

# NSK Standard Ball Screws Compact FA Model

Compact-nut ball screws with increased speed and low noise for NSK standard.

They accommodate a variety of uses, from use in semiconductor equipment to various transfer equipment.



# NSK Standard Ball Screws Compact FA Model

**Compact FA Model has a broad lineup to meet various industrial needs.**

**Low noise and space-compact design is achieved.**

The compact FA model of ball screws includes the following types to quickly and easily meet your requirements:

- PSS Model which offers various sizes for general use.
- USS Model for high accuracy and cleanroom environment use.
- FSS Model for transfer equipment.

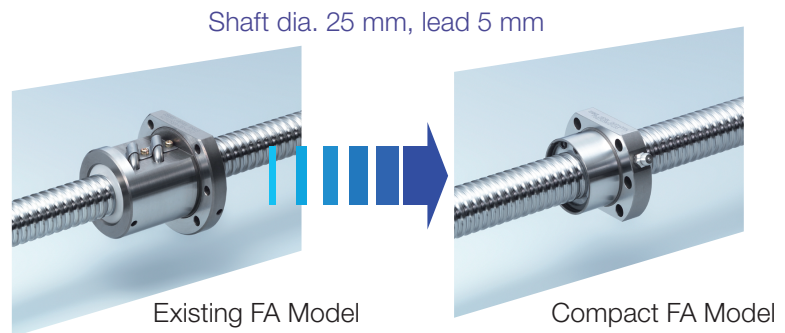
## Features

### Quick delivery

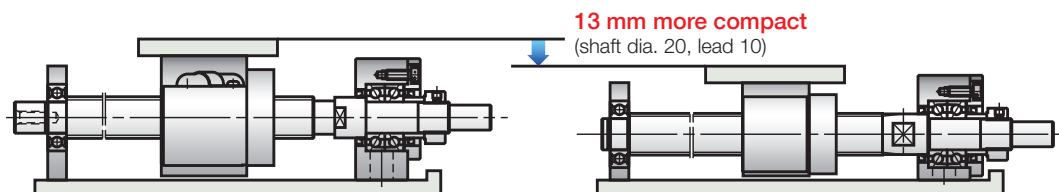
Ball screws and support units in the catalog are in stock.

### Compact

The outside diameter of the ball nut is as much as 30% smaller than those of existing NSK products, and the low-profile support units especially compatible with the compact FA model are available. These contribute to more compact design of equipment and devices.



Comparison of existing FA Model and Compact FA Model



### High-speed, low-noise

Used with the end-deflector recirculation system. Maximum rotational speed of 5 000 min<sup>-1</sup> is achieved, and noise reduced by 6 dB(A) compared with the tube recirculation system. The vibration is reduced as well.

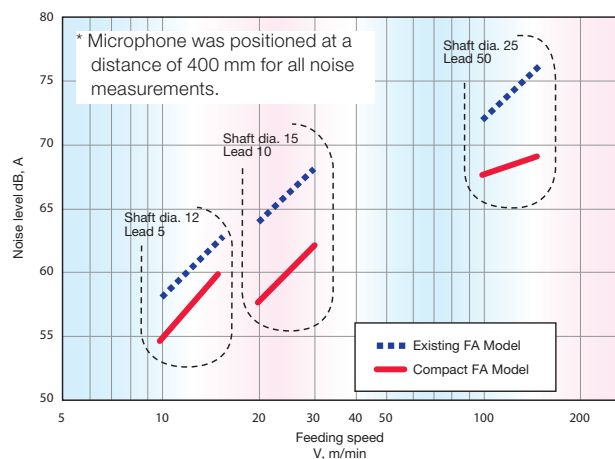
### Thin plastic seal

Screw shafts with diameters of 10 to 25 mm are equipped with a thin layer of sealing, which minimizes spattering of grease and helps to achieve a cleanroom environment.

\* Screws with shaft diameters of 6 mm or 8 mm are not sealed.

### Grease fitting

A grease fitting (M5 × 0.8) is provided as a standard equipment for shaft dia. of 10 to 25 mm. Two lubrication ports are provided to facilitate easy maintenance.



# LINE UP

## Selection of ball screws

Three types of compact FA Model are available. Choose optimal types for application.

### NSK Standard Ball Screws

#### Compact FA-PSS Model for general uses

Accuracy grade: C5 grade of JIS  
 Axial play: shaft dia. 6 and 8 mm; 0.005 mm or less  
 shaft dia. 10 mm or over; 0

Page 3,  
7 to 30

#### Compact FA-USS Model for high-accuracy and cleanroom environments

Accuracy grade: C3 grade of JIS Axial play: 0

Page 4,  
31 to 36

#### Compact FA-FSS Model for transfer equipment

Accuracy grade: Ct7 grade of JIS Axial play: 0.010 mm or less

Page 5,  
37 to 44

Combinations of screw shaft diameter and lead

Unit: mm

Lead Screw shaft dia.	5	8	10	12	15	20	25	30	40	50	60
6		●		●							
8			●		●						
10	●●		●								
12	●●		●●			●		●			
15	●●		●●			●●		●			
20	●		●●			●●		●	●		●
25	●		●●			●●	●●	●		●	

● PSS Model ● USS Model ● FSS Model

### Support Unit

Shape	Square type	Round type	Page 45 to 50
Applications	<ul style="list-style-type: none"> <li>For general uses</li> <li>For cleanroom uses</li> <li>Space-saving (low-profile type)</li> </ul>	<ul style="list-style-type: none"> <li>For general uses</li> <li>For Cleanroom uses</li> </ul>	

# Compact FA-PSS Model for General Uses

## Applications

Semiconductor manufacturing equipment, LCD manufacturing equipment, material handling equipment, measuring equipment, medical equipment etc.

## Accuracy grade and axial play

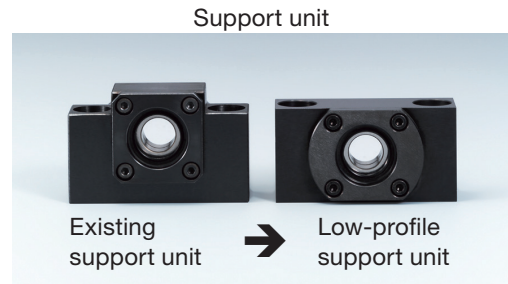
Accuracy grade: C5 grade of JIS    Axial play 1) Shaft dia. 6 and 8 mm: 0.005 mm or less  
2) Shaft dia. 10 mm or over: 0 (Oversize ball preload)

## Wide variation

Abundant combinations of shaft diameter, lead and stroke are available to meet a wide range of customer needs.

## Shaft end support

The low-profile support units especially compatible with the compact FA model are available. Since the ends of ball screw shafts are shaped to accommodate the shapes of support units, no detailed design after purchase is necessary.



Combinations of shaft diameter, lead and stroke

Shaft dia. (mm)	Lead (mm)	Stroke (mm)														Page	Recommended support unit		
		50	100	150	200	300	400	500	600	700	800	1 000	1 200	1 600	2 000		Fixed	Simple	
6	8		●														7 to 8	WBK04-01M (square) WBK04-11M (round)	-
	12	●																	
8	10	●															9 to 10	WBK06-01M (square) WBK06-11M (round)	-
	15	●																	
10	5	●	●		●	●	●										11 to 12	WBK08-01B	WBK08S-01B
	10		●		●	●	●												
12	5	●	●		●	●	●	●									13 to 14	WBK08-01B	WBK08S-01B
	10		●		●	●	●	●											
	20		●		●	●	●	●											
	30		●		●	●	●	●											
15	5	●	●		●	●	●	●	●								15 to 18	WBK12-01B WBK10-01B	WBK12S-01B
	10		●		●	●	●	●	●	●									
	20		●		●	●	●	●	●	●	●								
	30		●		●	●	●	●	●	●	●								
20	5			●	●	●	●	●	●	●							19 to 24	WBK15-01B	WBK15S-01B
	10				●	●	●	●	●	●	●								
	20					●	●	●	●	●	●	●							
	30				●	●	●	●	●	●	●	●							
	40						●	●	●	●	●	●	●						
	60						●	●	●	●	●	●	●	●					
25	5			●	●	●	●	●	●	●							25 to 30	WBK20-01	WBK20S-01
	10				●	●	●	●	●	●	●								
	20						●	●	●	●	●	●							
	25							●	●	●	●	●	●						
	30							●	●	●	●	●	●	●					
	50							●	●	●	●	●	●	●					

**Reference number**      Compact FA PSS Model      Screw shaft length (mm)

Example      **PSS**      **15**      **05**      **N1D**      **0361**

   Screw shaft diameter (mm)      Lead (mm)      NSK control number





# Precautions

## Design

- (1) If a ball screw of which left shaft end (opposite driven side) is the shape I, and is supported with the "fixed-fixed" supporting method, you should be aware that the operating life of support bearings may drop due to thermal expansion of the screw shaft, depending on usage conditions. In this case, you should consider a structure that can absorb thermal expansion of the screw shaft if necessary. Please consult with NSK for a detailed examination.
- (2) If using an NSK linear guide, the maximum speed of a linear guide of standard specifications under ordinary conditions is limited to 100 m/min. A linear guide with high-speed specifications is available if higher operating speed is required. Contact NSK for further information.
- (3) For general precautions concerning ball screws, please see NSK Catalog No. E3162 "Precision Machine Components."

## Usage and handling

Ball screws are precision products and should be treated as follows:

[Lubrication]

- (1) Compact FA Model ball screws are packed and coated with lubrication grease at the factory, and require no further lubrication under ordinary circumstances. If the surface of the grease becomes contaminated with dirt and metal powder under operation, cleanroom it with white kerosene and replenish with new grease of the same kind through the oil hole (grease fitting) on the ball nut. Avoid mixing different types of grease.
- (2) Lubricant should be checked after the first 2 to 3 months of operation. If excessively dirty, we recommend you wipe away the old grease and replenish with a generous quantity of grease.  
After that, grease should be checked and replenished once a year under ordinary circumstances, but the period may vary depending upon the service environment.



Check lubrication

[Handling]

- (1) Never disassemble the ball screw, otherwise dirt may contaminate the inside of the unit and affect precision or result in equipment failure.
- (2) Compact FA Model ball screws incorporate a new ball re-circulation system. Consequently, only NSK authorized plants should conduct disassembly and reassembly. If the nut accidentally comes off the screw shaft or is dropped, NSK will check precision, problems or perform repairs at your expense.
- (3) When the ball screw is erected upright, the screw shaft or nut could fall by force of its own weight and result in injury. If dropped, the ball grooves could be dented or re-circulation parts damaged, resulting in loss of function. This would require the ball screw to be inspected by NSK. If so, be sure to send the ball screw to NSK and we will check it for a fee.



Do not disassemble



Beware of dropping

[Usage]

- (1) Ball screws should be used in a cleanroom environment. The ball screws should be provided with a dust cover to prevent the entry of debris such as dust and metal powder. If foreign matter is allowed to contaminate the ball screw, this could not only cause the ball screw to lose some of its function, but also result in clogging and damaging the re-circulation system parts, or cause the table to fall or a similar serious accident.
- (2) Compact FA Model ball screws are designed to be used in a service temperature environment of 80°C or lower. Do not allow the service temperature limit to be exceeded. In some cases, using ball screws in temperatures above 80°C might lead to damage of re-circulation system parts or seal parts. Contact NSK if 80°C must be exceeded.



Dust control



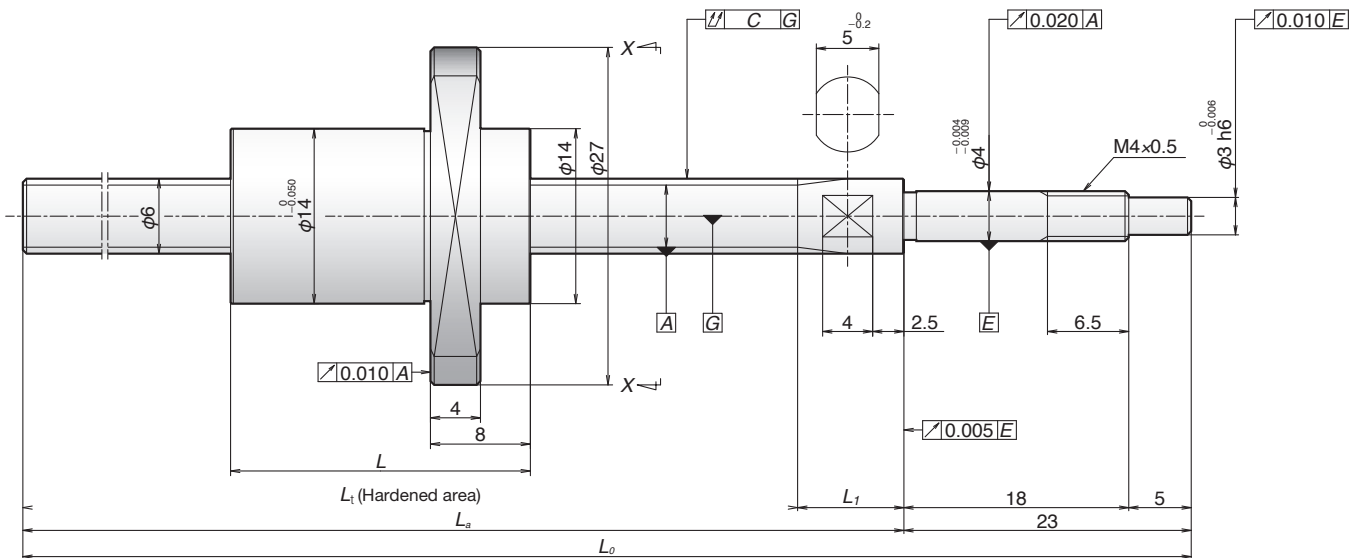
Caution max. temperature

## Compact FA Model options

Consult with NSK for information about such as shaft end machining, reverse direction and alternative preload.

# Compact FA-PSS Model

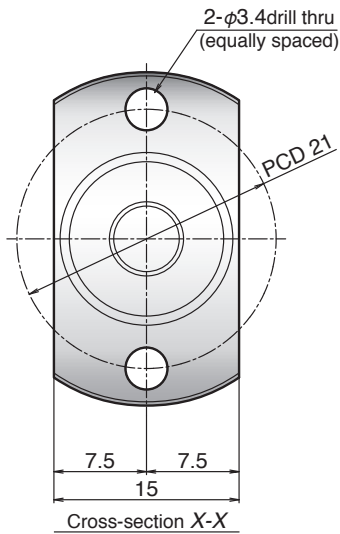
Screw shaft diameter 6 mm, Lead 8 and 12 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$
PSS0608NAD0150	6	8	690	805	100	102.5	16	118.5	127	150	8.5
PSS0608NBD0150			1 480	1 940	50	94.5	24				
PSS0612NAD0150		12	665	800	50	97.0	20	117.0	127	150	10.0
PSS0612NBD0150			1 430	1 970	50	85.0	32				

Notes : 1. Contact NSK if permissible rotational speed is to be exceeded.





Unit : mm

Ball screw specification	
Ball dia./screw shaft root dia.	1.2 / 4.9
Ball circle dia.	6.2
Accuracy grade/axial play	C5/ 0.005 mm or less
Factory-packed grease	NSK grease PS2

[Recommended support unit]

For drive side (Fixed)	
WBK04-01M (square)	P 45
WBK04-11M (round)	P 47

Unit : mm

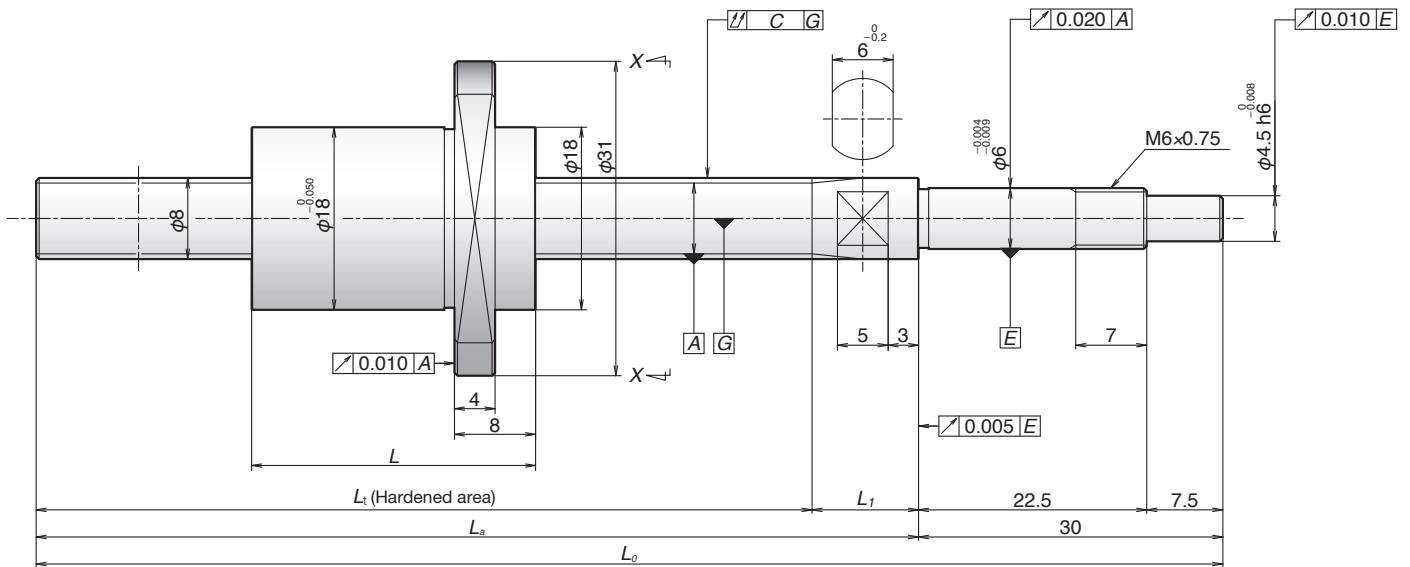
Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm)	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> )*1	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
Target value $T$	Error $e_p$	Variation $V_u$						
0	0.020	0.018	0.040	0.5 or less	0.06	5 000	0.2	0.1
					0.06		0.3	0.2
					0.06		0.2	0.1
					0.07		0.3	0.2

2. Service temperature range is 0 to 80°C.

3. Use of NSK support unit is recommended. Refer to pages 45 to 48 for details.

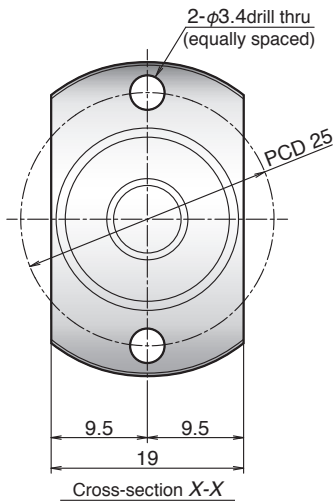
# Compact FA-PSS Model

Screw shaft diameter 8 mm, Lead 10 and 15 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$
PSS0810NAD0150	8	10	1 150	1 420	50	91.5	18	109.5	120	150	10.5
PSS0810NBD0150			2 470	3 430	50	81.5	28				
PSS0815NAD0150		15	1 130	1 430	50	85.0	22	107.0	13.0		
PSS0815NBD0150			2 410	3 520	50	70.0	37				

Notes : 1. Contact NSK if permissible rotational speed is to be exceeded.



Unit : mm

Ball screw specification	
Ball dia./screw shaft root dia.	1.588 / 6.6
Ball circle dia.	8.3
Accuracy grade/axial play	C5/ 0.005 mm or less
Factory-packed grease	NSK grease PS2

[Recommended support unit]

For drive side (Fixed)	
WBK06-01M (square)	P 45
WBK06-11M (round)	P 47

Unit : mm

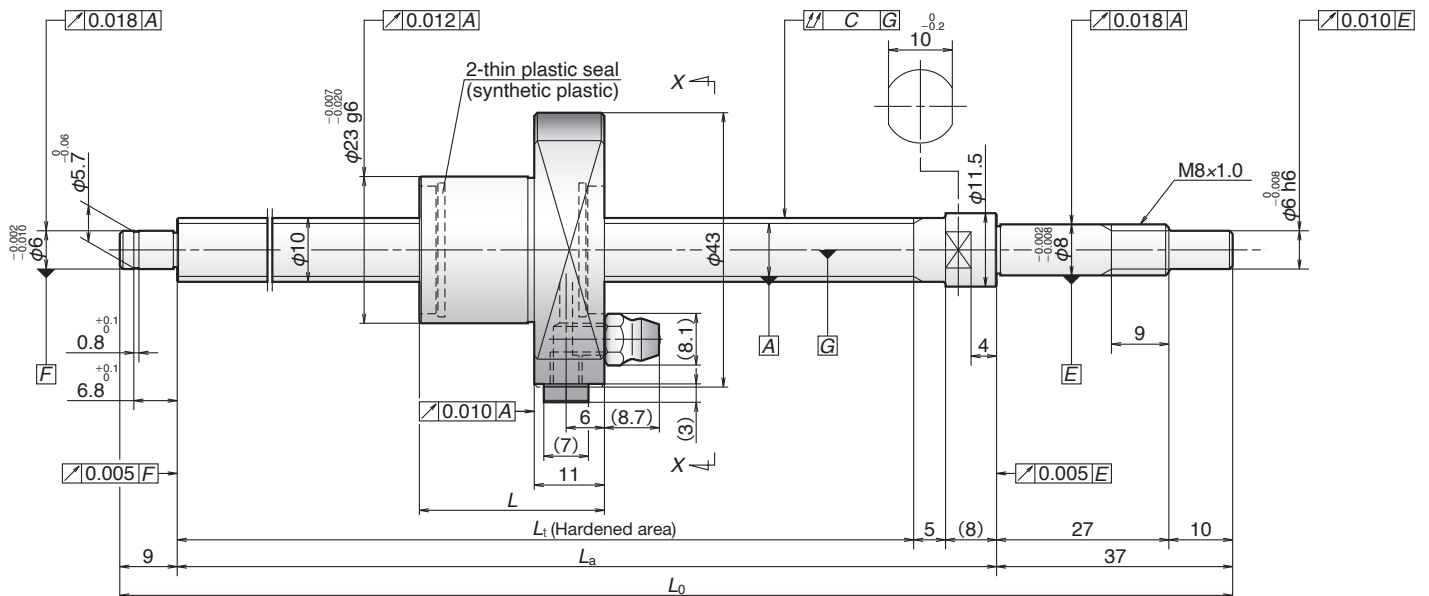
Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm)	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> )*1	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
Target value $T$	Error $e_p$	Variation $V_u$						
0	0.020	0.018	0.040	0.5 or less	0.09	5 000	0.4	0.2
					0.11		0.5	0.3
					0.10		0.4	0.2
					0.12		0.6	0.3

2. Service temperature range is 0 to 80°C.

3. Use of NSK support unit is recommended. Refer to pages 45 to 48 for details.

# Compact FA-PSS Model

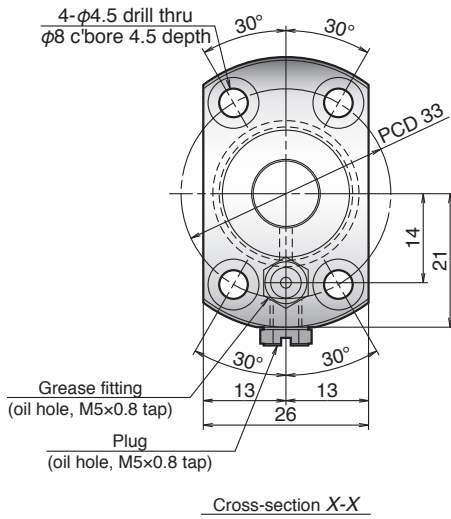
Screw shaft diameter 10 mm, Lead 5 and 10 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions		
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$
PSS1005N1D0171	10	5	3 420	4 840	50	78	29	112	125	171
PSS1005N1D0221					100	128		162	175	221
PSS1005N1D0321					200	228		262	275	321
PSS1005N1D0421					300	328		362	375	421
PSS1005N1D0521					400	428		462	475	521
PSS1010N1D0221	10	10	2 290	2 980	100	125	32	162	175	221
PSS1010N1D0321					200	225		262	275	321
PSS1010N1D0421					300	325		362	375	421
PSS1010N1D0521					400	425		462	475	521

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



### Ball screw specification

Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	2.000 / 8.2
Ball circle dia.	10.3
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease PS2

### [Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK08-01B (low-profile, square) P 45	WBK08S-01B (low-profile, square) P 49
WBK08-11 (round) P 47	
WBK08-11B (round, high-load) P 47	

Unit : mm

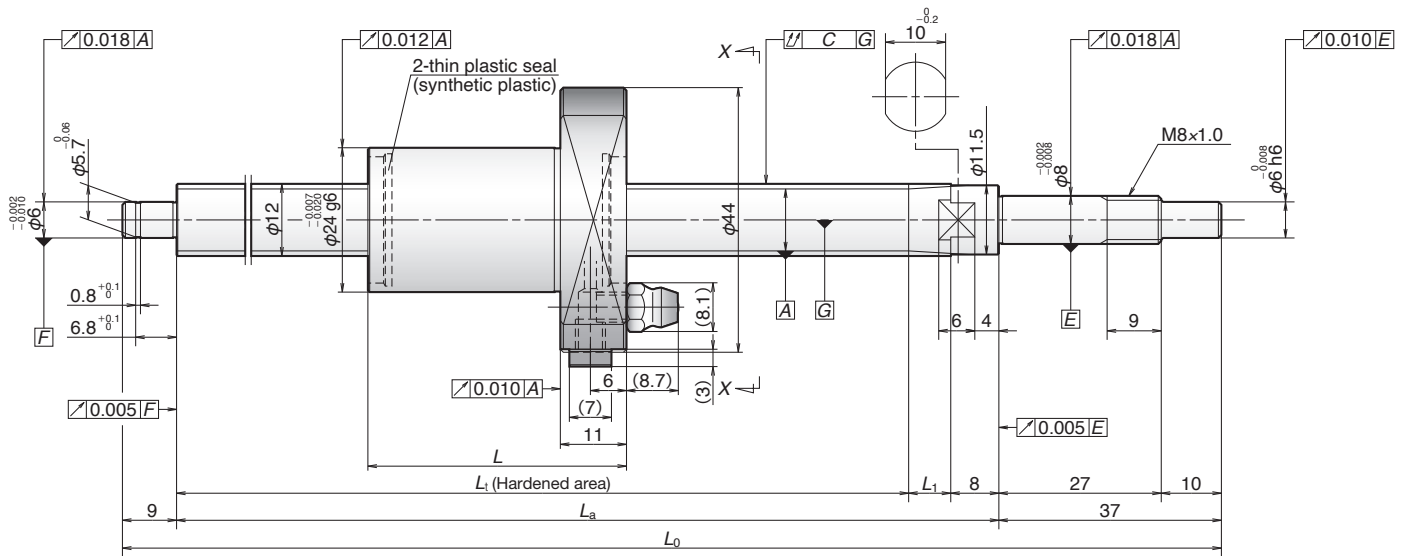
Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Error $e_p$	Variation $V_u$						
0	0.020	0.018	0.030	0.7-3.3	0.3	5 000	0.8	0.4
	0.020	0.018	0.045	0.7-3.3	0.3			
	0.023	0.018	0.060	0.6-4.3	0.3			
	0.025	0.020	0.070	0.6-4.3	0.4		0.7	
	0.027	0.020	0.085	0.4-4.9	0.5			
	0.020	0.018	0.045	0.7-3.3	0.3			
	0.023	0.018	0.060	0.6-4.3	0.4			
	0.025	0.020	0.070	0.6-4.3	0.4			
	0.027	0.020	0.085	0.4-4.9	0.5			

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

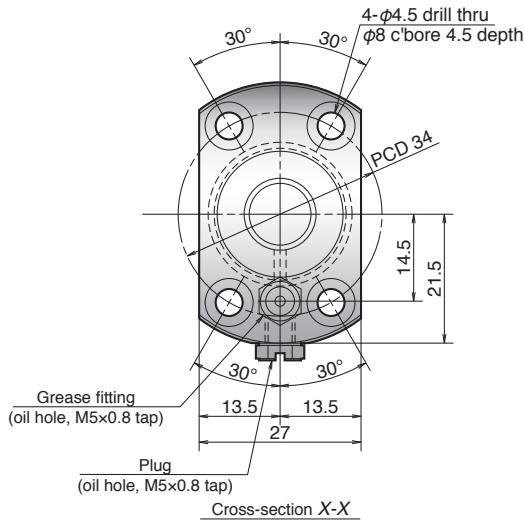
Screw shaft diameter 12 mm, Lead 5, 10, 20 and 30 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$
PSS1205N1D0171	12	5	3 750	5 810	50	75	30	110	125	171	7
PSS1205N1D0221					100	125		160	175	221	
PSS1205N1D0321					200	225		260	275	321	
PSS1205N1D0421					300	325		360	375	421	
PSS1205N1D0521					400	425		460	475	521	
PSS1205N1D0621					500	525		560	575	621	
PSS1210N1D0221		10	3 760	5 780	100	112	43	160	175	221	7
PSS1210N1D0321					200	212		260	275	321	
PSS1210N1D0421					300	312		360	375	421	
PSS1210N1D0521					400	412		460	475	521	
PSS1210N1D0621					500	512		560	575	621	
PSS1220N1D0271		20	2 330	3 600	100	153	50	208	225	271	9
PSS1220N1D0371					200	253		308	325	371	
PSS1220N1D0471					300	353		408	425	471	
PSS1220N1D0571					400	453		508	525	571	
PSS1220N1D0671					500	553		608	625	671	
PSS1230N1D0271	30	2 190	3 650	100	128	70	203	225	271	14	
PSS1230N1D0371				200	228		303	325	371		
PSS1230N1D0471				300	328		403	425	471		
PSS1230N1D0571				400	428		503	525	571		
PSS1230N1D0671				500	528		603	625	671		

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	2.000 / 10.2
Ball circle dia.	12.3
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease PS2

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK08-01B (low-profile, square) P 45	WBK08S-01B (low-profile, square) P 49
WBK08-11 (round) P 47	
WBK08-11B (round, high-load) P 47	

Unit : mm

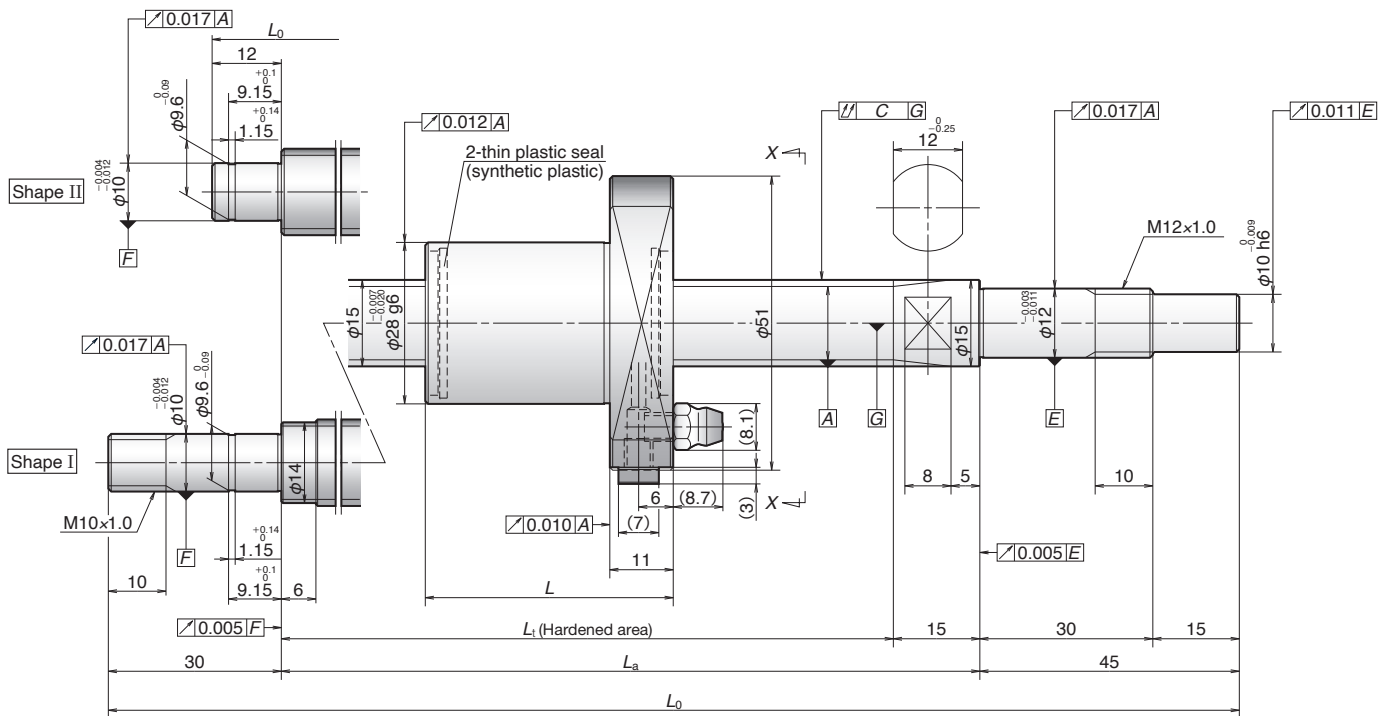
Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Error $e_p$	Variation $V_u$				Fixed-simple		
0	0.020	0.018	0.030	0.7-3.3	0.3	5 000	1.0	0.5
	0.020	0.018	0.045	0.7-3.3	0.3			
	0.023	0.018	0.060	0.6-4.3	0.4			
	0.025	0.020	0.070	0.6-4.3	0.5			
	0.027	0.020	0.085	0.6-4.3	0.6			
	0.030	0.023	0.085	0.4-4.9	0.7			
	0.020	0.018	0.045	0.7-3.3	0.4	5 000	1.0	0.5
	0.023	0.018	0.060	0.6-4.3	0.5			
	0.025	0.020	0.070	0.6-4.3	0.5			
	0.027	0.020	0.085	0.6-4.3	0.6			
	0.030	0.023	0.085	0.4-4.9	0.7			
	0.023	0.018	0.045	1.4-4.5	0.4			
	0.023	0.018	0.060	0.9-4.9	0.5	5 000	1.2	0.6
	0.027	0.020	0.070	0.9-4.9	0.6			
	0.030	0.023	0.085	0.6-5.9	0.7			
	0.030	0.023	0.110	0.6-5.9	0.8			
	0.023	0.018	0.045	1.4-4.5	0.5			
	0.023	0.018	0.060	0.9-4.9	0.6			
0.027	0.020	0.070	0.9-4.9	0.7	5 000	1.5	0.8	
0.030	0.023	0.085	0.6-5.9	0.7				
0.030	0.023	0.110	0.6-5.9	0.8				
						4 480		
						4 720		

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

Screw shaft diameter 15 mm, Lead 5 and 10 mm

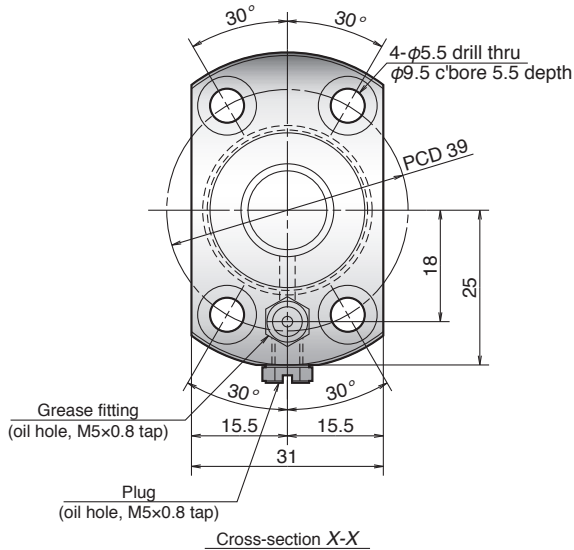


Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions		
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$
PSS1505N1D0211	15	5	6 410	10 100	50	103	30	139	154	211
PSS1505N1D0261					100	153		189	204	261
PSS1505N1D0361					200	253		289	304	361
PSS1505N1D0461					300	353		389	404	461
PSS1505N1D0561					400	453		489	504	561
PSS1505N1D0661					500	553		589	604	661
PSS1505N1D0761					600	653		689	704	761
PSS1510N1D0261		10	6 530	10 200	100	140	43	189	204	261
PSS1510N1D0361					200	240		289	304	361
PSS1510N1D0461					300	340		389	404	461
PSS1510N1D0561					400	440		489	504	561
PSS1510N1D0661					500	540		589	604	661
PSS1510N1D0761					600	640		689	704	761
PSS1510N1D0879					700	740		789	804	879
PSS1510N1D0979	800				840	889		904	979	
PSS1510N1D1179	1 000				1 040	1 089		1 104	1 179	

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.



Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	2.778 / 12.6
Ball circle dia.	15.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK12-01B (low-profile, square) P 45	WBK10-01B (low-profile, square) P 45	WBK12S-01B (low-profile, square) P 49
WBK12-11 (round) P 47	WBK10-11 (round) P 47	

Unit : mm

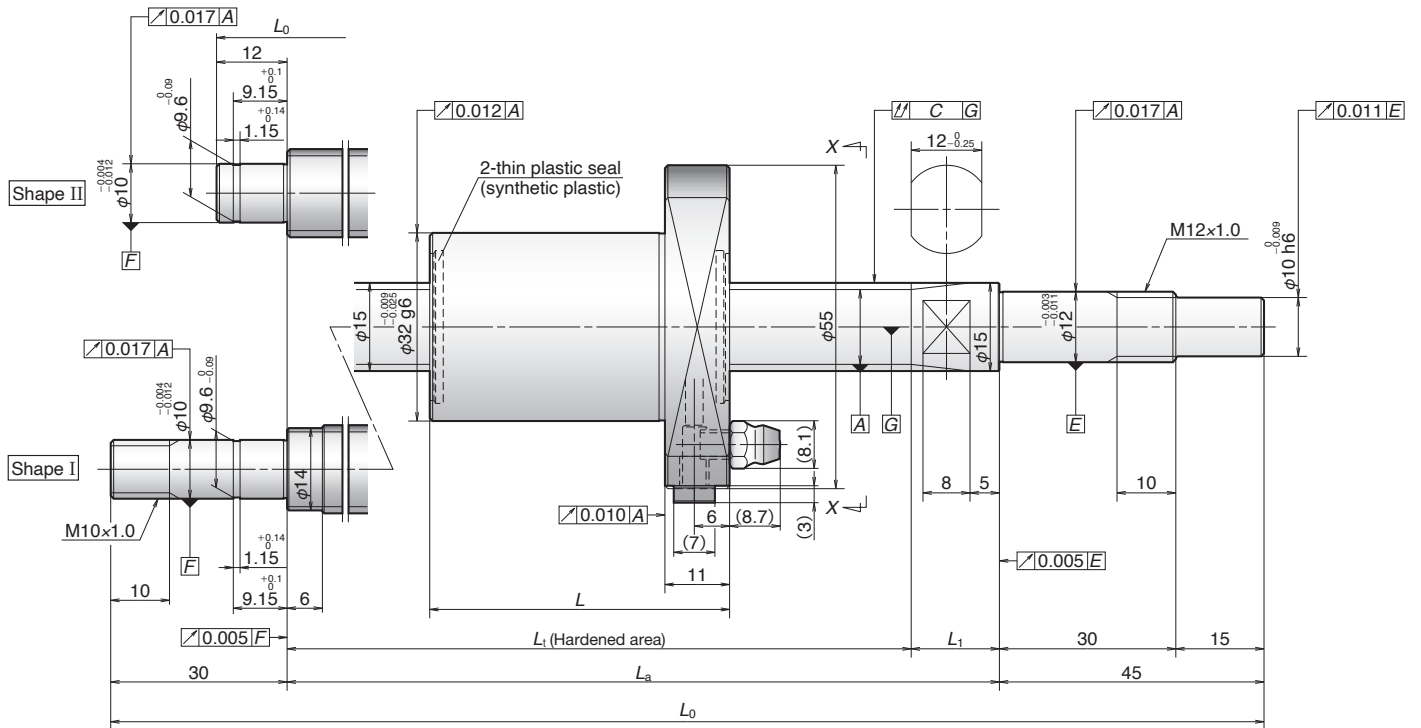
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut(cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed		
II	0	0.020	0.018	0.035	0.2- 6.9	0.5	5 000	-	2.0	1.0
		0.020	0.018	0.035	0.2- 6.9	0.5				
		0.023	0.018	0.045	0.2- 6.9	0.6				
		0.025	0.020	0.050	0.4- 9.8	0.8				
		0.027	0.020	0.060	0.4- 9.8	0.9				
		0.030	0.023	0.075	0.4- 9.8	1.0				
		0.035	0.025	0.075	0.4-11.8	1.1				
II		0.020	0.018	0.035	0.6- 7.4	0.6	5 000	-		
		0.023	0.018	0.045	0.6- 7.4	0.7				
		0.025	0.020	0.050	0.4- 9.8	0.8				
		0.027	0.020	0.060	0.4- 9.8	1.0				
		0.030	0.023	0.075	0.4- 9.8	1.1				
		0.035	0.025	0.075	0.4-11.8	1.2				
I		0.035	0.025	0.095	0.4-11.8	1.4	3 190	4 410		
	0.040	0.027	0.095	0.4-11.8	1.5	2 500	3 470			
	0.046	0.030	0.120	0.4-11.8	1.7	1 650	2 320			

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

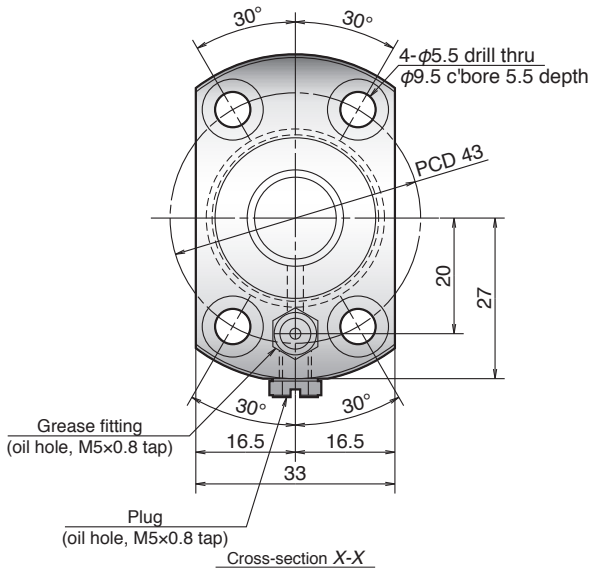
## Screw shaft diameter 15 mm, Lead 20 and 30 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$
PSS1520N1D0261	15	20	5 660	8 700	100	129	51	186	204	261	18
PSS1520N1D0361					200	229		286	304	361	
PSS1520N1D0461					300	329		386	404	461	
PSS1520N1D0561					400	429		486	504	561	
PSS1520N1D0661					500	529		586	604	661	
PSS1520N1D0761					600	629		686	704	761	
PSS1520N1D0879					700	729		786	804	879	
PSS1520N1D0979					800	829		886	904	979	
PSS1520N1D1179					1 000	1 029		1 086	1 104	1 179	
PSS1530N1D0311	30	30	5 500	8 580	100	153	71	230	254	311	24
PSS1530N1D0411					200	253		330	354	411	
PSS1530N1D0511					300	353		430	454	511	
PSS1530N1D0611					400	453		530	554	611	
PSS1530N1D0711					500	553		630	654	711	
PSS1530N1D0811					600	653		730	754	811	
PSS1530N1D0929					700	753		830	854	929	
PSS1530N1D1029					800	853		930	954	1 029	
PSS1530N1D1229					1 000	1 053		1 130	1 154	1 229	

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 12.2
Ball circle dia.	15.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK12-01B (low-profile, square) P 45	WBK10-01B (low-profile, square) P 45	WBK12S-01B (low-profile, square) P 49
WBK12-11 (round) P 47	WBK10-11 (round) P 47	

Unit : mm

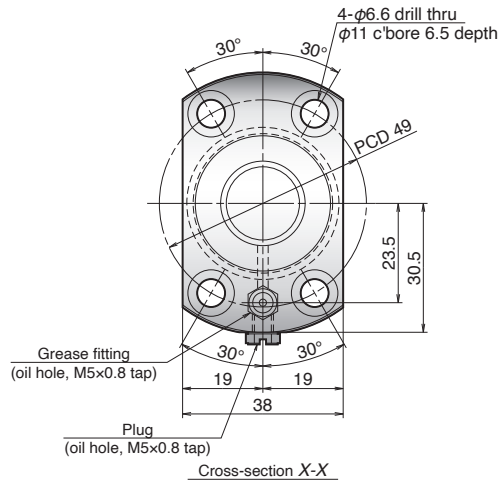
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut(cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )			
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed					
II	0	0.020	0.018	0.035	0.8- 8.8	0.7	5 000	-	2.8	1.4			
		0.023	0.018	0.045	0.8- 8.8	0.8							
		0.025	0.020	0.050	0.8-10.8	0.9							
		0.027	0.020	0.060	0.8-10.8	1.1							
		0.030	0.023	0.075	0.8-10.8	1.2							
		0.035	0.025	0.075	0.8-13.8	1.3					4 170		
I	0	0.035	0.025	0.095	0.8-13.8	1.5	3 150	4 310	3.4	1.7			
		0.040	0.027	0.095	0.8-13.8	1.6	2 460	3 390					
		0.046	0.030	0.120	0.8-13.8	1.9	1 620	2 260					
II		0	0.023	0.018	0.035	1.2- 9.3	0.8	5 000			-	3.4	1.7
			0.025	0.020	0.050	0.8-10.8	1.0						
			0.027	0.020	0.060	0.8-10.8	1.1						
	0.030		0.023	0.060	0.8-10.8	1.2							
	0.030		0.023	0.075	0.8-13.8	1.4	3 770						
0.035	0.025		0.095	0.8-13.8	1.5	3 770							
I	0	0.040	0.027	0.095	0.8-13.8	1.6	2 880	3 910	3.4	1.7			
		0.040	0.027	0.120	0.8-13.8	1.8	2 310	3 110					
		0.046	0.030	0.120	0.8-13.8	2.0	1 540	2 100					

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.



Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 17.2
Ball circle dia.	20.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK15-01B (low-profile, square) P 45	WBK15-01B (low-profile, square) P 45	WBK15S-01B (low-profile, square) P 49
WBK15-11 (round) P 47	WBK15-11 (round) P 47	

Unit : mm

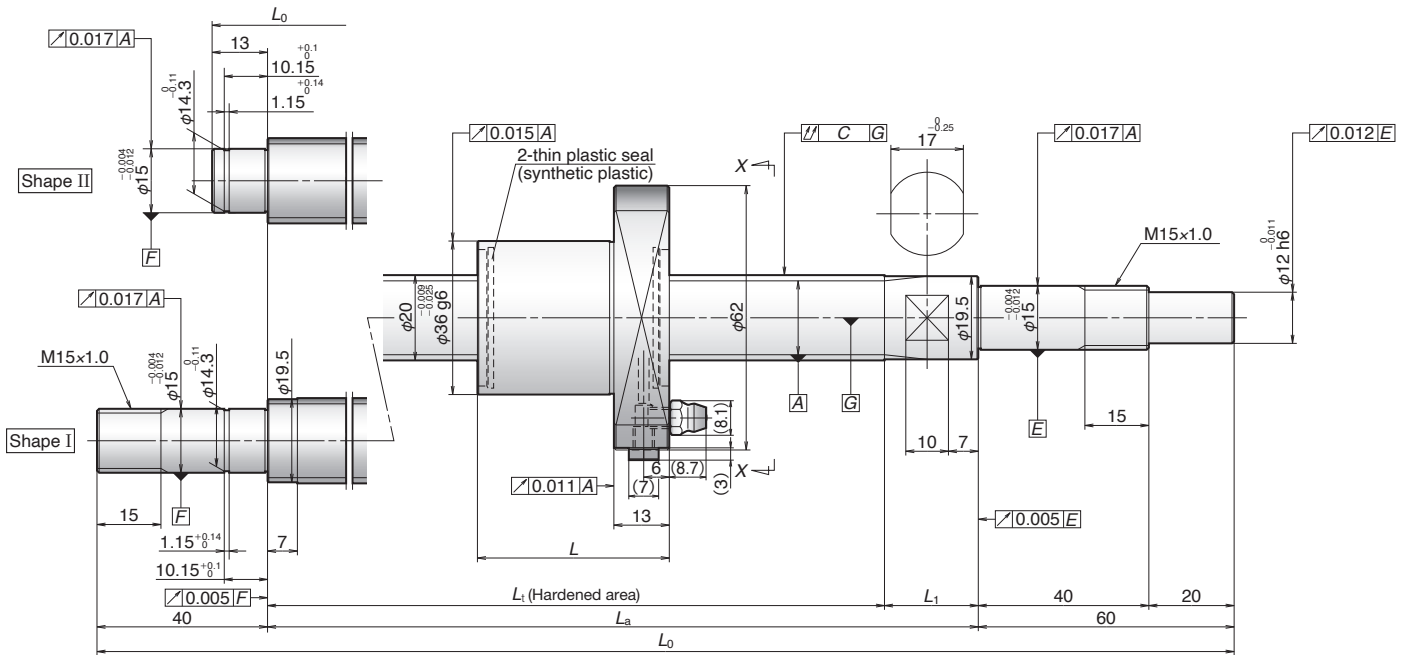
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )	
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed			
II	0	0.023	0.018	0.045	0.6- 7.4	1.0	5 000	-	3.4	1.7	
		0.023	0.018	0.045	0.6- 7.4	1.1					
		0.025	0.020	0.050	0.6- 7.4	1.3					
		0.027	0.020	0.060	0.4- 9.8	1.5					
		0.030	0.023	0.075	0.4- 9.8	1.7					
		0.035	0.025	0.075	0.4- 9.8	1.9					
I		0.035	0.025	0.095	0.4- 9.8	2.2	4 410	4 710			
		0.040	0.027	0.095	0.4-11.8	2.4	3 450				
II		0	0.023	0.018	0.045	1.2- 9.3	1.2	5 000	-	3.2	1.6
			0.025	0.020	0.050	1.2- 9.3	1.4				
			0.027	0.020	0.060	0.8-10.8	1.7				
			0.030	0.023	0.075	0.8-10.8	1.9				
	0.035		0.025	0.075	0.8-10.8	2.1					
	0.035		0.025	0.095	0.8-10.8	2.4	4 330				
I	0.040		0.027	0.120	0.8-13.8	2.6	3 400	4 640			
	0.046		0.030	0.120	0.8-13.8	3.1	2 250	3 110			
	0.054		0.035	0.160	0.8-13.8	3.6	1 600	2 220			

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

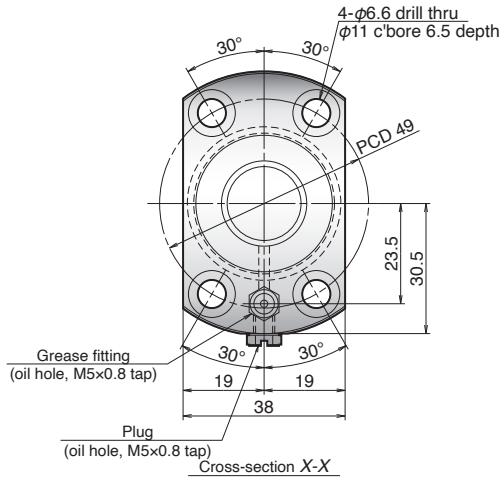
Screw shaft diameter 20 mm, Lead 20 and 30 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions									
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$						
PSS2020N1D0508	20	20	6 790	11 800	300	353	54	413	435	508	22						
PSS2020N1D0608					400	453		513	535	608							
PSS2020N1D0708					500	553		613	635	708							
PSS2020N1D0808					600	653		713	735	808							
PSS2020N1D0908					700	753		813	835	908							
PSS2020N1D1035					800	851		913	935	1 035							
PSS2020N1D1235					1 000	1 051		1 113	1 135	1 235							
PSS2020N1D1435					1 200	1 251		1 313	1 335	1 435							
PSS2020N1D1835					1 600	1 651		1 713	1 735	1 835							
PSS2030N1D0408					30	30		6 550	11 800	200		228	74	308	335	408	27
PSS2030N1D0508										300		328		408	435	508	
PSS2030N1D0608										400		428		508	535	608	
PSS2030N1D0708										500		528		608	635	708	
PSS2030N1D0808										600		628		708	735	808	
PSS2030N1D0908										700		728		808	835	908	
PSS2030N1D1035										800		826		908	935	1 035	
PSS2030N1D1235	1 000	1 026	1 108	1 135			1 235										
PSS2030N1D1435	1 200	1 226	1 308	1 335	1 435												

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 17.2
Ball circle dia.	20.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK15-01B (low-profile, square) P 45	WBK15-01B (low-profile, square) P 45	WBK15S-01B (low-profile, square) P 49
WBK15-11 (round) P 47	WBK15-11 (round) P 47	

Unit : mm

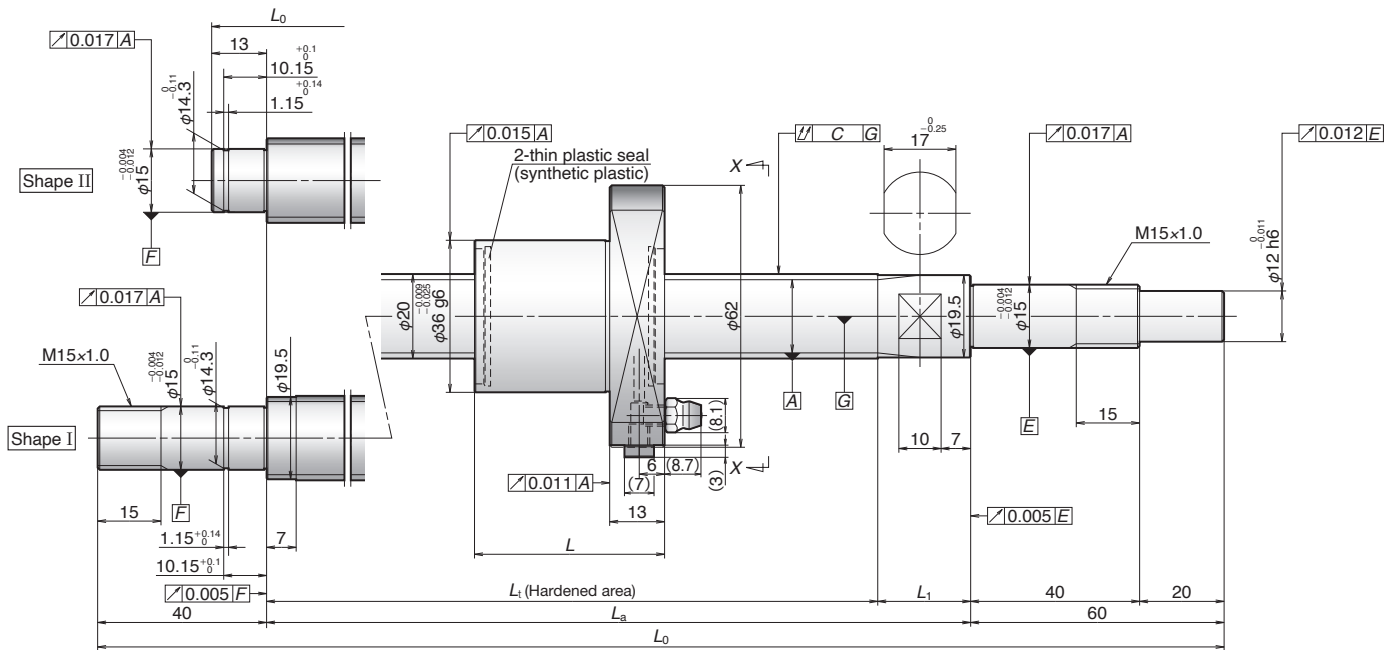
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed		
II	0	0.027	0.020	0.060	1.4-11.8	1.6	5 000	-	3.2	1.6
		0.030	0.023	0.060	1.4-11.8	1.8				
		0.030	0.023	0.075	1.4-11.8	2.0				
		0.035	0.025	0.095	1.4-11.8	2.3				
		0.040	0.027	0.095	0.8-13.8	2.5				
I	0	0.040	0.027	0.120	0.8-13.8	2.8	3 270	4 470		
		0.046	0.030	0.120	0.8-13.8	3.3	2 180	3 010		
		0.054	0.035	0.160	0.8-13.8	3.8	1 550	2 170		
		0.065	0.040	0.200	0.8-13.8	4.7	900	1 270		
II	0	0.023	0.018	0.050	1.6-9.8	1.4	5 000	-	4.6	2.3
		0.027	0.020	0.060	1.4-11.8	1.7				
		0.030	0.023	0.060	1.4-11.8	1.9				
		0.030	0.023	0.075	1.4-11.8	2.1				
		0.035	0.025	0.095	1.4-11.8	2.4				
		0.040	0.027	0.095	0.8-13.8	2.6				
I	0	0.040	0.027	0.120	0.8-13.8	2.9	3 380	4 570		
		0.046	0.030	0.120	0.8-13.8	3.4	2 240	3 070		
		0.054	0.035	0.160	0.8-13.8	3.9	1 590	2 200		

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

## Screw shaft diameter 20 mm, Lead 40 and 60 mm

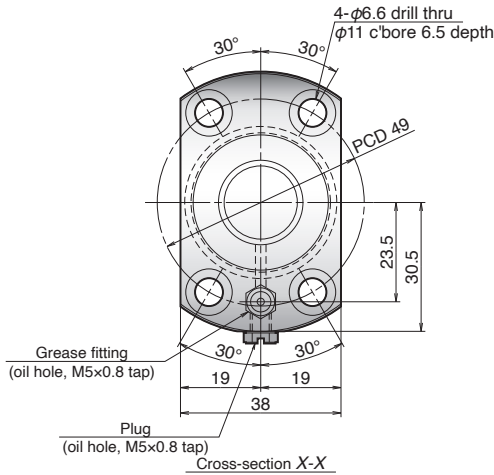


Reference no.	Screw shaft dia. <i>d</i>	Lead <i>ℓ</i>	Basic load ratings (N)		Stroke		Nut length <i>L</i>	Screw shaft dimensions			
			Dynamic <i>C<sub>a</sub></i>	Static <i>C<sub>0a</sub></i>	Nominal	max.		<i>L<sub>t</sub></i>	<i>L<sub>a</sub></i>	<i>L<sub>0</sub></i>	<i>L<sub>1</sub></i>
PSS2040N1D0658	20	40	6 380	11 600	400	455	92	553	585	658	32
PSS2040N1D0758					500	555		653	685	758	
PSS2040N1D0858					600	655		753	785	858	
PSS2040N1D0958					700	755		853	885	958	
PSS2040N1D1085					800	853		953	985	1 085	
PSS2040N1D1285					1 000	1 053		1 153	1 185	1 285	
PSS2040N1D1485					1 200	1 253		1 353	1 385	1 485	
PSS2040N1D1885					1 600	1 653		1 753	1 785	1 885	
PSS2040N1D2285					2 000	2 053		2 153	2 185	2 285	
PSS2060N1D0708					60	60		5 680	11 800	400	
PSS2060N1D0808	500	558	693	735			808				
PSS2060N1D0908	600	658	793	835			908				
PSS2060N1D1008	700	758	893	935			1 008				
PSS2060N1D1135	800	856	993	1 035			1 135				
PSS2060N1D1335	1 000	1 056	1 193	1 235			1 335				
PSS2060N1D1535	1 200	1 256	1 393	1 435			1 535				
PSS2060N1D1935	1 600	1 656	1 793	1 835			1 935				
PSS2060N1D2335	2 000	2 056	2 193	2 235	2 335						

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.



Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 17.2
Ball circle dia.	20.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK15-01B (low-profile, square) P 45	WBK15-01B (low-profile, square) P 45	WBK15S-01B (low-profile, square) P 49
WBK15-11 (round) P 47	WBK15-11 (round) P 47	

Unit : mm

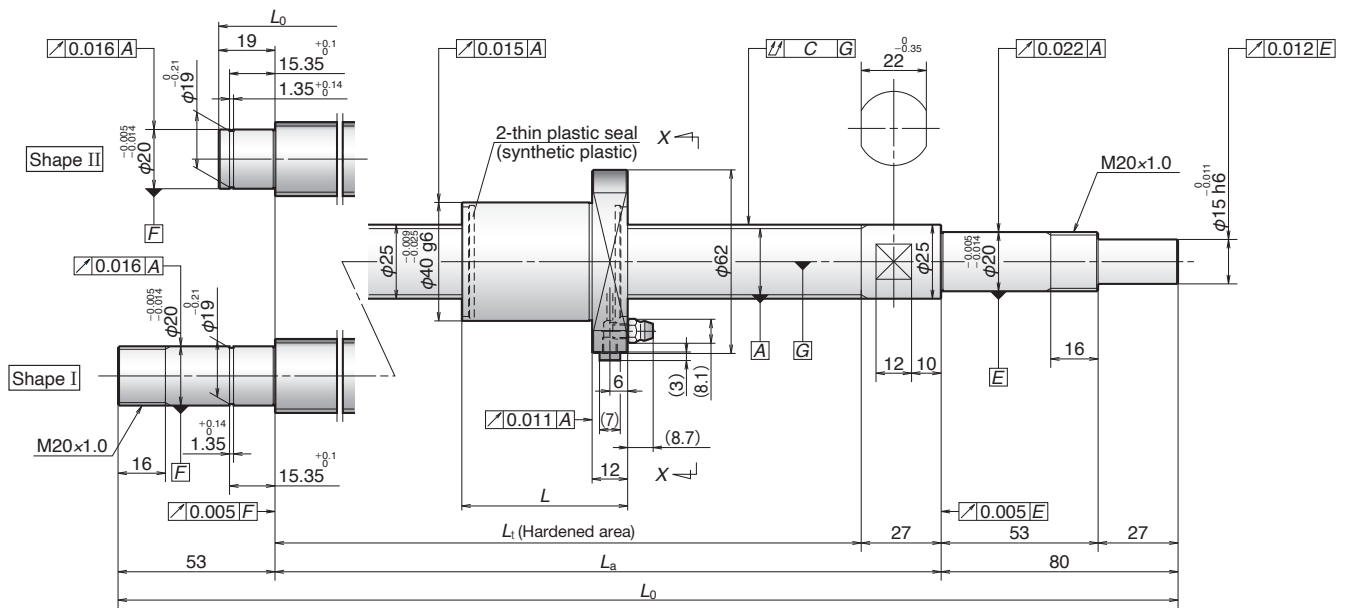
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )	
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed			
II	0	0.030	0.023	0.075	2.2-12.8	2.1	5 000	-	5.3	2.7	
		0.035	0.025	0.075	2.2-12.8	2.4					
		0.035	0.025	0.095	2.2-12.8	2.6					
		0.040	0.027	0.095	1.8-14.8	2.8					3 940
I	0	0.040	0.027	0.120	1.8-14.8	3.1	3 120	4 190	5.3	2.7	
		0.046	0.030	0.160	1.8-14.8	3.6	2 100	2 850			
		0.054	0.035	0.160	1.8-14.8	4.1	1 500	2 070			
		0.065	0.040	0.200	1.8-14.8	5.1	880	1 230			
II	0	0.030	0.023	0.075	2.7-13.8	2.4	5 000	-	7.0	3.5	
		0.035	0.025	0.095	2.7-13.8	2.6					
		0.035	0.025	0.095	2.7-13.8	2.9					4 830
		0.040	0.027	0.120	1.8-14.8	3.1					3 740
I	0	0.040	0.027	0.120	1.8-14.8	3.4	2 980	3 920	7.0	3.5	
		0.046	0.030	0.160	1.8-14.8	3.9	2 020	2 700			
		0.054	0.035	0.160	1.8-14.8	4.4	1 460	1 970			
		0.065	0.040	0.200	1.8-14.8	5.4	860	1 180			
		0.077	0.046	0.240	1.8-14.8	6.3	570	790			

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

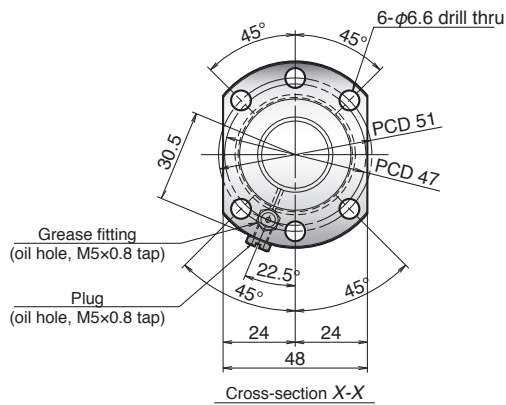
## Screw shaft diameter 25 mm, Lead 5 and 10 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions		
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$
PSS2505N1D0349	25	5	11 500	23 500	150	185	32	223	250	349
PSS2505N1D0399					200	235		273	300	399
PSS2505N1D0499					300	335		373	400	499
PSS2505N1D0599					400	435		473	500	599
PSS2505N1D0699					500	535		573	600	699
PSS2505N1D0899					700	735		773	800	899
PSS2505N1D0999					800	835		873	900	999
PSS2505N1D1233					1 000	1 027		1 073	1 100	1 233
PSS2510N1D0549					10	10		15 000	32 400	300
PSS2510N1D0649	400	461	523	550			649			
PSS2510N1D0749	500	561	623	650			749			
PSS2510N1D0849	600	661	723	750			849			
PSS2510N1D0949	700	761	823	850			949			
PSS2510N1D1049	800	861	923	950			1 049			
PSS2510N1D1283	1 000	1 053	1 123	1 150			1 283			
PSS2510N1D1883	1 600	1 653	1 723	1 750			1 883			

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 22.2
Ball circle dia.	25.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK20-01 (square) P 45	WBK20-01 (square) P 45	WBK20S-01 (square) P 49
WBK20-11 (round) P 47	WBK20-11 (round) P 47	

Unit : mm

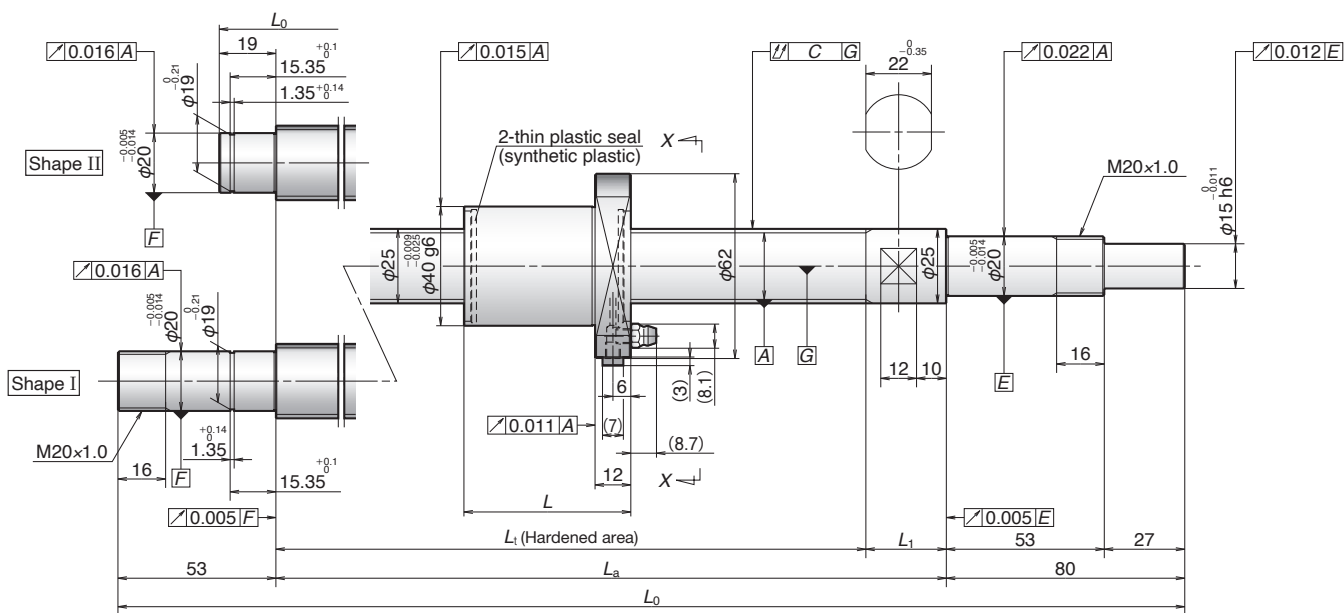
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque ( $N \cdot cm$ ) <sup>*1</sup>	Mass (kg)	Permissible rotational speed ( $min^{-1}$ ) <sup>*2</sup>		Internal spatial volume of nut( $cm^3$ )	Standard volume of grease replenishing ( $cm^3$ )
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed		
II	0	0.023	0.018	0.035	1.2- 9.3	1.5	5 000	-	4.4	2.2
		0.023	0.018	0.035	1.2- 9.3	1.6				
		0.025	0.020	0.040	1.2- 9.3	2.0				
		0.027	0.020	0.045	1.2- 9.3	2.3				
		0.030	0.023	0.055	0.8-10.8	2.7				
		0.035	0.025	0.065	0.8-10.8	3.4				
I		0.040	0.027	0.065	0.8-10.8	3.7	4 490	4 060		
		0.046	0.030	0.080	0.8-13.8	4.5	2 960			
II		0.027	0.020	0.045	3.1-11.8	2.4	5 000	-	4.7	2.4
		0.030	0.023	0.055	2.2-12.8	2.7				
		0.030	0.023	0.055	2.2-12.8	3.1				
		0.035	0.025	0.065	2.2-12.8	3.5				
	0.040	0.027	0.065	2.2-12.8	3.8					
I	0.040	0.027	0.080	2.2-12.8	4.2	4 120	3 790			
	0.046	0.030	0.100	1.8-14.8	5.0	2 760				
	0.065	0.040	0.130	1.8-14.8	7.2	1 150				1 620

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

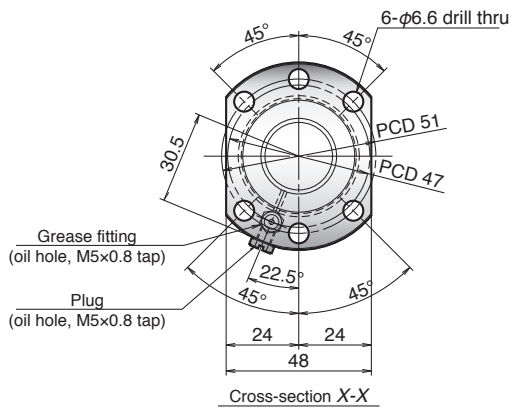
## Screw shaft diameter 25 mm, Lead 20 and 25 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions				
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$	
PSS2520N1D0729	25	20	7 650	14 800	500	544	54	604	630	729	26	
PSS2520N1D0829					600	644		704	730	829		
PSS2520N1D0929					700	744		804	830	929		
PSS2520N1D1029					800	844		904	930	1 029		
PSS2520N1D1263					1 000	1 036		1 104	1 130	1 263		
PSS2520N1D1463					1 200	1 236		1 304	1 330	1 463		
PSS2520N1D1863					1 600	1 636		1 704	1 730	1 863		
PSS2520N1D2263					2 000	2 036		2 104	2 130	2 263		
PSS2525N1D0779		25	25	7 490	14 600	500	581	63	650	680	779	30
PSS2525N1D0879						600	681		750	780	879	
PSS2525N1D0979						700	781		850	880	979	
PSS2525N1D1079						800	881		950	980	1 079	
PSS2525N1D1313						1 000	1 073		1 150	1 180	1 313	
PSS2525N1D1513						1 200	1 273		1 350	1 380	1 513	
PSS2525N1D1913						1 600	1 673		1 750	1 780	1 913	
PSS2525N1D2313						2 000	2 073		2 150	2 180	2 313	

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 22.2
Ball circle dia.	25.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK20-01 (square) P 45	WBK20-01 (square) P 45	WBK20S-01 (square) P 49
WBK20-11 (round) P 47	WBK20-11 (round) P 47	

Unit : mm

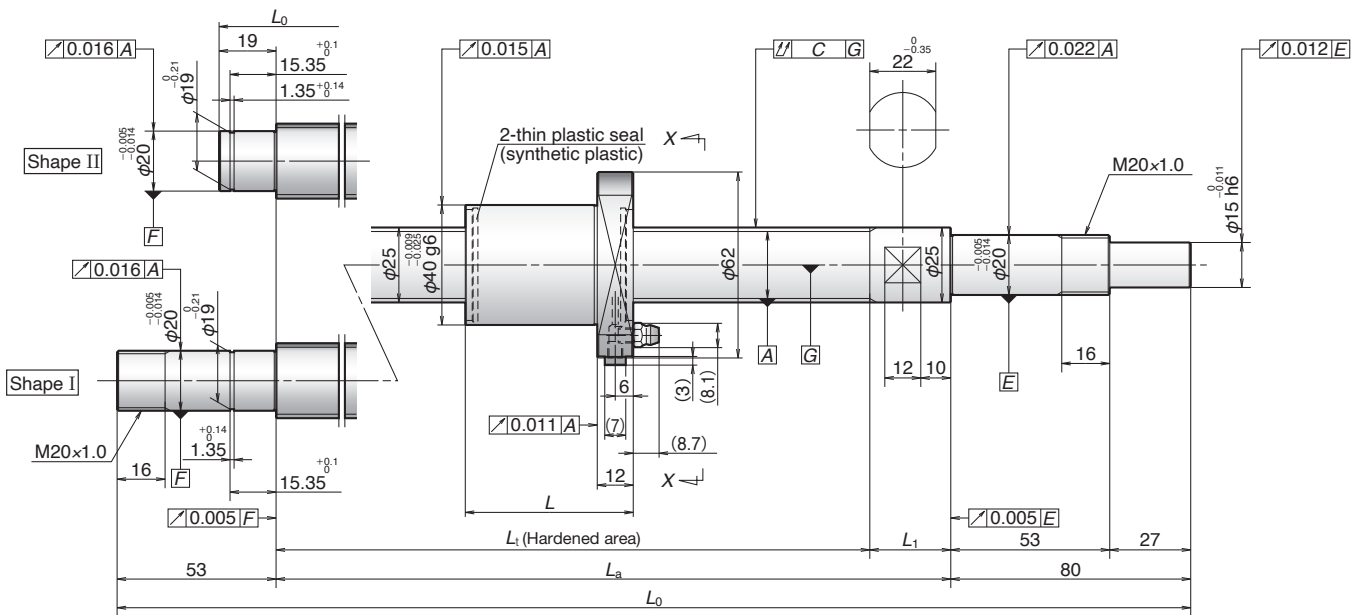
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut(cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )		
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed				
II	0	0.030	0.023	0.055	2.2-12.8	3.1	5 000	-	3.9	2.0		
		0.035	0.025	0.065	2.2-12.8	3.4						
		0.040	0.027	0.065	2.2-12.8	3.8						
		0.040	0.027	0.080	2.2-12.8	4.2						
I		0.046	0.030	0.100	1.8-14.8	5.0	2 850	3 920				
		0.054	0.035	0.100	1.8-14.8	5.8	2 030	2 820				
		0.065	0.040	0.130	1.8-14.8	7.3	1 180	1 650				
		0.077	0.046	0.170	1.8-14.8	8.8	770	1 080				
II		0.035	0.025	0.055	2.7-13.8	3.3	5 000	-			4.3	2.2
		0.035	0.025	0.065	2.7-13.8	3.7						
		0.040	0.027	0.065	2.7-13.8	4.1						
		0.040	0.027	0.080	2.7-13.8	4.4						
I	0.046	0.030	0.100	1.8-14.8	5.3	2 640	3 620					
	0.054	0.035	0.100	1.8-14.8	6.0	1 900	2 630					
	0.065	0.040	0.130	1.8-14.8	7.5	1 120	1 570					
	0.077	0.046	0.170	1.8-14.8	9.1	740	1 040					

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-PSS Model

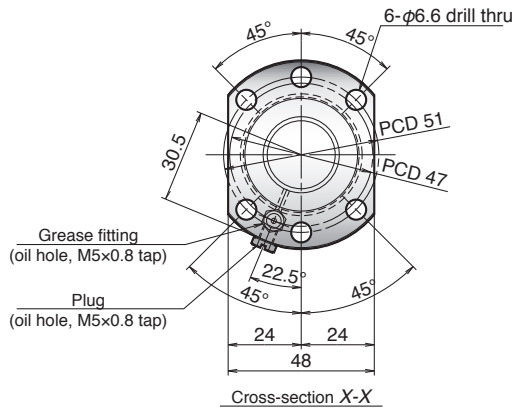
## Screw shaft diameter 25 mm, Lead 30 and 50 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$
PSS2530N1D0779	25	30	7 490	14 600	500	570	74	650	680	779	30
PSS2530N1D0879					600	670		750	780	879	
PSS2530N1D0979					700	770		850	880	979	
PSS2530N1D1079					800	870		950	980	1 079	
PSS2530N1D1313					1 000	1 062		1 150	1 180	1 313	
PSS2530N1D1513					1 200	1 262		1 350	1 380	1 513	
PSS2530N1D1913					1 600	1 662		1 750	1 780	1 913	
PSS2530N1D2313					2 000	2 062		2 150	2 180	2 313	
PSS2550N1D0829		50	6 910	14 700	500	570	114	690	730	829	40
PSS2550N1D0929					600	670		790	830	929	
PSS2550N1D1029					700	770		890	930	1 029	
PSS2550N1D1129					800	870		990	1 030	1 129	
PSS2550N1D1363					1 000	1 062		1 190	1 230	1 363	
PSS2550N1D1563					1 200	1 262		1 390	1 430	1 563	
PSS2550N1D1963					1 600	1 662		1 790	1 830	1 963	
PSS2550N1D2363					2 000	2 062		2 190	2 230	2 363	

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	3.175 / 22.2
Ball circle dia.	25.5
Accuracy grade/axial play	C5 / 0
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side	
	(Fixed)	(Simple)
WBK20-01 (square) P 45	WBK20-01 (square) P 45	WBK20S-01 (square) P 49
WBK20-11 (round) P 47	WBK20-11 (round) P 47	

Unit : mm

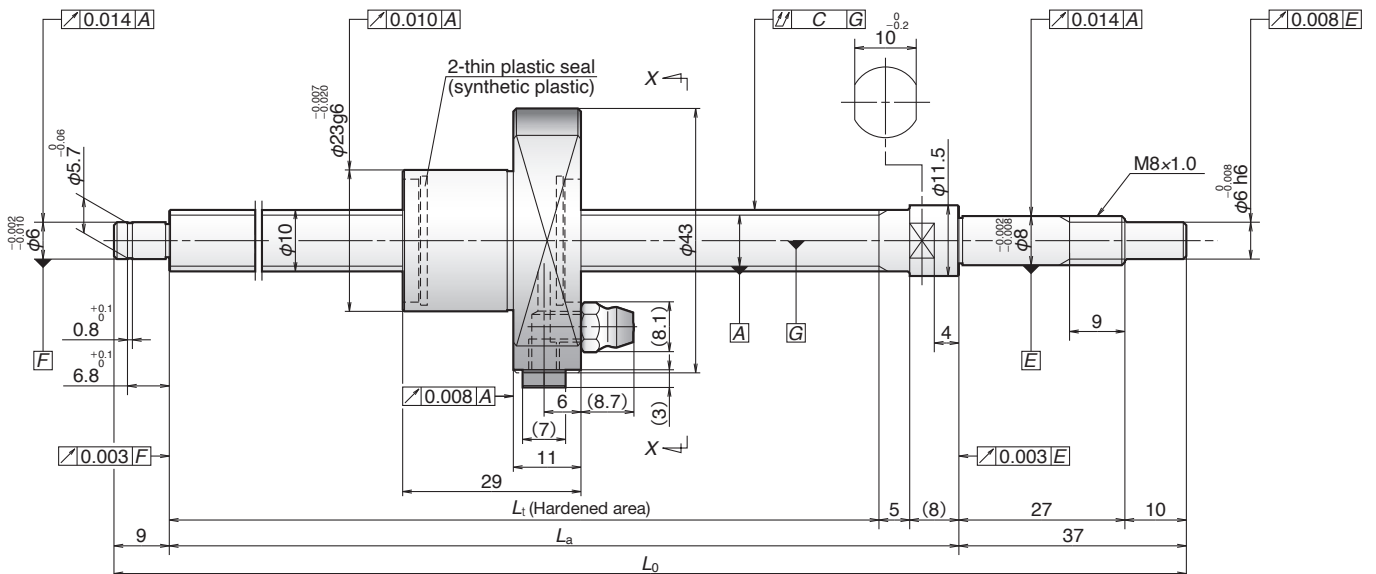
Left shaft end (opposite driven side)	Lead accuracy			Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>		Internal spatial volume of nut(cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )			
	Target value $T$	Error $e_p$	Variation $V_u$				Fixed-simple	Fixed-Fixed					
II	0	0.035	0.025	0.055	2.7-13.8	3.4	5 000	-	5.5	2.8			
		0.035	0.025	0.065	2.7-13.8	3.7							
		0.040	0.027	0.065	2.7-13.8	4.1					4 980		
		0.040	0.027	0.080	2.7-13.8	4.5					3 960		
I		0.046	0.030	0.100	1.8-14.8	5.3	2 670	3 650					
		0.054	0.035	0.100	1.8-14.8	6.1	1 920	2 650					
		0.065	0.040	0.130	1.8-14.8	7.6	1 130	1 580					
		0.077	0.046	0.170	1.8-14.8	9.1	740	1 040					
II		0.035	0.025	0.065	5.4-17.6	3.8	5 000	-			7.7	3.9	
		0.035	0.025	0.065	5.4-17.6	4.1							
		0.040	0.027	0.080	5.4-17.6	4.5							4 750
		0.040	0.027	0.080	5.4-17.6	4.9							3 790
I	0.046	0.030	0.100	4.1-19.6	5.8	2 570	3 470						
	0.054	0.035	0.100	4.1-19.6	6.5	1 860	2 540						
	0.065	0.040	0.130	4.1-19.6	8.0	1 100	1 520						
	0.077	0.046	0.170	4.1-19.6	9.6	730	1 020						

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-USS Model

Screw shaft diameter 10 mm, Lead 5 mm



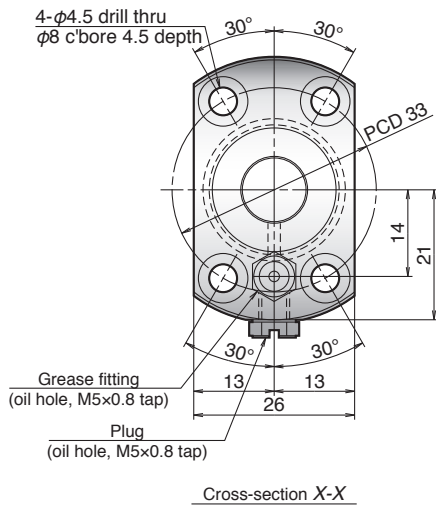
Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Screw shaft dimensions		
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.	$L_t$	$L_a$	$L_0$
USS1005N1D0221	10	5	3 420	4 840	100	133	162	175	221
USS1005N1D0321					200	233	262	275	321
USS1005N1D0521					400	433	462	475	521

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.



# for High-Accuracy and Cleanroom Uses

Unit : mm



Ball screw specification	
Shaft dia.	$\phi$ 10
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	2.000 / 8.2
Ball circle dia.	10.3
Accuracy grade/axial play	C3 / 0
Factory-packed grease	NSK cleanroom grease LG2

### [Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK08-01C (square, cleanroom) P 45	WBK08S-01C (square, cleanroom) P 49
WBK08-11C (round, cleanroom) P 47	WBK08S-01B (low-profile, square) P 49
WBK08-01B (low-profile, square) P 45	
WBK08-11 (round) P 47	

Unit : mm

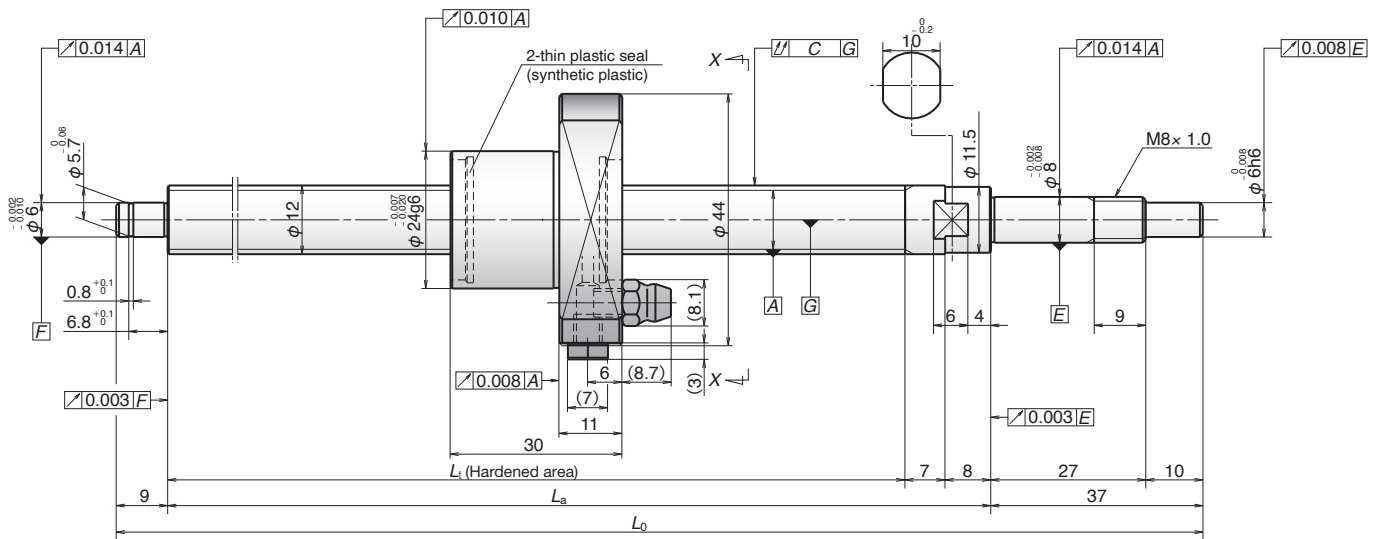
Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Error $e_p$	Variation $V_u$						
0	0.010	0.008	0.035	0.2-1.8	0.3	5 000	0.8	0.4
	0.012	0.008	0.045	0.2-2.0	0.3			
	0.015	0.010	0.070	0.2-3.0	0.5			

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

# Compact FA-USS Model

Screw shaft diameter 12 mm, Lead 5 mm

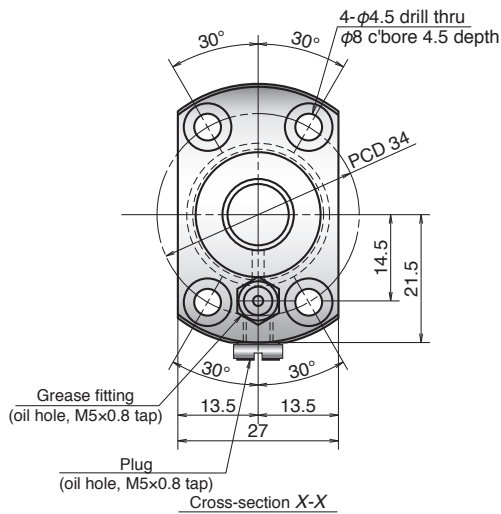


Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Screw shaft dimensions		
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.	$L_t$	$L_a$	$L_0$
USS1205N1D0221	12	5	3 750	5 810	100	130	160	175	221
USS1205N1D0321					200	230	260	275	321
USS1205N1D0621					500	530	560	575	621

Notes : 1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.  
2. Contact NSK if permissible rotational speed is to be exceeded.

# for High-Accuracy and Cleanroom Uses

Unit : mm



Ball screw specification	
Shaft dia.	φ 12
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	2.000 / 10.2
Ball circle dia.	12.3
Accuracy grade/axial play	C3 / 0
Factory-packed grease	NSK cleanroom grease LG2

### [Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK08-01C (square, cleanroom) P 45	WBK08S-01C (square, cleanroom) P 49
WBK08-11C (round, cleanroom) P 47	WBK08S-01B (low-profile, square) P 49
WBK08-01B (low-profile, square) P 45	
WBK08-11 (round) P 47	

Unit : mm

Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Error $e_p$	Variation $V_u$				Fixed-simple		
0	0.010	0.008	0.035	0.2-1.8	0.3	5 000	1.0	0.5
	0.012	0.008	0.045	0.2-2.0	0.3			
	0.016	0.012	0.070	0.2-3.0	0.7			

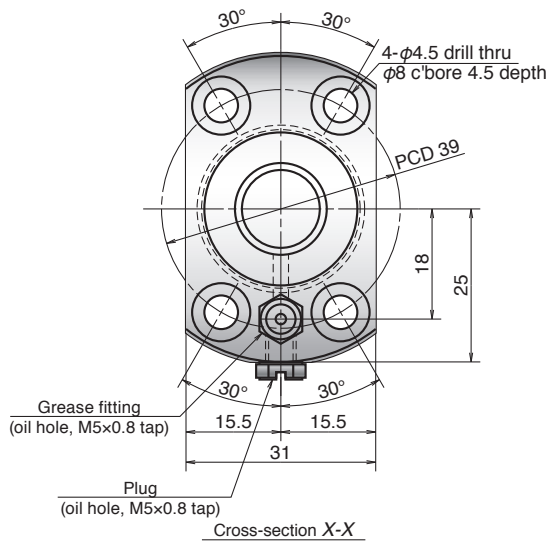
3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.



# for High-Accuracy and Cleanroom Uses

Unit : mm



Ball screw specification	
Shaft dia.	φ15
Preload type	Oversize ball (P-preload)
Ball dia./screw shaft root dia.	2.778 / 12.6
Ball circle dia.	15.5
Accuracy grade/axial play	C3 / 0
Factory-packed grease	NSK cleanroom grease LG2

### [Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK12-01C (square, cleanroom) P 45	WBK12S-01C (square, Cleanroom) P 49
WBK12-11C (round, cleanroom) P 47	WBK12S-01B (low-profile, square) P 49
WBK12-01B (low-profile, square) P 45	
WBK12-11 (round) P 47	

Unit : mm

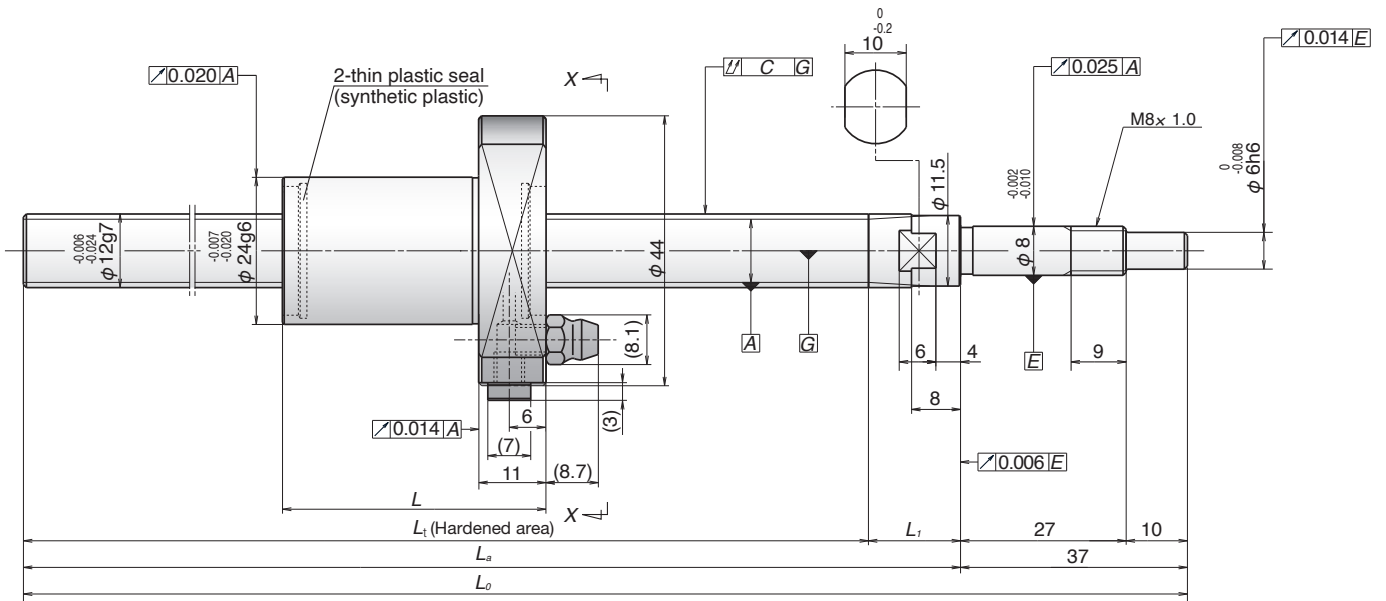
Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm) <sup>*1</sup>	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> ) <sup>*2</sup>	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
	Error $e_p$	Variation $V_u$				Fixed-simple		
0	0.010	0.008	0.025	0.2-5.0	0.5	5 000	2.0	1.0
	0.012	0.008	0.035	0.2-5.0	0.6			
	0.015	0.010	0.045	0.2-6.0	0.9			
	0.018	0.013	0.060	0.2-8.0	1.1	4 130		

3. Service temperature range is 0 to 80°C.

4. Use of NSK support unit is recommended. Refer to pages 45 to 50 for details.

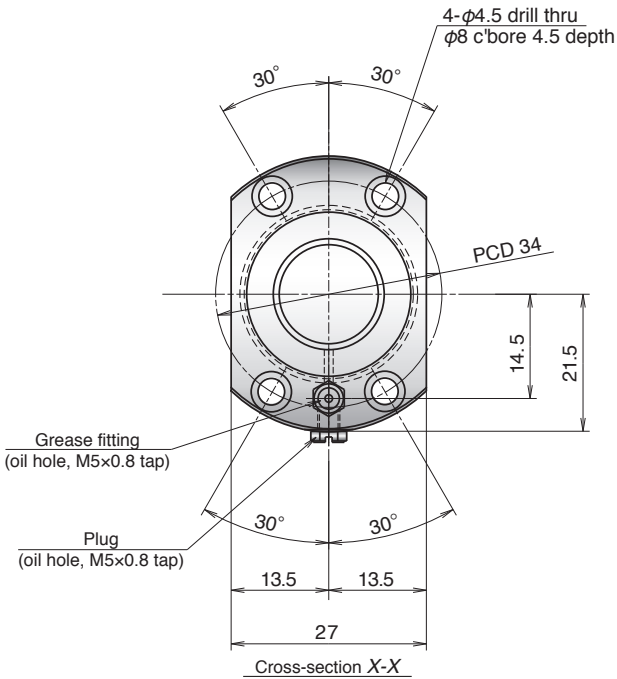
# Compact FA-FSS Model

Screw shaft diameter 12 mm, Lead 10 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut length $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_o$	$L_1$
FSS1210N1D0400	12	10	3 760	5 780	250	287	43	348	363	400	15
FSS1210N1D0600					450	487		548	563	600	
FSS1210N1D0900					750	787		848	863	900	

- Notes :
1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.
  2. The stroke and permissible rotational speed shown in the table are the values when the support unit recommended by NSK is used and Fixed-Supported (ball screw mounting method) is selected.
  3. Contact NSK if permissible rotational speed is to be exceeded.



Unit : mm

Ball screw specification	
Ball dia./screw shaft root dia.	2.000 / 10.2
Ball circle dia.	12.3
Accuracy grade/axial play	Ct7 / 0.010 or less
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK08-01B (low-profile, square) P 45	WBK12SF-01B (low-profile, square) P 50

Unit : mm

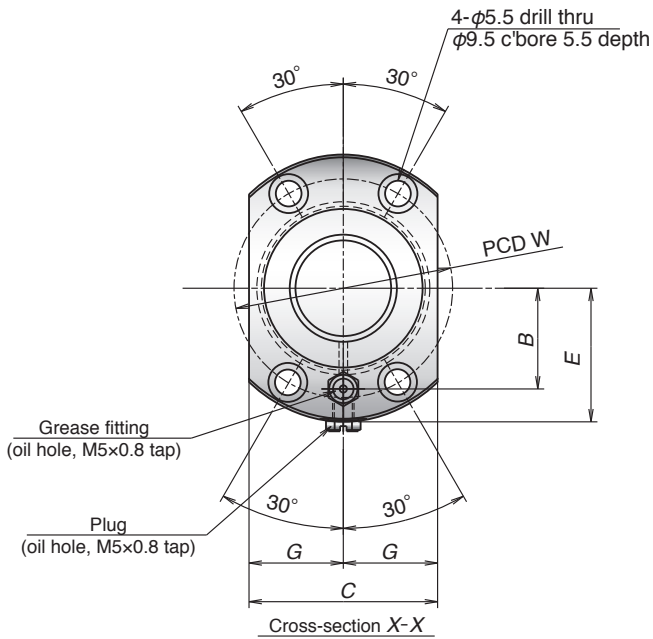
Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm)	Mass (kg)	Permissible rotational speed ( $\text{min}^{-1}$ )*2	Internal spatial volume of nut ( $\text{cm}^3$ )	Standard volume of grease replenishing ( $\text{cm}^3$ )
	Error $e_p$	Variation $V_{300}$				Fixed-simple		
0	0.120	0.052	0.080	-	0.5	5 000	1.0	0.5
	0.195		0.120		0.7	5 000		
	0.310		0.180		1.0	2 300		

4. Service temperature range is 0 to 80°C

5. Use of NSK support unit is recommended. Refer to pages 45 to 48 for details.







Unit : mm

Ball screw specification		
Lead	10	20
Ball dia./screw shaft root dia.	2.778 / 12.6	3.175 / 12.2
Ball circle dia.	15.5	
Accuracy grade/axial play	Ct7 / 0.010 or less	
Factory-packed grease	NSK grease LR3	

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK12-01B (low-profile, square) P 45	WBK15SF-01B (low-profile, square) P 50

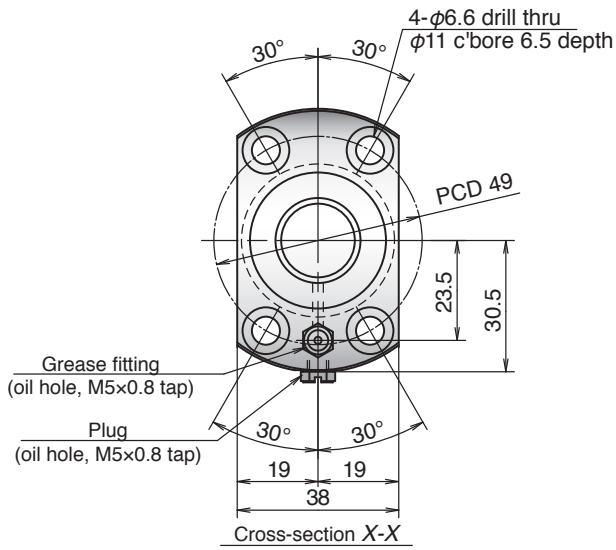
Unit : mm

Nut dimensions								Shaft run-out C	Dynamic preload torque (N·cm)	Mass (kg)	Permissible rotational speed (min <sup>-1</sup> )*2	Internal spatial volume of nut (cm <sup>3</sup> )	Standard volume of grease replenishing (cm <sup>3</sup> )
L	D <sub>1</sub>	D <sub>2</sub>	W	B	C	E	G						
43	28	51	39	18	31	25	15.5	0.070	-	0.9	5 000	2.0	1.0
								0.125			2 300		
								0.200			1 020		
51	32	55	43	20	33	27	16.5	0.070	-	1.0	5 000	2.8	1.4
								0.125			2 260		
								0.200			1 000		

4. Service temperature range is 0 to 80°C

5. Use of NSK support unit is recommended. Refer to pages 45 to 48 for details.





Unit : mm

Ball screw specification	
Ball dia./screw shaft root dia.	3.175 / 17.2
Ball circle dia.	20.5
Accuracy grade/axial play	Ct7 / 0.010 or less
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK15-01B (low-profile, square) P 45	WBK20SF-01B (low-profile, square) P 50

Unit : mm

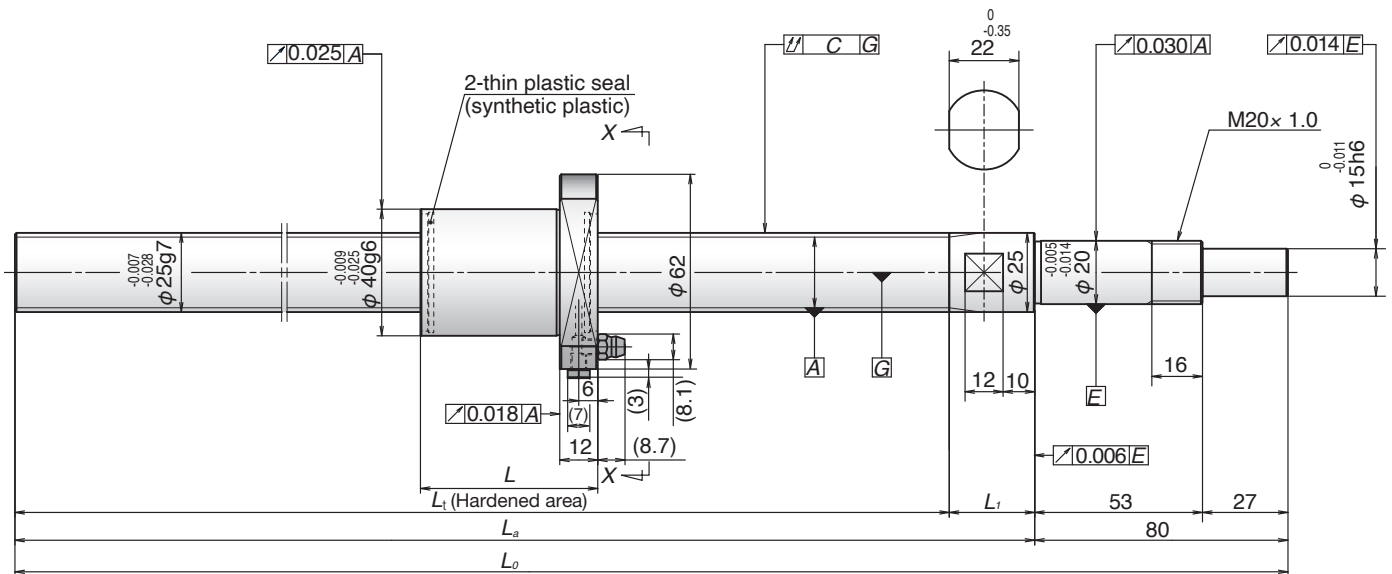
Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm)	Mass (kg)	Permissible rotational speed ( $\text{min}^{-1}$ ) <sup>*2</sup>	Internal spatial volume of nut ( $\text{cm}^3$ )	Standard volume of grease replenishing ( $\text{cm}^3$ )
	Error $e_p$	Variation $V_{300}$				Fixed-simple		
0	0.195	0.052	0.085	-	1.7	5 000	3.2	1.6
	0.310				2.6	3 310		
	0.490				3.6	1 450		
	0.195				1.8	5 000		
	0.310				2.7	3 350		
	0.490				3.8	1 460		

4. Service temperature range is 0 to 80°C

5. Use of NSK support unit is recommended. Refer to pages 45 to 48 for details.

# Compact FA-FSS Model

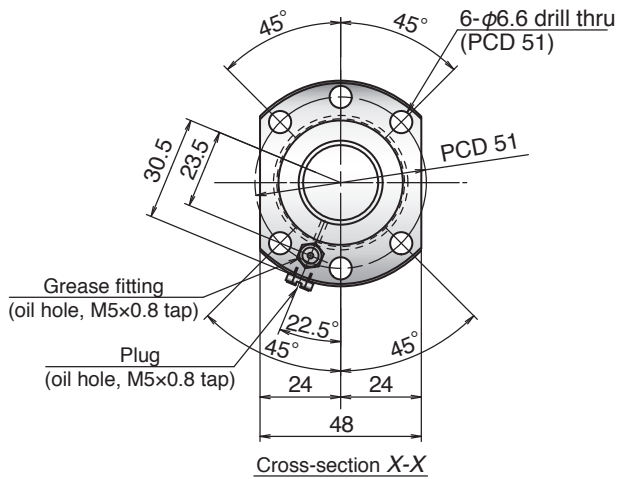
Screw shaft diameter 25 mm, Lead 10, 20 and 25 mm



Reference no.	Screw shaft dia. $d$	Lead $\ell$	Basic load ratings (N)		Stroke		Nut dimensions $L$	Screw shaft dimensions			
			Dynamic $C_a$	Static $C_{0a}$	Nominal	max.		$L_t$	$L_a$	$L_0$	$L_1$
FSS2510N1D0600	25	10	15 000	32 400	400	415	56	493	520	600	27
FSS2510N1D1000					800	815		893	920	1 000	
FSS2510N1D1450					1 250	1 265		1 343	1 370	1 450	
FSS2520N1D0600		20	7 650	14 800	400	418	54	494	520	600	26
FSS2520N1D1000					800	818		894	920	1 000	
FSS2520N1D1450					1 250	1 268		1 344	1 370	1 450	
FSS2525N1D0600		25	7 490	14 600	400	405	63	490	520	600	30
FSS2525N1D1000					800	805		890	920	1 000	
FSS2525N1D1450					1 250	1 255		1 340	1 370	1 450	

- Notes :
1. Indicates ball screw preload control value. Approximately 2.0 N · cm of torque is added due to thin plastic seals.
  2. The stroke and permissible rotational speed shown in the table are the values when the support unit recommended by NSK is used and Fixed-Supported (ball screw mounting method) is selected.
  3. Contact NSK if permissible rotational speed is to be exceeded.

Unit : mm



Ball screw specification	
Ball dia./screw shaft root dia.	3.175 / 22.2
Ball circle dia.	25.5
Accuracy grade/axial play	Ct7 / 0.010 or less
Factory-packed grease	NSK grease LR3

[Recommended support unit]

For drive side (Fixed)	For opposite to drive side (Simple)
WBK20-01 (square) P 45	WBK25SF-01 (square) P 50

Unit : mm

Target value $T$	Lead accuracy		Shaft run-out $C$	Dynamic preload torque (N·cm)	Mass (kg)	Permissible rotational speed ( $\text{min}^{-1}$ )*1	Internal spatial volume of nut ( $\text{cm}^3$ )	Standard volume of grease replenishing ( $\text{cm}^3$ )
	Error $e_p$	Variation $V_{300}$				Fixed-simple		
0	0.155	0.052	0.065	-	2.6	5 000	4.7	2.4
	0.310		0.090		4.0	4 590		
	0.490		0.130		5.8	1 970		
	0.155		0.065		2.6	5 000	3.9	
	0.310		0.090		4.0	4 570		
	0.490		0.130		5.8	1 960		
	0.155		0.065		2.6	5 000	4.3	
	0.310		0.090		4.1	4 660		
	0.490		0.130		5.8	1 990		

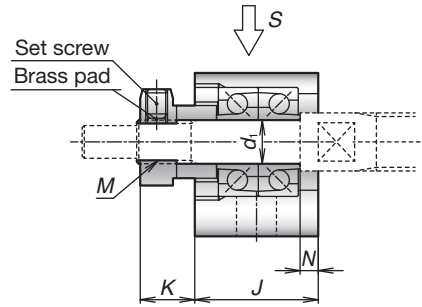
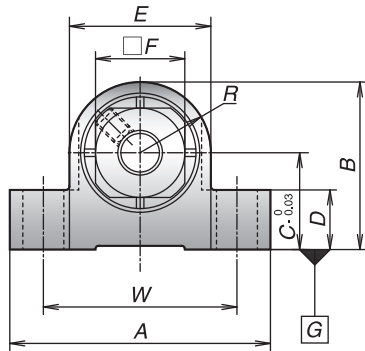
4. Service temperature range is 0 to 80°C

5. Use of NSK support unit is recommended. Refer to pages 45 to 48 for details.

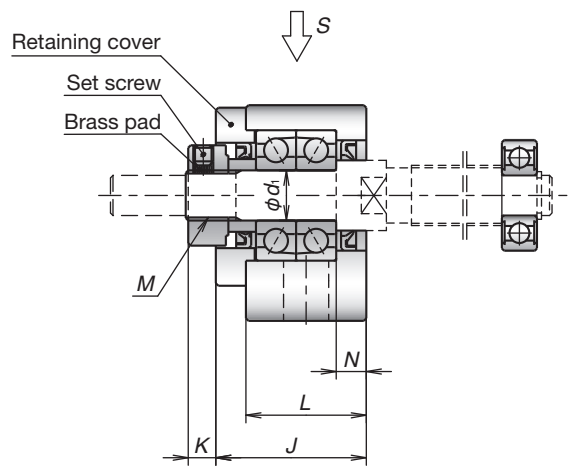
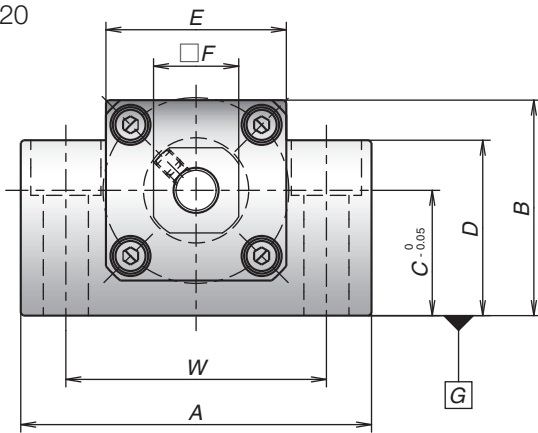
# Square Type Support Unit

## Fixed support side support unit (square type)

WBK04 and 06

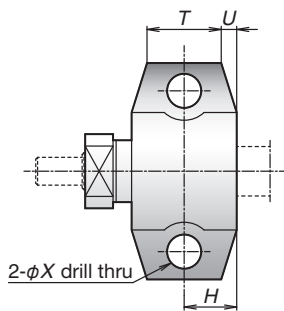


WBK08 to 20



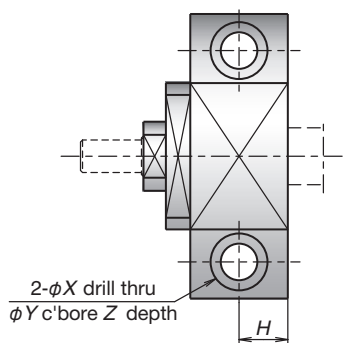
Reference no.	Use	$d_1$	A	B	C	D	E	F	L	J	K	R	T	U
WBK04-01M	General	4	27	17	10	6	14	10	-	14	5.5	7	9	2.5
WBK06-01M	General	6	35	22.5	13	8	19	12	-	17	7.5	9.5	12	2.5
WBK08-01A	General	8	52	32	17	26	25	14	23	23	7	-	-	-
WBK08-01B	Low type		62	31	15.5	31	-		21.5	25.5	4.5	-	-	-
WBK08-01C	Cleanroom		52	32	17	26	25		23	23	7	-	-	-
WBK10-01A	General	10	70	43	25	35	36	17	24	30	5.5	-	-	-
WBK10-01B	Low type			38	20	38	-							
WBK10-01C	Cleanroom			43	25	35	36							
WBK12-01A	General	12	70	43	25	35	36	19	24	30	5.5	-	-	-
WBK12-01B	Low type			38	20	38	-							
WBK12-01C	Cleanroom			43	25	35	36							
WBK15-01A	General	15	80	50	30	40	41	22	25	31	12	-	-	-
WBK15-01B	Low type			42	22	42	-							
WBK15-01C	Cleanroom			50	30	40	41							
WBK20-01	General	20	95	58	30	45	56	30	42	52	10	-	-	-

- Notes :
1. Use datum surface G for mounting to machine base.
  2. Tighten set screw after locknut has been adjusted and tightened.
  3. Insert brass pad provided with unit into locknut set screw hole, then insert and tighten the set screw.

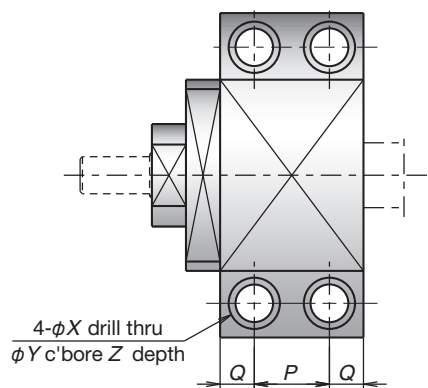


View S (WBK04 and 06)

Reference no.	Tightening torque (reference) [N · cm]	
	Locknut	Set screw
WBK04-**	100	69 (M3)
WBK06-**	190	69 (M3)
WBK08-**	230	69 (M3)
WBK10-**	280	147 (M4)
WBK12-**	630	147 (M4)
WBK15-**	790	147 (M4)
WBK20-**	1 670	147 (M4)



View S (WBK08 to 15)



View S (WBK20)

Unit : mm

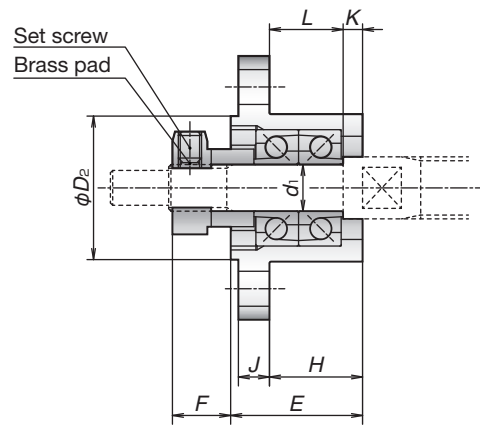
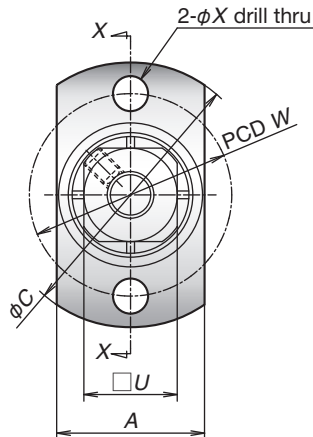
N	Counterbore dimensions							Mass (kg)	Specification				Locknut screw M	Attached bearing for support side
	H	P	Q	W	X	Y	Z		Basic dynamic load rating $C_a$ (N)	Load limit $C_a$ (N)	Rigidity (N/μm)	Maximum starting torque (N·cm)		
2	7	-	-	21	3.5	-	-	0.03	1 470	464	39	0.2	M4×0.5	-
2.5	8.5	-	-	26	5.5	-	-	0.05	2 760	854	60	0.35	M6×0.75	-
4	11.5	-	-	38	6.6	11	12	0.25	4 400	1 450	49	0.88	M8×1	606ZZ
3.5	11			46	9	14	18	0.3	6 600	2 730	94	1.9		606VV
4	11.5			38	6.6	11	12	0.25	3 100	1 100	36	0.52		
6	12	-	-	52	9	14	11	0.5	6 600	2 730	94	1.9	M10×1	608ZZ
							19	0.45	6 600	2 730	94	1.9		608VV
							11	0.5	4 250	1 364	50	1.1		
6	12	-	-	52	9	14	11	0.5	7 100	3 040	104	2.1	M12×1	6000ZZ
							19	0.4	7 100	3 040	104	2.1		6000VV
							11	0.5	4 700	2 443	57	1.2		
5	12.5	-	-	60	11	17	15	0.7	7 600	3 380	113	2.4	M15×1	6002ZZ
							23	0.6	7 600	3 380	113	2.4		6002VV
							15	0.7	5 100	2 757	63	1.3		
10	-	22	10	75	11	17	15	1.4	17 900	8 240	155	6.2	M20×1	6204ZZ

4. Deep groove ball bearing and snap ring are also provided for simple support side. (except WBK04-01M, WBK06-01M)
5. For retaining cover side of WBK08-01A and WBK08-01C, there are no seals.
6. For WBK04-01M and WBK06-01M, non-contact metal seals are installed in both sides of bearings.
7. Contact NSK if the rotational speed is 50 min<sup>-1</sup> and below.

# Round Type Support Unit

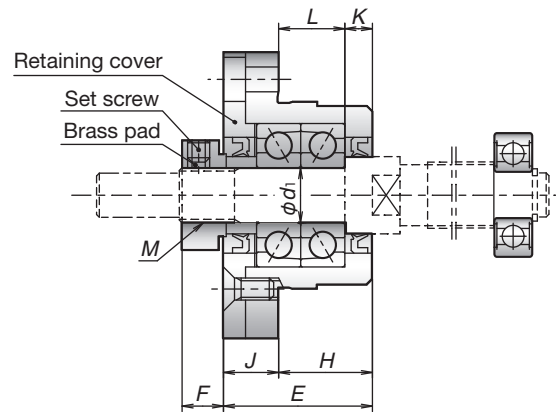
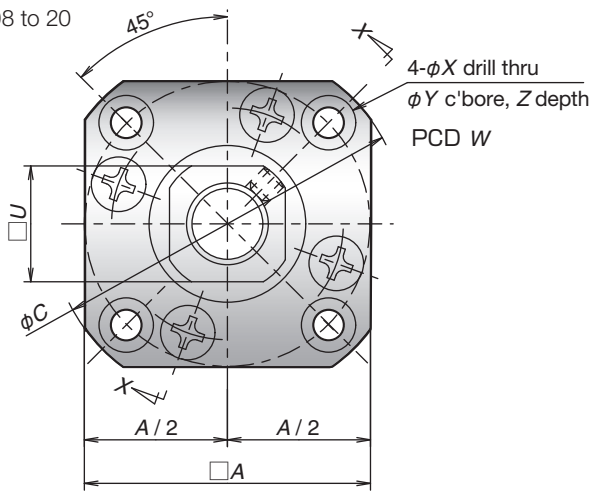
## Fixed support side support unit (round type)

WBK04 and 06



Cross section X-X (Example 1)

WBK08 to 20

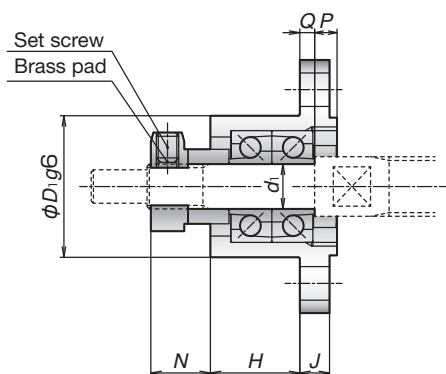


View X-X (Example 1)

Reference no.	Use	$d_1$	A	C	$D_1$	$D_2$	E	H	L	K	F	N	U	P
WBK04-11M	General	4	14	26	14	14	13.5	8.5	7	1.5	5.5	6.6	10	2.6
WBK06-11M	General	6	19	34	19	18.5	17	12	9.5	2.5	7.5	8	12	3
WBK08-11B	High-load	8	42	52	34	-	25.5	15.5	12	3.5	4.5	7	14	6
WBK08-11	General		35	43	28	-	23	14	10	4	7	8		5
WBK08-11C	Cleanroom													
WBK10-11	General	10	42	52	34	-	27	17	12	5	7.5	8.5	17	6
WBK10-11C	Cleanroom													
WBK12-11	General	12	44	54	36	-	27	17	12	5	7.5	8.5	19	6
WBK12-11C	Cleanroom													
WBK15-11	General	15	52	63	40	-	32	17	11	6	12	14	22	8
WBK15-11C	Cleanroom													
WBK20-11	General	20	68	85	57	-	52	30	20	10	10	14	30	14

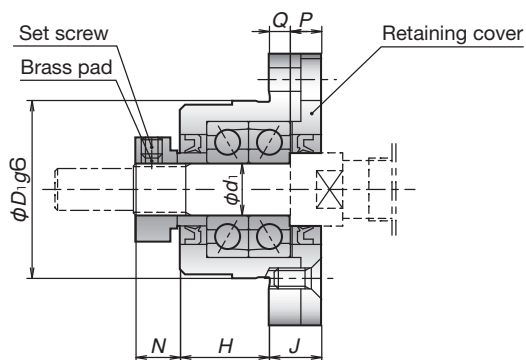
- Notes :
1. Tighten set screw after locknut has been adjusted and tightened.
  2. Insert brass pad provided with unit into locknut set screw hole, then insert and tighten the set screw.
  3. Deep groove ball bearing and snap ring are also provided for simple support side. (except WBK04-11M and WBK06-11M)





Cross section X-X (Example 2)

Reference no.	Tightening torque (reference) [N · cm]	
	Locknut	Set screw
WBK04-**	100	69 (M3)
WBK06-**	190	69 (M3)
WBK08-**	230	69 (M3)
WBK10-**	280	147 (M4)
WBK12-**	630	147 (M4)
WBK15-**	790	147 (M4)
WBK20-**	1 670	147 (M4)



View X-X (Example 2)

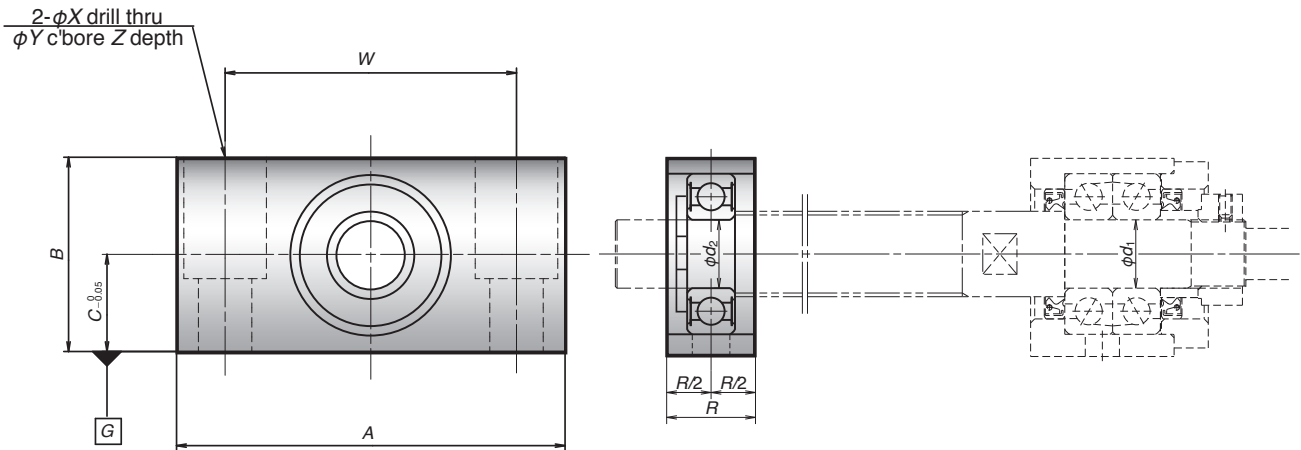
Unit : mm

Q	Counterbore dimensions					Mass (kg)	Specification				Locknut screw M	Attached bearing for support side
	J	W	X	Y	Z		Basic dynamic load rating $C_a$ (N)	Load limit $C_a$ (N)	Rigidity (N/ $\mu$ m)	Maximum starting torque (N·cm)		
2.4	3	20	3.5	-	-	0.02	1 470	464	39	0.2	M4x0.5	-
2	4	26	4.5	-	-	0.04	2 760	854	60	0.35	M6x0.75	-
4	10	42	4.5	8	4	0.2	6 600	2 730	94	1.9	M8x1	606ZZ
	9	35	3.4	6.5			4 400	1 450	49	0.88		606ZZ
4	10	42	4.5	8	4	0.2	3 100	1 100	36	0.52	M10x1	606VV
							6 600	2 730	94	1.9		608ZZ
4	10	44	4.5	8	4	0.25	4 250	1 364	50	1.1	M12x1	608VV
							7 100	3 040	104	2.1		6000ZZ
7	15	50	5.5	9.5	6	0.4	4 700	2 443	57	1.2	M15x1	6000VV
							7 600	3 380	113	2.4		6002ZZ
8	22	70	6.6	11	10	1.1	5 100	2 757	63	1.3	M20x1	6002VV
							17 900	8 240	155	6.2		6204ZZ

4. For retaining cover side of WBK08-11 and WBK08-11C, there are no seals.
5. For WBK04-11M and WBK06-11M, non-contact metal seals are installed in both sides of bearings.
6. Contact NSK if the rotational speed is 50 min<sup>-1</sup> and below.

# Square Type Support Unit for Simple Support Side

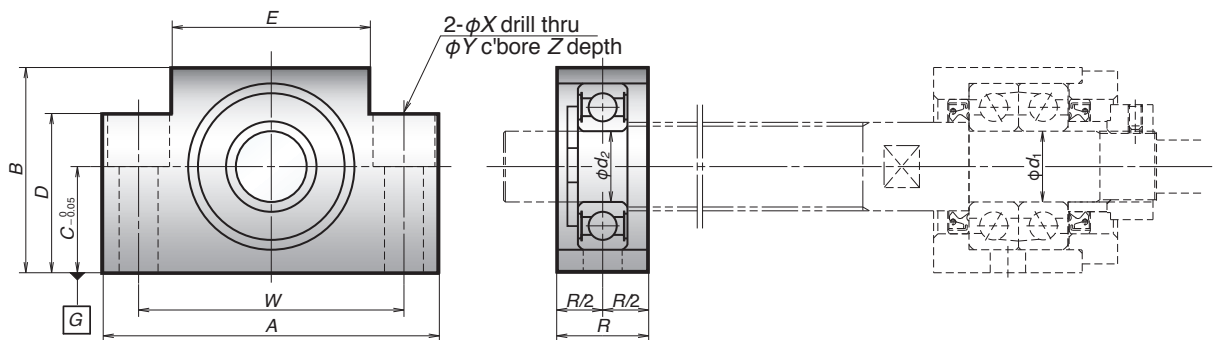
## Simple support side support unit for PSS and USS Models



Unit : mm

Reference no.	Use	$d_2$	A	B	C	R	Counterbore dimensions				Mass (kg)	Bearing reference no.	Axial direction basic dynamic load rating (N)
							W	X	Y	Z			
WBK08S-01B	Low	6	62	31	15.5	16	46	9	14	18	0.2	606ZZ	2 260
WBK12S-01B	Low	10	70	38	20	20	52	9	14	19	0.4	6000ZZ	4 550
WBK15S-01B	Low	15	80	42	22	20	60	9	14	23	0.4	6002ZZ	5 600

Note : 1. Use datum surface G for mounting to machine base.

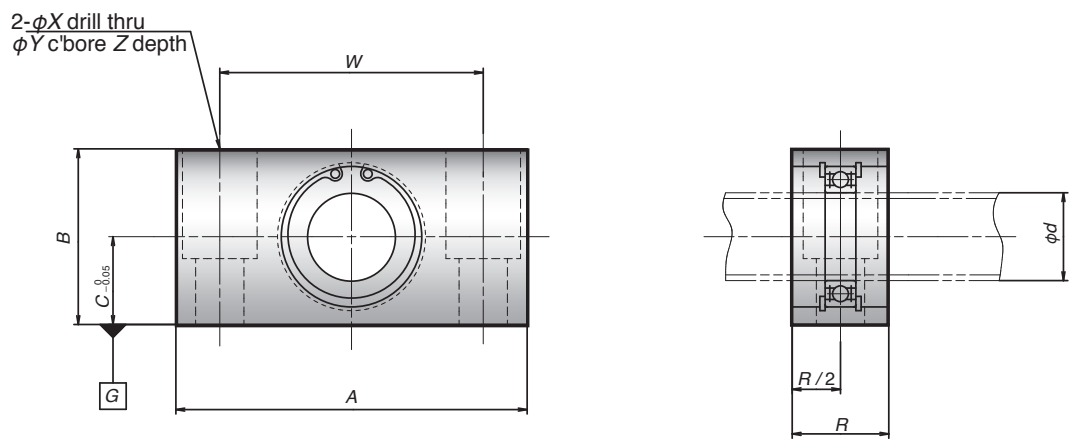


Unit : mm

Reference no.	Use	$d_2$	A	B	C	D	E	R	Counterbore dimensions				Mass (kg)	Bearing reference no.	Axial direction basic dynamic load rating (N)
									W	X	Y	Z			
WBK08S-01	General	6	52	32	17	26	25	15	38	6.6	11	12	0.15	606ZZ	2 260
WBK08S-01C	Cleanroom													606VV	2 260
WBK10S-01	General	8	70	43	25	35	36	20	52	9	14	11	0.4	608ZZ	3 300
WBK10S-01C	Cleanroom													608VV	3 300
WBK12S-01	General	10	70	43	25	35	36	20	52	9	14	11	0.35	6000ZZ	4 550
WBK12S-01C	Cleanroom													6000VV	4 550
WBK15S-01	General	15	80	50	30	40	41	20	60	9	14	11	0.45	6002ZZ	5 600
WBK15S-01C	Cleanroom													6002VV	5 600
WBK20S-01	General	20	95	58	30	45	56	26	75	11	17	15	0.8	6204ZZ	12 800

Note : 1. Use datum surface G for mounting to machine base.

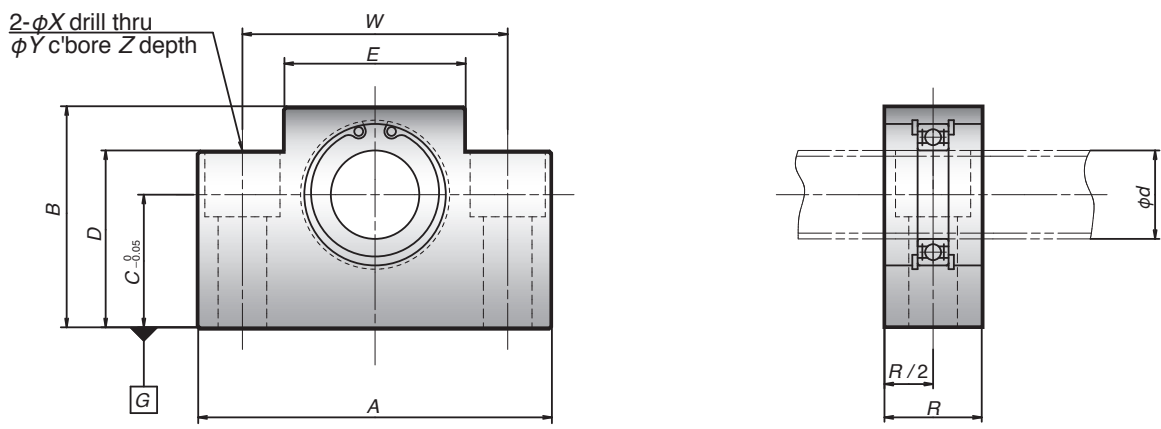
## Simple support side support unit for FSS Model



Unit : mm

Reference no.	d	A	B	C	R	Counterbore dimensions				Mass (kg)	Bearing reference no.	Axial direction basic dynamic load rating (N)
						W	X	Y	Z			
<b>WBK12SF-01B</b>	12	62	31	15.5	18	46	9	14	18	0.2	6801ZZ	1 920
<b>WBK15SF-01B</b>	15	70	38	20	18	52	9	14	19	0.3	6902ZZ	4 350
<b>WBK20SF-01B</b>	20	80	42	22	22	60	11	17	23	0.4	6804ZZ	4 000

Note : 1. Use datum surface G for mounting to machine base.



Unit : mm

Reference no.	d	A	B	C	D	E	R	Counterbore dimensions				Mass (kg)	Bearing reference no.	Axial direction basic dynamic load rating (N)
								W	X	Y	Z			
<b>WBK25SF-01</b>	25	95	58	30	45	56	22	75	11	17	15	0.55	6005ZZ	10 100

Note : 1. Use datum surface G for mounting to machine base.

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