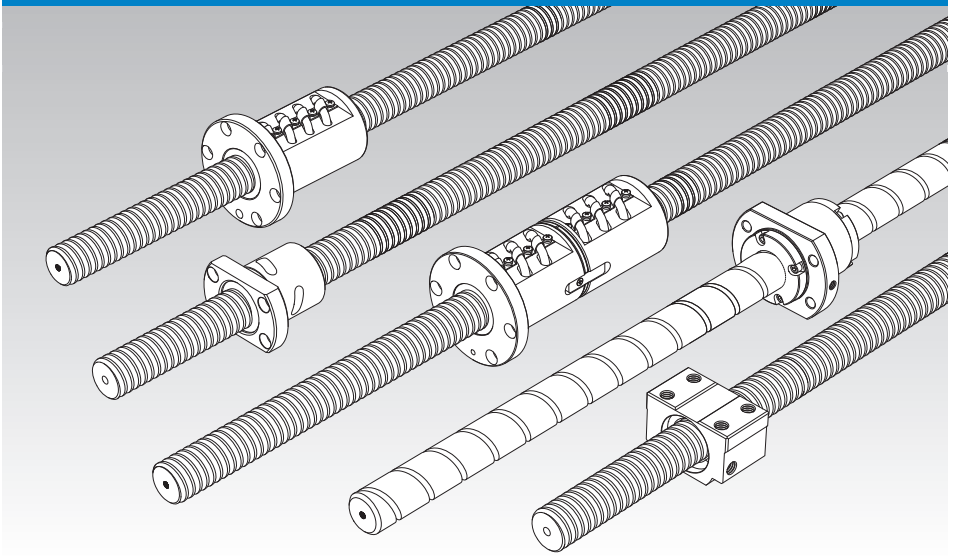
Precision Ball Screw

Models BIF, DIK, BNFN, DKN, BLW, BNF, DK, MDK, WHF, BLK/WGF and BNT



For THK Precision Ball Screws, a wide array of precision-ground screw shafts and ball screw nuts are available as standard to meet diversified applications.

Structure and Features

[Combinations of Various shaft Diameters and Leads]

You can select the combination of a shaft diameter and a lead that meet the intended use from the various nut types and the screw shaft leads. Those nut types include the return-pipe nuts, which represent the most extensive variations among the series, the compact simple nuts and the large-lead end-cap nuts.

[Standard-stock Types (with Unfinished Shaft Ends/Finished Shaft Ends) are Available]

The unfinished shaft end types, which are mass manufactured by cutting the standardized screw shafts to the standard lengths, and those with finished shaft ends, for which the screw shaft ends are machined to match the corresponding the support units, are available as the standard.

[Accuracy Standards Compliant with JIS (ISO)]

The accuracy of the Ball Screw is controlled in accordance with the JIS standards (JIS B1192-1997).

	Precision Ball Screw							
						Rolled Ball Screw		
Accuracy grades	C0	C1	C2	C3	C5	C7	C8	C10

Type	Series symbol	Grade	Remarks
For positioning	C	0, 1, 3, 5	JIS series
	Cp	1, 3, 5	ISO compliant
For transport	Ct	1, 3, 5, 7, 10	

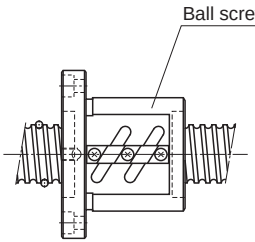
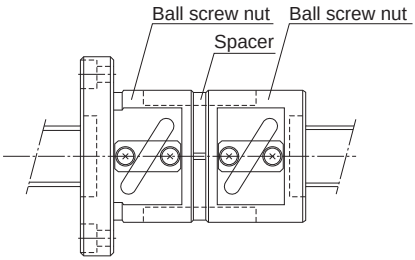
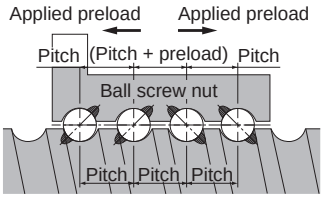
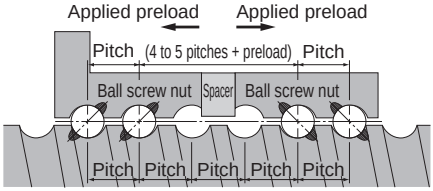
[Options that Meet the Environment are Available]

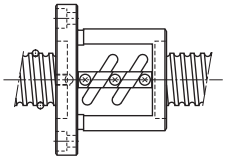
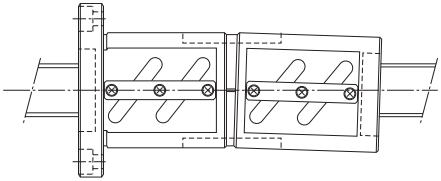
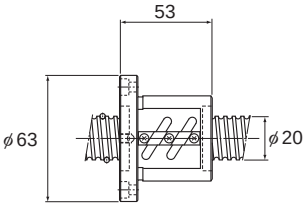
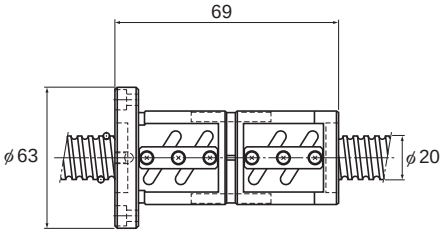
Options are available consisting of a lubricator (QZ), which enables the maintenance interval to be significantly extended, and a wiper ring (W), which improves the ability to remove foreign materials in adverse environments.

[Structure and Features of Offset Preload Type Simple-Nut Ball Screw]

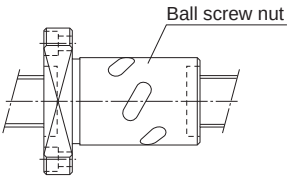
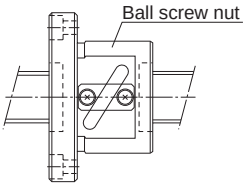
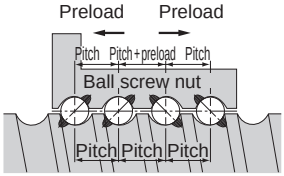
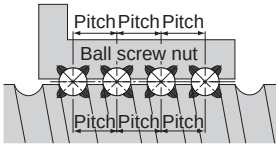
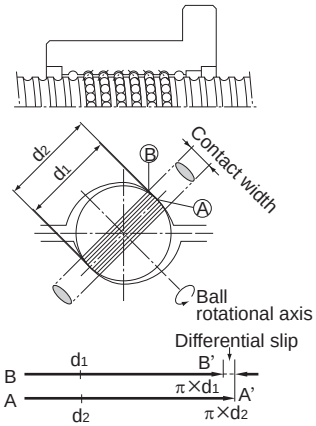
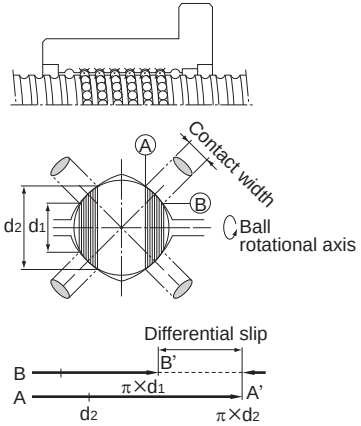
The Simple-Nut Ball Screw is an offset preload type in which a phase is provided in the middle of a single ball screw nut, and an axial clearance is set at a below-zero value (under a preload).
The Simple-Nut Ball Screw has a more compact structure and allows smoother motion than the conventional double-nut type (spacer inserted between two nuts).

[Comparison between the Simple Nut and the Double-Nuts]

Simple-Nut Ball Screw	Conventional Double-Nut Type Ball Screw
	
Preloading Structure	
 Screw shaft	 Screw shaft

Simple-Nut Ball Screw	Conventional Double-Nut Type Ball Screw
Rotational Performance	
The preload adjustment with Simple Nut Ball Screw is performed according to the ball diameter. This eliminates the inconsistency in the contact angle, which is the most important factor of the Ball Screw performance. It also ensures the high rigidity, the smooth motion and the high wobbling accuracy.	The use of a spacer in the double-nuts tends to cause inconsistency in the contact angle due to inaccurate flatness of the spacer surface and an inaccurate perpendicularity of the nut. This results in a non-uniform ball contact, an inferior rotational performance and a low wobbling accuracy.
	
Dimensions	
Since Simple-Nut Ball Screw is based on apreloading mechanism that does not require a spacer, the overall nut length can be kept short. As a result, the whole nut can be lightly and compactly designed.	
 Simple-Nut	 Double-Nut

[Comparison between the Offset Preload Type of Simple-Nut Ball Screw and the Oversized-ball Preload Nut Ball Screw]

Simple-Nut Ball Screw Model DIK	Conventional Oversized-ball Preload Nut Ball Screw Model BNF
	
Preloading Structure	
 Screw shaft	 Screw shaft
Accuracy Life	
Simple-Nut Ball Screw model DIK has a similar preloading structure to that of the double-nut type although the former only has one ball screw shaft. As a result, no differential slip or spin occurs, thus to minimize the increase in the rotational torque and the generation of heat. Accordingly, a high level of accuracy can be maintained over a long period.	With the oversized-ball preload nut Ball Screw, a preload is provided through the balls each in contact with the raceway at four points. This causes differential slip and spin to increase the rotational torque, resulting in an accelerated wear and a heat generation. Therefore, the accuracy deteriorates in a short period.
2 point contact structure 	4 point contact structure 

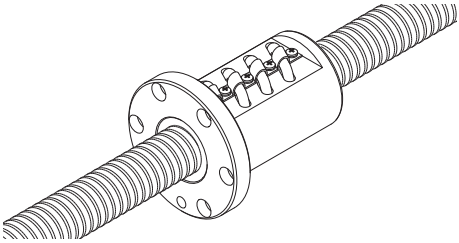
Types and Features

[Preload Type]

Model BIF

Specification Table⇒A15-182

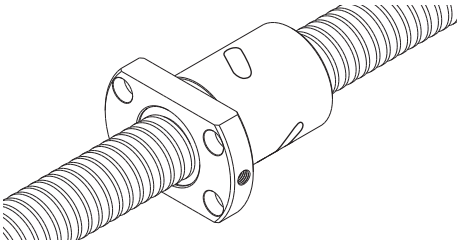
The right and the left screws are provided with a phase in the middle of the ball screw nut, and an axial clearance is set at a below-zero value (under a preload). This compact model is capable of a smooth motion.



Model DIK

Specification Table⇒A15-182

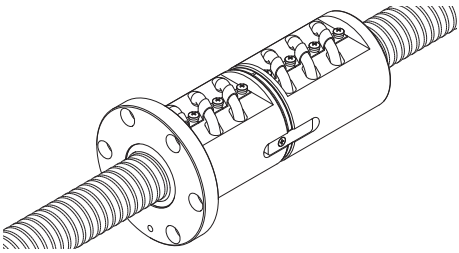
The right and the left screws are provided with a phase in the middle of the ball screw nut, and an axial clearance is set at a below-zero value (under a preload). This compact model is capable of a smooth motion.



Model BNFN

Specification Table⇒A15-182

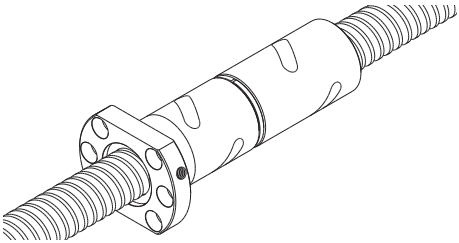
The most common type with a preload provided via a spacer between the two combined ball screw nuts to eliminate the backlash. It can be mounted using the bolt holes drilled on the flange.



Model DKN

Specification Table⇒A15-202

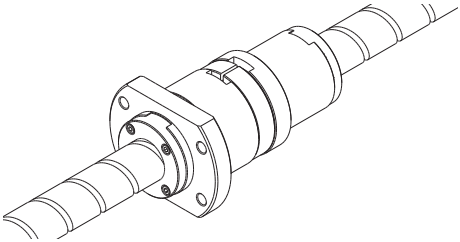
A preload is provided via a spacer between the two combined ball screw nuts to achieve a below-zero axial clearance (under a preload).



Model BLW

Specification Table⇒A15-182

Since a preload is provided through a spacer between two large lead nuts, high-speed feed without by backlash is ensured.

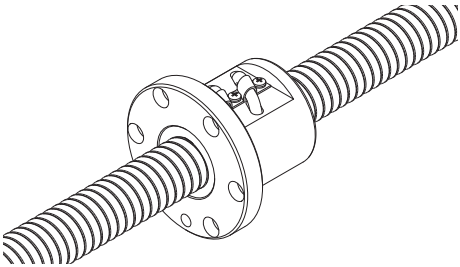


[No Preload Type]

Model BNF

Specification Table⇒A15-218

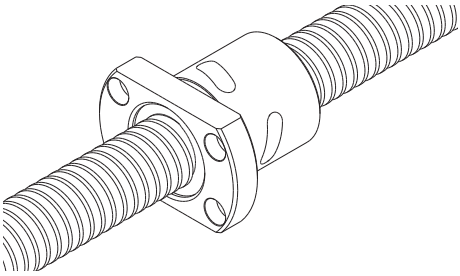
The simplest type with a single ball screw nut. It is designed to be mounted using the bolt holes drilled on the flange.



Model DK

Specification Table⇒A15-216

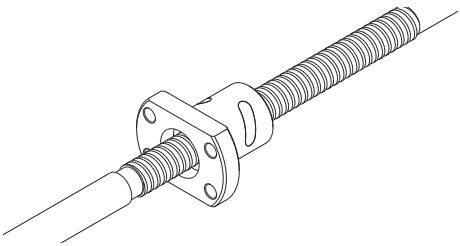
The most compact type, with a ball screw nut diameter 70 to 80% of that of the return-pipe nut.



Model MDK

Specification Table⇒A15-216

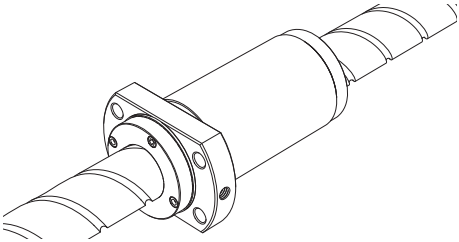
A miniature type with a screw shaft diameter of ϕ4 to ϕ14 mm and a lead of 1 to 5mm.



Model WHF

Specification Table⇒A15-216

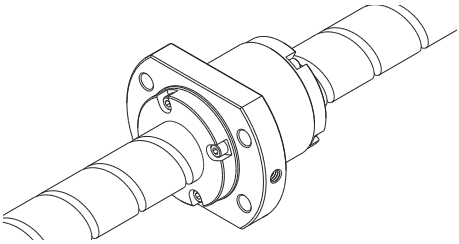
This Ball Screw for high-speed feed achieves a DN value of 120,000 by using a new circulation structure.
Since the nut outer diameter and the mounting holes of this model are dimensionally interchangeable with the previous model WGF, model WGF can be replaced with this model. (WHF1530, WHF2040 and WHF2550)



Models BLK/WGF

Specification Table⇒A15-216

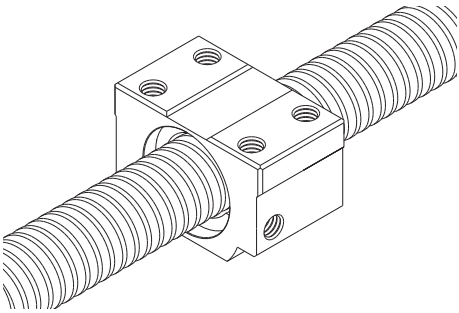
With model BLK, the shaft diameter is equal to the lead dimension. Model WGF has a lead dimension 1.5 to 3 times longer than the shaft diameter.



Square Ball Screw Nut Model BNT

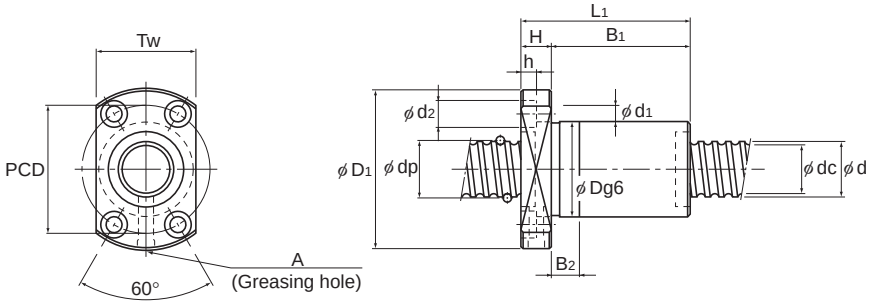
Specification Table⇒A15-246

Since mounting screw holes are machined on the square ball screw nut, this model can compactly be mounted on the machine without a housing.

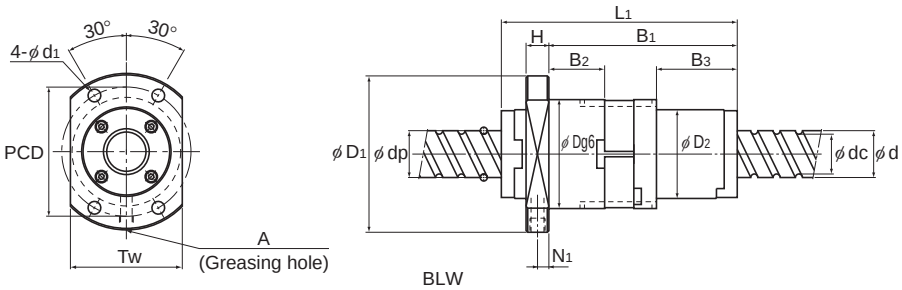


Preload Type of Precision Ball Screw

Screw shaft outer diameter	14 to 18
Lead	4 to 16



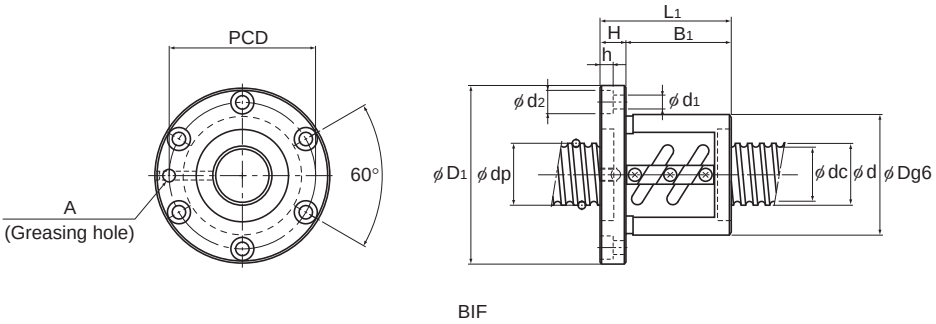
DIK (1404 to 2510)



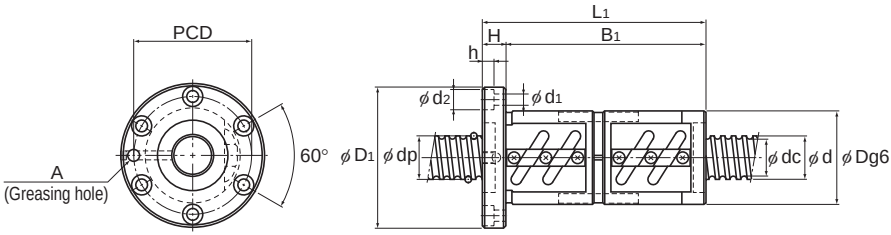
BLW

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity	Outer diameter	Flange diameter	
						Ca	C0a	K			
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D1	D2
14	4	DIK 1404-4	14.5	11.8	2×1	3	5.1	190	26	45	—
		DIK 1404-6	14.5	11.8	3×1	4.2	7.7	280	26	45	—
15	10	BLW 1510-5.6	15.75	12.5	2×2.8	14.3	27.8	680	43	64	34
16	4	BIF 1604-6	16.5	13.8	2×1.5	5.1	10.5	350	36	59	—
	5	BIF 1605-5	16.75	13.2	1×2.5	7.4	13.9	330	40	60	—
		DIK 1605-6	16.75	13.2	3×1	7.4	13	310	30	49	—
		BNFN 1605-3	16.75	13.2	2×1.5	8.7	16.8	390	40	60	—
		BNFN 1605-5	16.75	13.2	2×2.5	13.5	27.8	640	40	60	—
	6	BIF 1606-5	16.8	13.2	1×2.5	7.5	14	330	40	60	—
	10	BIF 1610-3	16.8	13.2	1×1.5	4.8	8.5	210	40	63	—
	16	BLW 1616-3.6	16.65	13.7	2×1.8	7.1	14.3	440	41	60	32
18	10	BIF 1810-3	18.8	15.5	1×1.5	5.1	9.6	230	42	65	—
		BNFN 1810-2.5	18.8	15.5	1×2.5	7.8	15.9	360	42	65	—
		BNFN 1810-3	18.8	15.5	2×1.5	9.2	19.1	430	42	65	—

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Model BLW cannot be attached with seal.



BIF



BNFN

Unit: mm

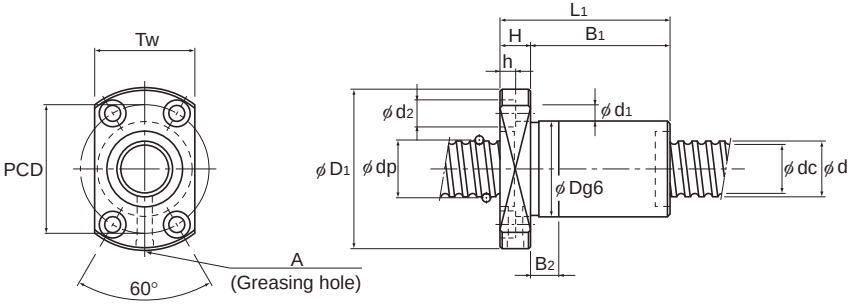
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg•cm²/mm	kg	kg/m
48	10	38	10	—	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.2	1.0
60	10	50	10	—	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.23	1.0
89	10	69	18.7	28.6	52	5.5	—	—	46	5	M6	3.9×10^{-4}	0.81	1.07
65	11	54	—	—	47	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.48	1.35
56	10	46	—	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.56	1.25
60	10	50	10	—	39	4.5	8	4.5	31	—	M6	5.05×10^{-4}	0.3	1.25
96	10	86	—	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.81	1.25
106	10	96	—	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.88	1.25
62	10	52	—	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.56	1.25
62	11	51	—	—	51	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.57	1.41
84.5	10	65.5	18.1	27.1	49	4.5	—	—	44	6	M6	5.05×10^{-4}	0.67	1.42
75	12	63	—	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	0.75	1.81
119	12	107	—	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	1.09	1.81
135	12	123	—	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	1.21	1.81

For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

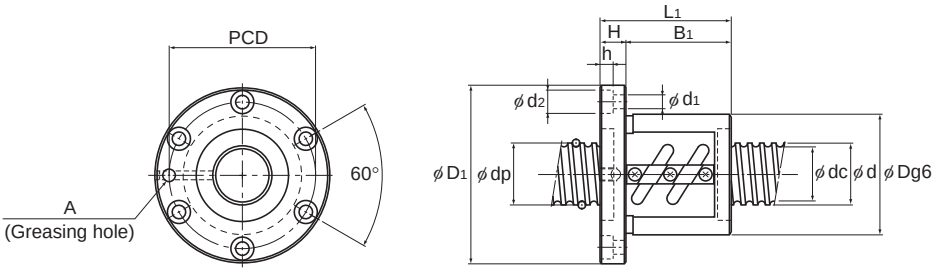
Screw shaft outer diameter	20
Lead	4 to 5



DIK (1404 to 2510)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
20	4	BIF 2004-5	20.5	17.8	1×2.5	4.8	10.9	360
		BIF 2004-10	20.5	17.8	2×2.5	8.6	21.8	700
		DIK 2004-6	20.5	17.8	3×1	5.2	11.6	380
		DIK 2004-8	20.5	17.8	4×1	6.6	15.5	510
	5	BIF 2005-5	20.75	17.2	1×2.5	8.3	17.4	390
		BIF 2005-6	20.75	17.2	2×1.5	9.7	21	470
		BIF 2005-7	20.75	17.2	1×3.5	11.1	24.5	550
		BIF 2005-10	20.75	17.2	2×2.5	15.1	35	760
		DIK 2005-6	20.75	17.2	3×1	8.5	17.3	310

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BIF

Unit: mm

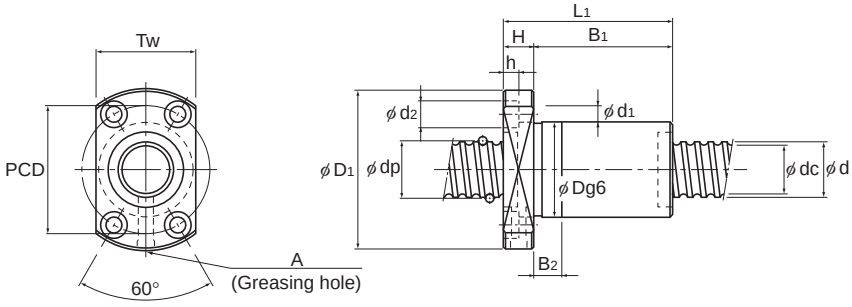
	Nut dimensions										Screw shaft inertia moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
	40	63	53	11	42	—	51	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.49	2.18
	40	63	76	11	65	—	51	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.61	2.18
	32	56	62	11	51	15	44	5.5×9.5×5.5	35	M6	1.23×10^{-3}	0.34	2.18
	32	56	70	11	59	15	44	5.5×9.5×5.5	35	M6	1.23×10^{-3}	0.37	2.18
	44	67	56	11	45	—	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.57	2.06
	44	67	77	11	66	—	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.79	2.06
	44	67	65	11	54	—	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.69	2.06
	44	67	86	11	75	—	55	5.5×9.5×5.5	—	M6	1.23×10^{-3}	0.85	2.06
	34	58	61	11	50	10	46	5.5×9.5×5.5	36	M6	1.23×10^{-3}	0.38	2.06

For model number coding, see A15-248.

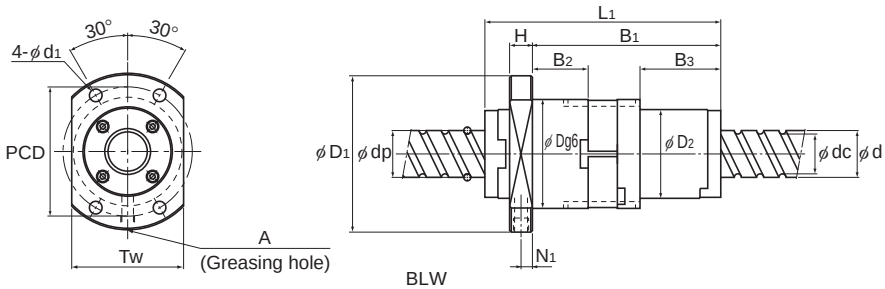
Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	20
Lead	6 to 20



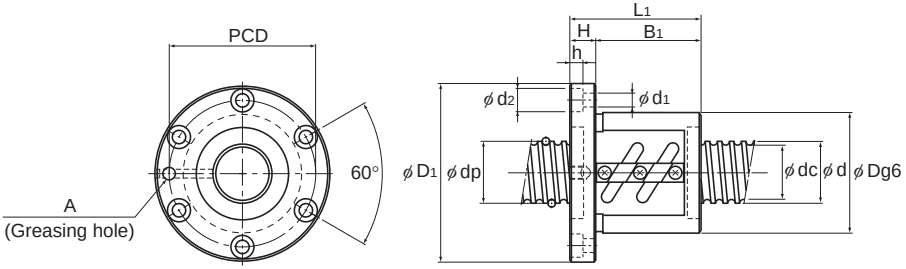
DIK (1404 to 2510)



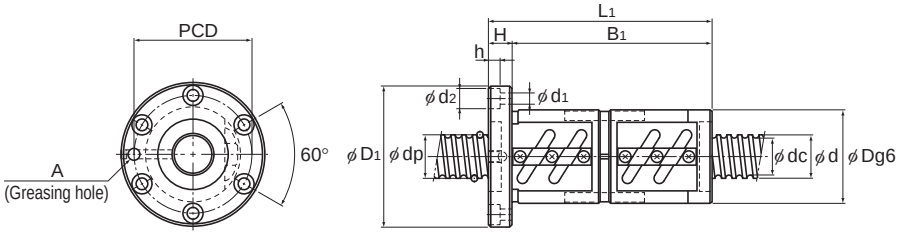
BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1	D2
20	6	BIF 2006-3	20.75	17.2	1×1.5	5.4	10.5	250	48	71	—
		BIF 2006-5	20.75	17.2	1×2.5	8.3	17.5	390	48	71	—
		DIK 2006-6	21	16.4	3×1	11.4	21.5	410	35	58	—
		BNFN 2006-3	20.75	17.2	2×1.5	9.7	21	470	48	71	—
		BNFN 2006-3.5	20.75	17.2	1×3.5	11.1	24.5	550	48	71	—
		BNFN 2006-5	20.75	17.2	2×2.5	15.1	35	760	48	71	—
	8	BIF 2008-5	21	16.4	1×2.5	11.1	21.8	760	46	74	—
		DIK 2008-4	21	16.4	2×1	8.1	14.4	280	35	58	—
	10	BIF 2010A-3	21	16.4	1×1.5	7.2	13.2	250	46	74	—
	12	BIF 2012-3	21	16.4	1×1.5	7.1	12.5	250	48	71	—
	20	BLW 2020-3.6	20.75	17.5	2×1.8	11.1	24.7	570	48	69	39

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Model BLW cannot be attached with seal.



BIF



BNFN

Unit: mm

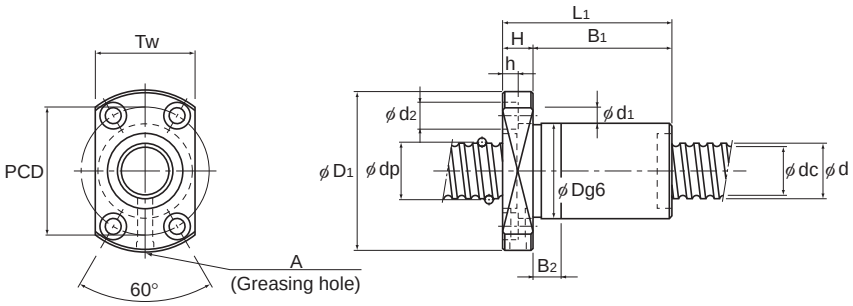
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	56	11	45	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.74	2.13
	62	11	51	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.8	2.13
	76	11	65	15	—	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.48	1.93
	110	11	99	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.3	2.13
	98	11	87	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.17	2.13
	122	11	111	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.42	2.13
	84	15	69	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.02	2.06
	69	11	58	15	—	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.45	2.06
	78	15	63	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.94	2.14
	88	18	70	—	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	1.15	2.19
	105	10	84	25	36	57	5.5	—	—	50	5	M6	1.23×10^{-3}	0.54	2.25

For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

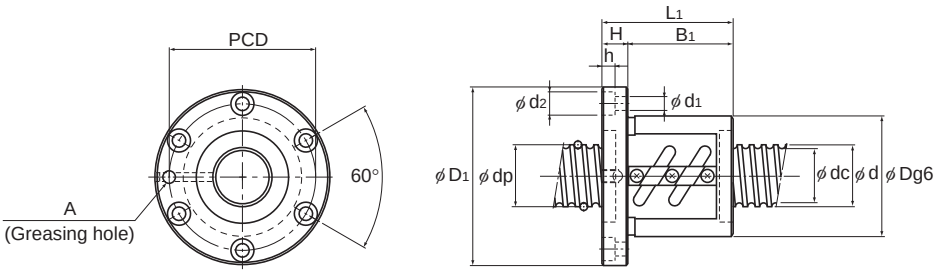
Screw shaft outer diameter	25
Lead	4 to 6



DIK (1404 to 2510)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
25	4	DIK 2504-6	25.5	22.8	3×1	5.7	15	470
		DIK 2504-8	25.5	22.8	4×1	7.4	19.9	620
		○ BIF 2504-5	25.5	22.8	1×2.5	5.2	13.7	420
		○ BIF 2504-10	25.5	22.8	2×2.5	9.5	27.3	820
	5	DIK 2505-6	25.75	22.2	3×1	9.7	22.6	490
		○ BIF 2505-3	25.75	22.2	1×1.5	6	13.1	280
		○ BIF 2505-5	25.75	22.2	1×2.5	9.2	22	470
		○ BIF 2505-6	25.75	22.2	2×1.5	10.8	26.4	560
		○ BIF 2505-7	25.75	22.2	1×3.5	12.3	30.7	650
		○ BIF 2505-10	25.75	22.2	2×2.5	16.7	44	910
	6	DIK 2506-4	26	21.4	2×1	9.1	18	330
		DIK 2506-6	26	21.4	3×1	12.8	27	490

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.



BIF

Unit: mm

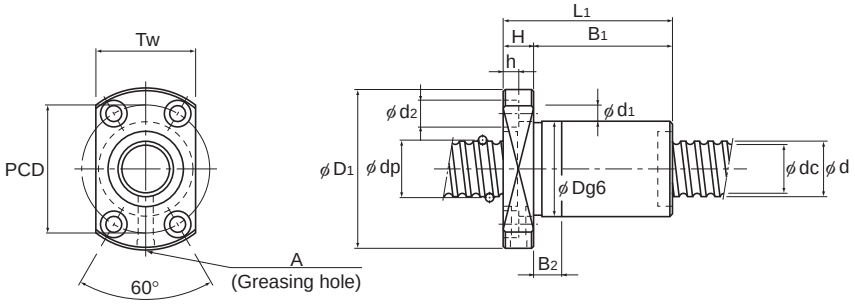
Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
38	63	63	11	52	15	51	5.5×9.5×5.5	39	M6	3.01×10^{-3}	0.43	3.5
38	63	71	11	60	15	51	5.5×9.5×5.5	39	M6	3.01×10^{-3}	0.47	3.5
46	69	48	11	37	—	57	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.55	3.5
46	69	72	11	61	—	57	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.74	3.5
40	63	61	11	50	10	51	5.5×9.5×5.5	41	M6	3.01×10^{-3}	0.47	3.35
50	73	52	11	41	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.7	3.35
50	73	55	11	44	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.75	3.35
50	73	77	11	66	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.95	3.35
50	73	65	11	54	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	0.83	3.35
50	73	85	11	74	—	61	5.5×9.5×5.5	—	M6	3.01×10^{-3}	1.02	3.35
40	63	60	11	49	10	51	5.5×9.5×5.5	41	M6	3.01×10^{-3}	0.46	3.19
40	63	72	11	61	15	51	5.5×9.5×5.5	41	M6	3.01×10^{-3}	0.54	3.19

For model number coding, see A15-248.

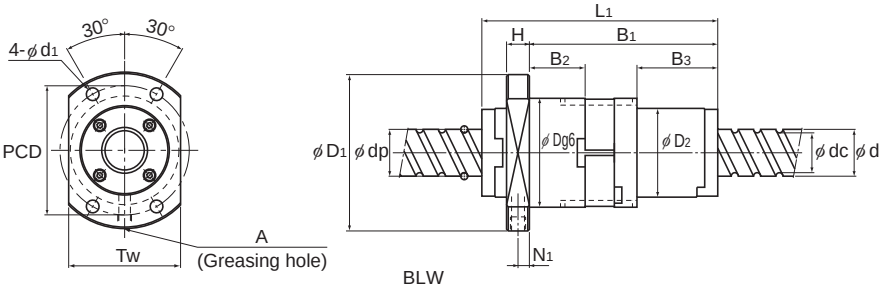
Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	25
Lead	6 to 25



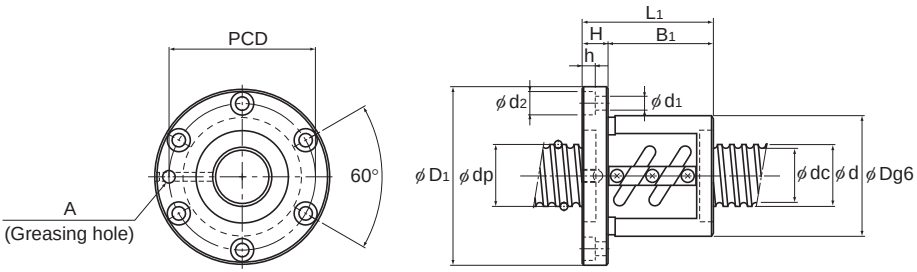
DIK (1404 to 2510)



BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C_{0a} kN	Rigidity K N/μm	Outer diameter D	Flange diameter D_1	D_2
25	6	○ BIF 2506-5	26	21.4	1×2.5	12.5	27.3	490	53	76	—
		○ BIF 2506-6	26	21.4	2×1.5	14.6	32.8	580	53	76	—
		○ BIF 2506-7	26	21.4	1×3.5	15.1	35.9	670	53	76	—
		○ BIF 2506-10	26	21.4	2×2.5	22.5	54.8	940	53	76	—
	8	DIK 2508-4	26	21.4	2×1	9.2	18.8	340	40	63	—
		DIK 2508-6	26	21.4	3×1	13.1	28.1	500	40	63	—
		○ BIF 2508-5	26.25	20.5	1×2.5	15.8	32.8	500	58	85	—
		○ BIF 2508-6	26.25	20.5	2×1.5	18.5	39.4	600	58	85	—
		○ BIF 2508-7	26.25	20.5	1×3.5	21.2	46	690	58	85	—
		○ BIF 2508-10	26.25	20.5	2×2.5	28.7	65.8	970	58	85	—
	10	DIK 2510-4	26	21.6	2×1	9	18	330	40	63	—
		○ BIF 2510A-5	26.3	21.4	1×2.5	15.8	33	500	58	85	—
	12	○ BIF 2512-5	26	21.9	1×2.5	12.3	27.6	490	53	76	—
	16	○ BIF 2516-3	26	21.4	1×1.5	7.9	16.7	300	53	76	—
	25	BLW 2525-3.6	26	21.9	2×1.8	16.6	38.7	700	57	82	47

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see **A15-360**. Model BLW cannot be attached with seal.



BIF

Unit: mm

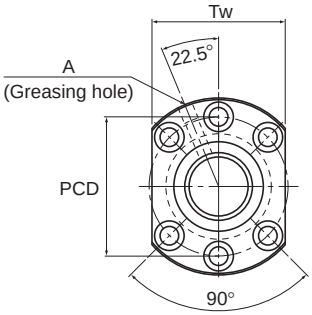
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length											Greasing hole			
L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
62	11	51	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	0.91	3.19
86	11	75	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.19	3.19
74	11	63	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.06	3.19
98	11	87	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.33	3.19
71	12	59	15	—	51	5.5	9.5	5.5	41	—	M6	3.01×10^{-3}	0.54	3.35
94	12	82	25	—	51	5.5	9.5	5.5	41	—	M6	3.01×10^{-3}	0.68	3.35
82	15	67	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.52	3.13
111	15	96	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.92	3.13
98	15	83	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.74	3.13
130	15	115	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	2.2	3.13
85	15	70	20	—	51	5.5	9.5	5.5	41	—	M6	3.01×10^{-3}	0.65	3.45
100	18	82	—	—	71	6.6	11	6.5	—	—	M6	3.01×10^{-3}	1.86	3.27
96	11	85	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.31	3.52
92	11	81	—	—	64	5.5	9.5	5.5	—	—	M6	3.01×10^{-3}	1.25	3.6
124.5	12	101.5	33	44	68	6.6	—	—	60	5	M6	3.01×10^{-3}	0.94	3.52

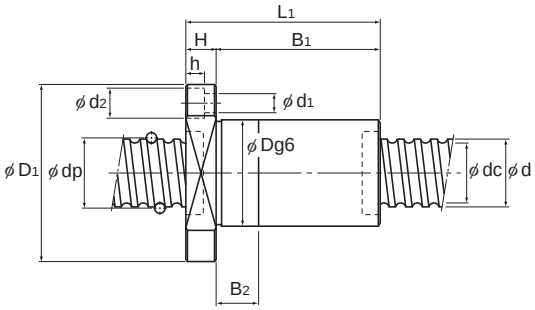
For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	28
Lead	5 to 10

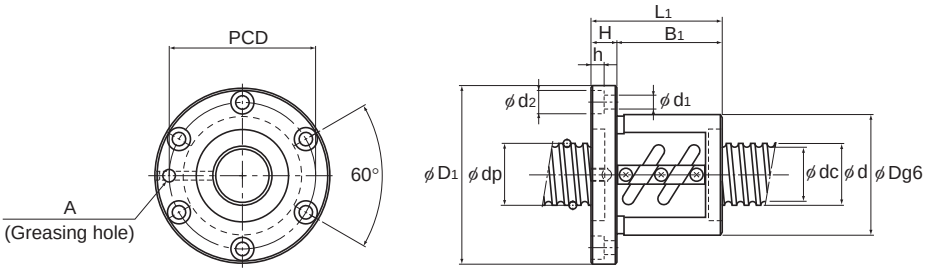




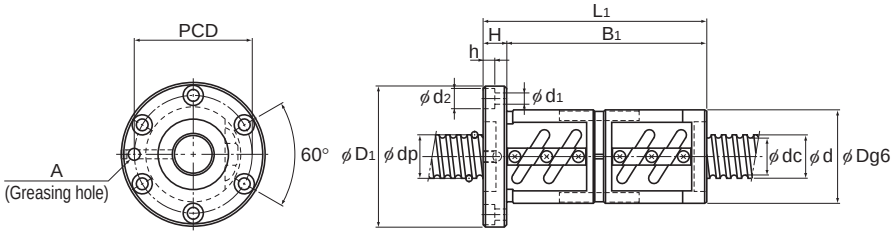
DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
28	5	BIF 2805-5	28.75	25.2	1×2.5	9.7	24.6	520
		BIF 2805-6	28.75	25.2	2×1.5	11.3	29.5	620
		BIF 2805-7	28.75	25.2	1×3.5	12.9	34.4	720
		BIF 2805-10	28.75	25.2	2×2.5	17.4	49.4	1000
		DIK 2805-6	28.75	25.2	3×1	10.5	26.4	560
		DIK 2805-8	28.75	25.2	4×1	13.4	35.2	730
		BNFN 2805-7.5	28.75	25.2	3×2.5	24.8	73.8	1470
	6	BIF 2806-5	28.75	25.2	1×2.5	9.6	24.6	520
		BIF 2806-7	28.75	25.2	1×3.5	12.9	34.5	710
		BIF 2806-10	28.75	25.2	2×2.5	17.5	49.4	1000
		DIK 2806-6	29	24.4	3×1	14	32	530
		BNFN 2806-7.5	28.75	25.2	3×2.5	24.8	73.8	1470
	8	BIF 2808-5	29.25	23.6	1×2.5	16.8	36.8	550
		BIF 2808-6	29.25	23.6	2×1.5	19.6	44.2	660
		BIF 2808-10	29.25	23.6	2×2.5	30.4	73.7	1060
	10	BIF 2810-3	29.75	22.4	1×1.5	15.7	29.4	350
		DIK 2810-4	29.25	23.6	2×1	12.3	25	380
		BNFN 2810-2.5	29.75	22.4	1×2.5	24	48.2	560

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BIF



BNFN

Unit: mm

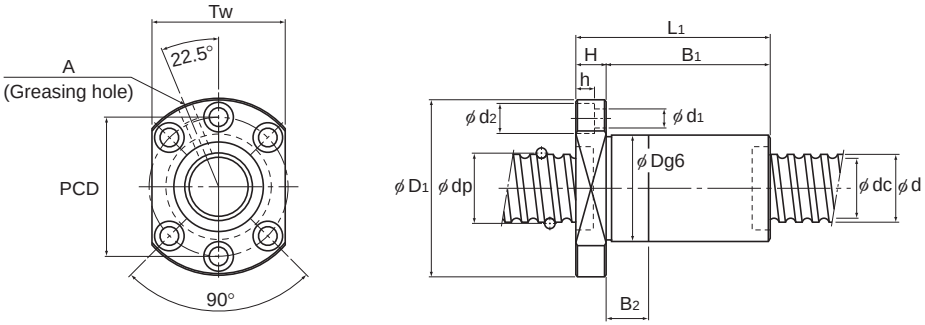
	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter	Flange diameter	Overall length							Greasing hole			
	D	D_1	L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	A	$kg \cdot cm^2/mm$	kg	kg/m
	55	85	59	12	47	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	0.98	4.27
	55	85	79	12	67	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.27	4.27
	55	85	69	12	57	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.14	4.27
	55	85	89	12	77	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.34	4.27
	43	71	69	12	57	15	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.61	4.27
	43	71	79	12	67	20	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.68	4.27
	55	85	134	12	122	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.88	4.27
	55	85	68	12	56	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.09	4.36
	55	85	80	12	68	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.27	4.36
	55	85	104	12	92	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	1.52	4.36
	43	71	73	12	61	15	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.64	4.36
	55	85	158	12	146	—	69	6.6×11×6.5	—	M6	4.74×10^{-3}	2.16	4.36
	60	104	92	18	74	—	82	11×17.5×11	—	M6	4.74×10^{-3}	2.11	4.02
	60	104	120	18	102	—	82	11×17.5×11	—	M6	4.74×10^{-3}	2.45	4.02
	60	104	140	18	122	—	82	11×17.5×11	—	M6	4.74×10^{-3}	2.74	4.02
	65	106	88	18	70	—	85	11×17.5×11	—	M6	4.74×10^{-3}	2.33	3.66
	45	71	84	15	69	20	57	6.6×11×6.5	55	M6	4.74×10^{-3}	0.82	4.18
	65	106	146	18	128	—	85	11×17.5×11	—	M6	4.74×10^{-3}	3.41	3.66

For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

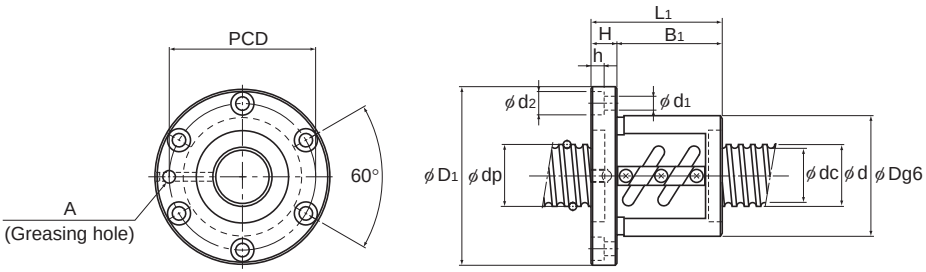
Screw shaft outer diameter	32
Lead	4 to 6



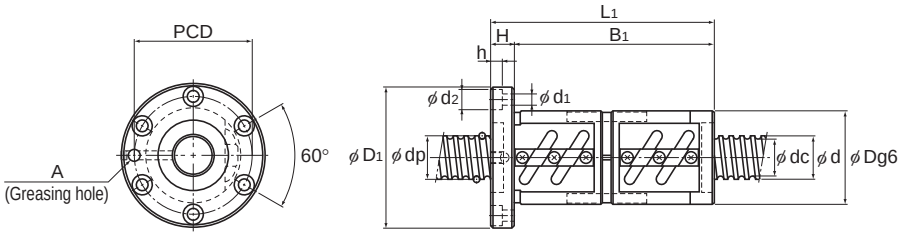
DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm
32	4	BIF 3204-10	32.5	30.1	2×2.5	10.5	35.4	1010
		DIK 3204-6	32.5	30.1	3×1	6.4	19.6	580
		DIK 3204-8	32.5	30.1	4×1	8.2	26.1	760
		DIK 3204-10	32.5	30.1	5×1	10	32.7	940
	5	DIK 3205-6	32.75	29.2	3×1	11.1	30.2	620
		DIK 3205-8	32.75	29.2	4×1	14.2	40.3	810
		○ BIF 3205-5	32.75	29.2	1×2.5	10.2	28.1	570
		○ BIF 3205-6	32.75	29.2	2×1.5	12	33.8	690
		○ BIF 3205-10	32.75	29.2	2×2.5	18.5	56.4	1110
		○ BNFN 3205-7.5	32.75	29.2	3×2.5	26.3	84.5	1640
	6	DIK 3206-6	33	28.4	3×1	14.9	37.1	630
		DIK 3206-8	33	28.4	4×1	19.1	49.5	820
		○ BIF 3206-5	33	28.4	1×2.5	13.9	35.2	600
		○ BIF 3206-6	33	28.4	2×1.5	16.3	42.2	710
		○ BIF 3206-7	33	28.4	1×3.5	18.5	49.2	810
		○ BIF 3206-10	33	28.4	2×2.5	25.2	70.4	1150

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.



BIF



BNFN

Unit: mm

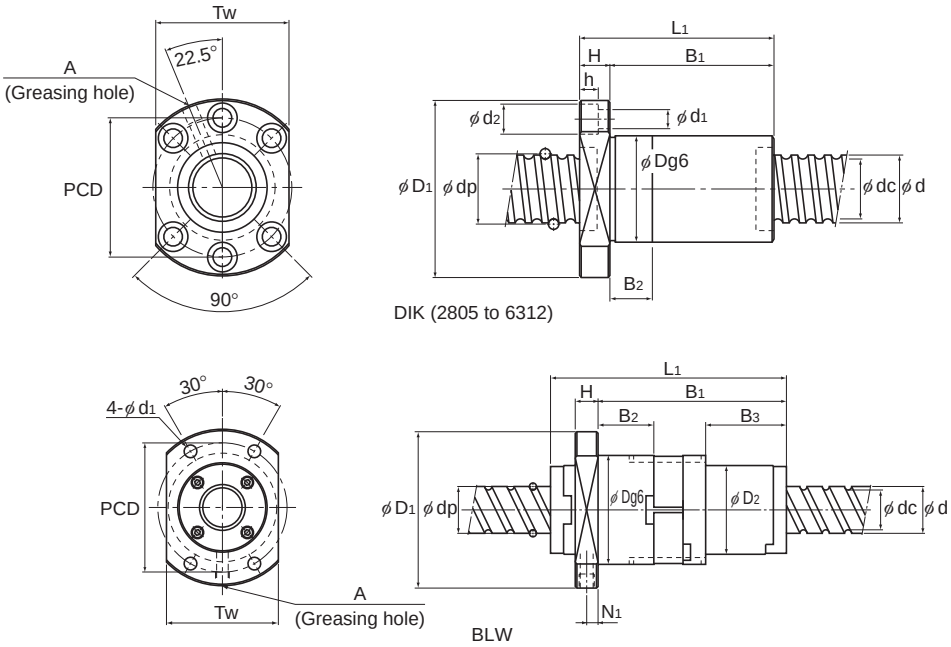
Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
54	81	76	11	65	—	67	6.6×11×6.5	—	M6	8.08×10^{-3}	0.97	5.86
45	76	64	11	53	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.57	5.86
45	76	72	11	61	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.62	5.86
45	76	80	11	69	20	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.66	5.86
46	76	62	12	50	10	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.60	5.67
46	76	73	12	61	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.67	5.67
58	85	56	12	44	—	71	6.6×11×6.5	—	M6	8.08×10^{-3}	0.94	5.67
58	85	78	12	66	—	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.21	5.67
58	85	86	12	74	—	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.31	5.67
58	85	136	12	124	—	71	6.6×11×6.5	—	M6	8.08×10^{-3}	1.93	5.67
48	76	73	12	61	15	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.74	6.31
48	76	87	12	75	20	63	6.6×11×6.5	59	M6	8.08×10^{-3}	0.85	6.31
62	89	63	12	51	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.21	6.31
62	89	87	12	75	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.57	6.31
62	89	75	12	63	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.39	6.31
62	89	99	12	87	—	75	6.6×11×6.5	—	M6	8.08×10^{-3}	1.75	6.31

For model number coding, see A15-248.

Options⇒A15-351

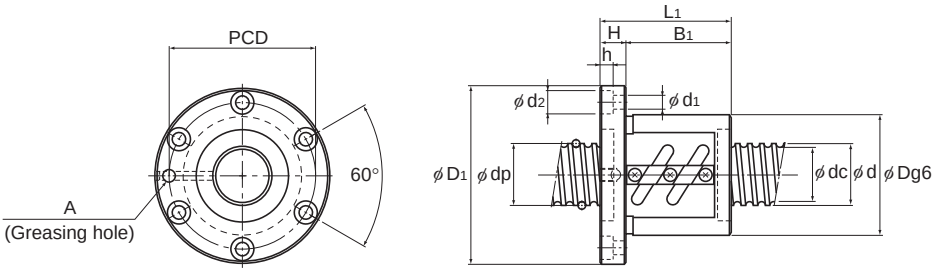
Preload Type of Precision Ball Screw

Screw shaft outer diameter	32
Lead	8 to 32



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D_1	D_2
32	8	○ BIF 3208A-5	33.25	27.5	1×2.5	17.8	42.2	610	66	100	—
		○ BIF 3208A-6	33.25	27.5	2×1.5	20.9	50.7	730	66	100	—
		○ BIF 3208A-7	33.25	27.5	1×3.5	23.8	59.1	840	66	100	—
		○ BIF 3208A-9	33.25	27.5	3×1.5	29.5	76	1070	66	100	—
		○ BIF 3208A-10	33.25	27.5	2×2.5	32.3	84.4	1180	66	100	—
	10	DIK 3210-6	33.75	26.4	3×1	25.7	52.2	600	54	87	—
		○ BIF 3210A-5	33.75	26.4	1×2.5	26.1	56.2	640	74	108	—
		○ BIF 3210A-6	33.75	26.4	2×1.5	30.5	67.4	750	74	108	—
		○ BIF 3210A-7	33.75	26.4	1×3.5	34.8	78.6	870	74	108	—
		○ BIF 3210A-10	33.75	26.4	2×2.5	47.2	112.7	1230	74	108	—
	12	DIK 3212-4	33.75	26.4	2×1	18.8	37	430	54	87	—
		○ BIF 3212-7	34	26.1	1×3.5	40.4	88.5	890	76	121	—
	32	BLW 3232-3.6	33.25	28.3	2×1.8	23.7	59.5	880	68	99	58

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.
Model BLW cannot be attached with seal.



BIF

Unit: mm

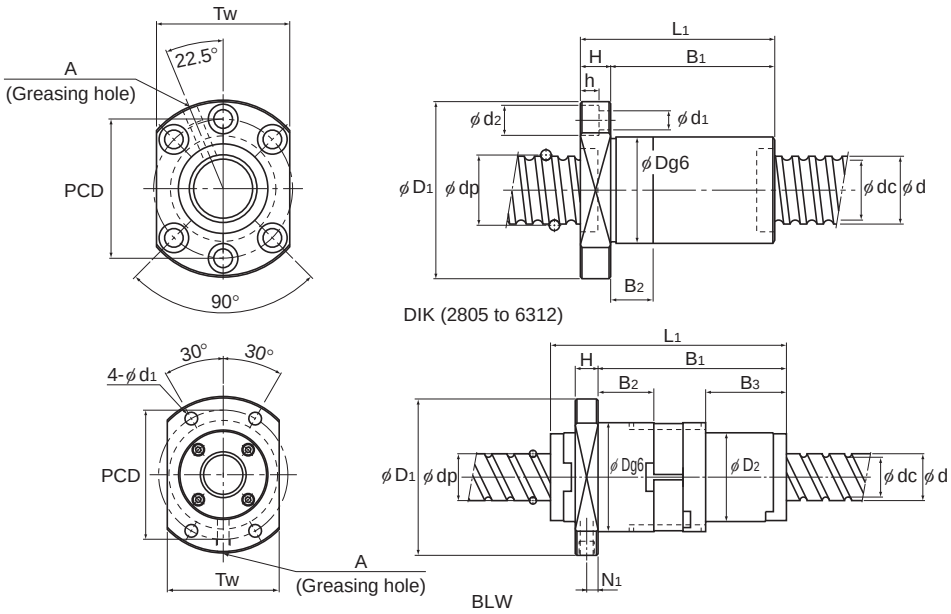
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	82	15	67	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	1.93	5.39
	111	15	96	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.42	5.39
	98	15	83	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.21	5.39
	143	15	128	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.99	5.39
	130	15	115	—	—	82	9	14	8.5	—	—	M6	8.08×10^{-3}	2.77	5.39
	110	15	95	25	—	69	9	14	8.5	66	—	M6	8.08×10^{-3}	1.57	4.98
	100	15	85	—	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	2.92	4.98
	137	15	122	—	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	3.73	4.98
	120	15	105	—	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	3.35	4.98
	160	15	145	—	—	90	9	14	8.5	—	—	M6	8.08×10^{-3}	4.27	4.98
	98	15	83	25	—	69	9	14	8.5	66	—	M6	8.08×10^{-3}	1.43	5.2
	146	18	128	—	—	98	11	17.5	11	—	—	M6	8.08×10^{-3}	4.5	4.9
	155	15	127	42.4	55.4	81	9	—	—	70	6	M6	8.08×10^{-3}	3.19	5.83

For model number coding, see A15-248.

Options⇒A15-351

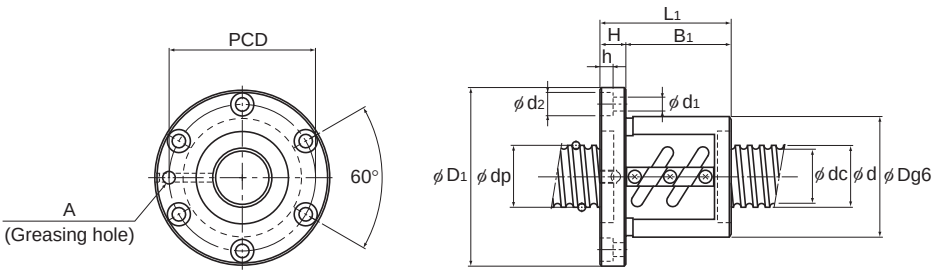
Preload Type of Precision Ball Screw

Screw shaft outer diameter	36
Lead	6 to 36



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1	D2
36	6	○ BIF 3606-5	36.75	33.2	1×2.5	10.7	31.8	630	65	100	—
		○ BIF 3606-6	36.75	33.2	2×1.5	12.5	38	740	65	100	—
		○ BIF 3606-10	36.75	33.2	2×2.5	19.4	63.4	1220	65	100	—
		○ BNFN 3606-7.5	36.75	33.2	3×2.5	27.5	95.2	1790	65	100	—
	8	○ BIF 3608-5	37.25	31.6	1×2.5	18.8	47.5	670	70	114	—
		○ BIF 3608-10	37.25	31.6	2×2.5	34.1	95.1	1290	70	114	—
		○ BNFN 3608-7.5	37.25	31.6	3×2.5	48.3	142.1	1910	70	114	—
	10	DIK 3610-6	37.75	30.5	3×1	28.8	63.8	710	58	98	—
		DIK 3610-8	37.75	30.5	4×1	36.8	85	940	58	98	—
		DIK 3610-10	37.75	30.5	5×1	44.6	106.3	1160	58	98	—
		○ BIF 3610-5	37.75	30.5	1×2.5	27.6	63.3	700	75	120	—
		○ BIF 3610-10	37.75	30.5	2×2.5	50.1	126.4	1350	75	120	—
		○ BNFN 3610-7.5	37.75	30.5	3×2.5	71.1	190.1	1990	75	120	—
	12	○ BIF 3612-5	38	30.1	1×2.5	32.1	71.4	720	78	123	—
		○ BIF 3612-10	38	30.1	2×2.5	58.4	142.1	1370	78	123	—
	16	○ BIF 3616-5	38	30.1	1×2.5	32.1	71.4	720	78	123	—
		○ BNFN 3616-5	38	30.1	2×2.5	58.3	143.1	1380	78	123	—
	20	○ BIF 3620-3	37.75	30.5	1×1.5	17.6	38.3	430	70	103	—
	36	BLW 3636-3.6	37.4	31.7	2×1.8	30.8	78	980	79	116	66

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360. Model BLW cannot be attached with seal.



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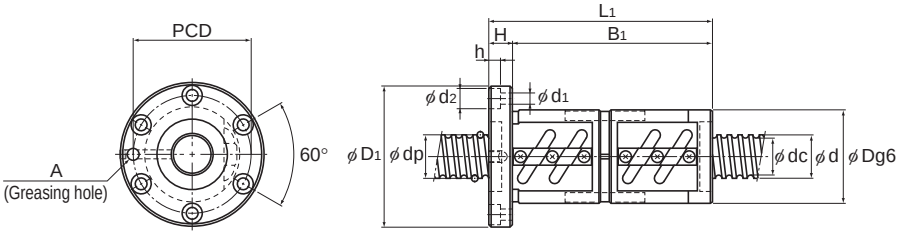


BNFN

Unit: mm

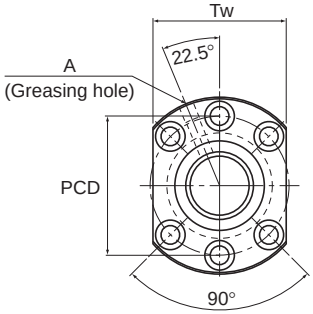
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	Greasing hole A	kg•cm²/mm	kg	kg/m
71	15	56	—	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.57	7.39
92	15	77	—	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.93	7.39
107	15	92	—	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	2.17	7.39
161	15	146	—	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	2.96	7.39
92	18	74	—	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	2.57	6.96
140	18	122	—	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	2.57	6.96
212	18	194	—	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	4.87	6.96
122	18	104	30	—	77	11	17.5	11	75	—	M6	1.29×10^{-2}	2.03	6.51
143	18	125	35	—	77	11	17.5	11	75	—	M6	1.29×10^{-2}	2.3	6.51
164	18	146	45	—	77	11	17.5	11	75	—	M6	1.29×10^{-2}	2.57	6.51
111	18	93	—	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	3.45	6.51
171	18	153	—	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	4.84	6.51
261	18	243	224	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	6.93	6.51
123	18	105	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	4.07	6.41
195	18	177	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	5.45	6.41
140	18	122	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	4.38	6.8
268	18	250	—	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	7.8	6.8
115	15	100	—	—	85	9	14	8.5	—	—	M6	1.29×10^{-2}	2.75	7.24
181	17	147.9	49.4	65.4	95	11	—	—	82	7	M6	1.29×10^{-2}	5.99	7.34

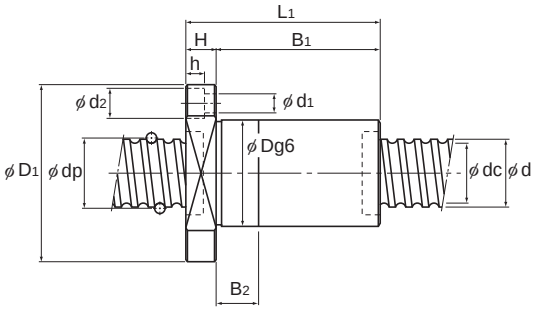
For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	40
Lead	5 to 10

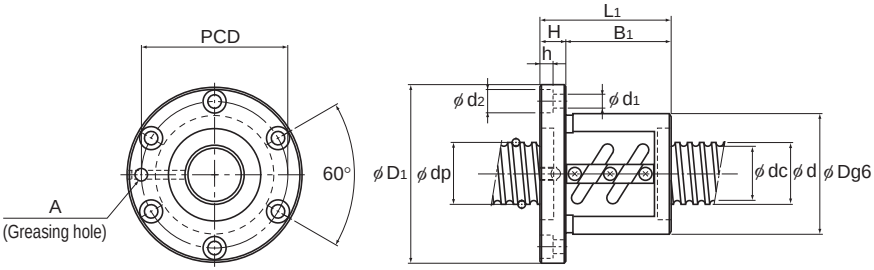




DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm
40	5	BIF 4005-6	40.75	37.2	2×1.5	13	42.3	810
		BIF 4005-10	40.75	37.2	2×2.5	20.3	70.6	1320
		BNFN 4005-6	40.75	37.2	4×1.5	23.7	84.7	1580
	6	BIF 4006-5	41	36.4	1×2.5	15.3	44.1	710
		BIF 4006-10	41	36.4	2×2.5	27.7	88.1	1360
		BNFN 4006-7.5	41	36.4	3×2.5	39.2	132.3	2010
	8	BIF 4008-5	41.25	35.5	1×2.5	19.6	52.8	730
		BIF 4008-6	41.25	35.5	2×1.5	22.9	63.4	860
		BIF 4008-10	41.25	35.5	2×2.5	35.7	105.8	1410
	10	BIF 4010-5	41.75	34.4	1×2.5	29	70.4	750
		BIF 4010-6	41.75	34.4	2×1.5	33.8	84.5	900
		BIF 4010-7	41.75	34.4	1×3.5	38.8	99	1050
		BIF 4010-10	41.75	34.4	2×2.5	52.7	141.1	1470
		DIK 4010-6	41.75	34.7	3×1	29.8	69.3	750
		DIK 4010-8	41.75	34.7	4×1	38.1	92.4	1000

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see **A15-360**.



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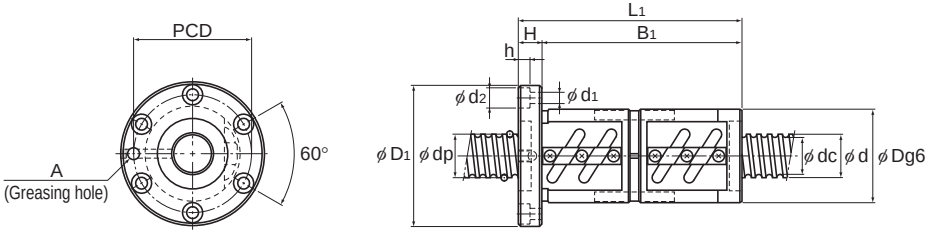


BNFN

Unit: mm

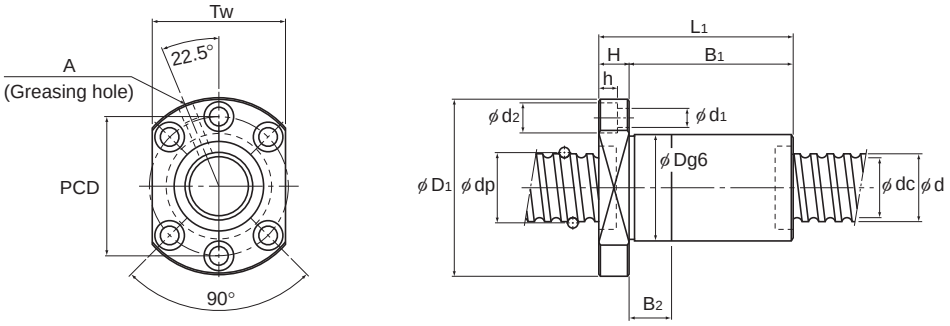
	Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
	67	101	81	15	66	—	83	9×14×8.5	—	M6	1.97×10^{-2}	1.69	9.06
	67	101	89	15	74	—	83	9×14×8.5	—	M6	1.97×10^{-2}	1.85	9.06
	67	101	156	15	141	—	83	9×14×8.5	—	M6	1.97×10^{-2}	2.82	9.06
	70	104	66	15	51	—	86	9×14×8.5	—	M6	1.97×10^{-2}	1.63	8.82
	70	104	102	15	87	—	86	9×14×8.5	—	M6	1.97×10^{-2}	2.29	8.82
	70	104	162	15	147	—	86	9×14×8.5	—	M6	1.97×10^{-2}	3.29	8.82
	74	108	82	15	67	—	90	9×14×8.5	—	M6	1.97×10^{-2}	2.19	8.72
	74	108	111	15	96	—	90	9×14×8.5	—	M6	1.97×10^{-2}	2.74	8.72
	74	108	130	15	115	—	90	9×14×8.5	—	M6	1.97×10^{-2}	3.17	8.72
	82	124	103	18	85	—	102	11×17.5×11	—	M6	1.97×10^{-2}	3.69	8.22
	82	124	140	18	122	—	102	11×17.5×11	—	M6	1.97×10^{-2}	4.56	8.22
	82	124	123	18	105	—	102	11×17.5×11	—	M6	1.97×10^{-2}	4.18	8.22
	82	124	163	18	145	—	102	11×17.5×11	—	M6	1.97×10^{-2}	5.33	8.22
	62	104	113	18	95	25	82	11×17.5×11	79	PT 1/8	1.97×10^{-2}	2.09	8.22
	62	104	137	18	119	35	82	11×17.5×11	79	PT 1/8	1.97×10^{-2}	2.42	8.22

For model number coding, see A15-248.

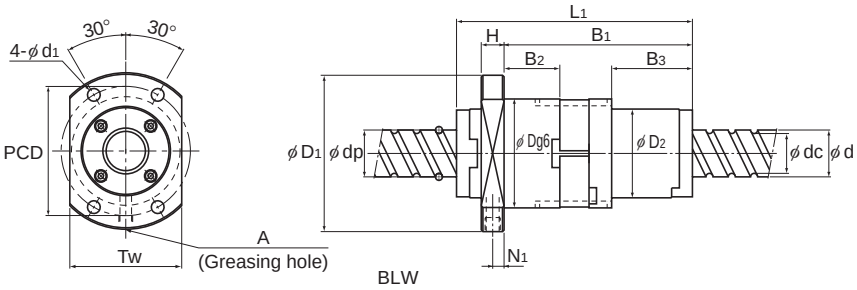
Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	40
Lead	12 to 40



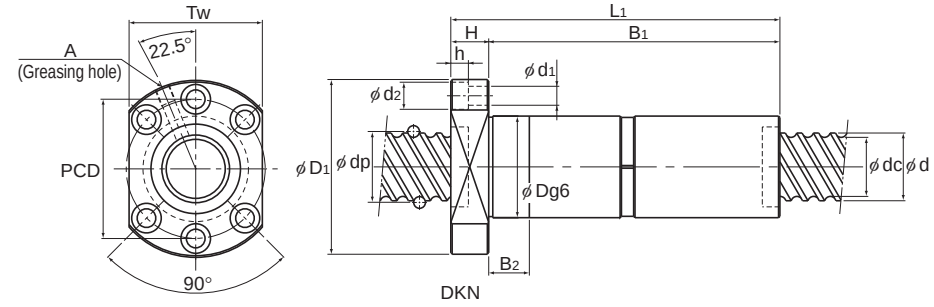
DIK (2805 to 6312)

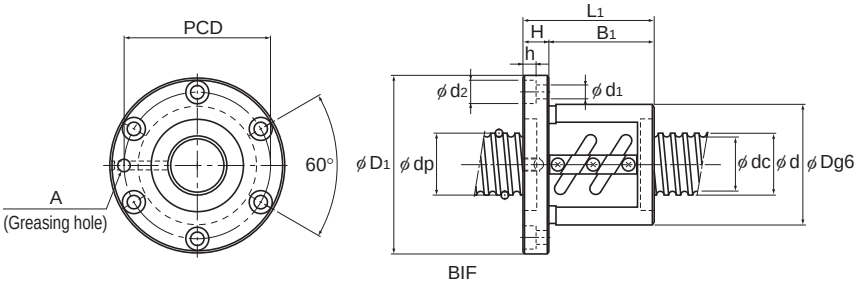


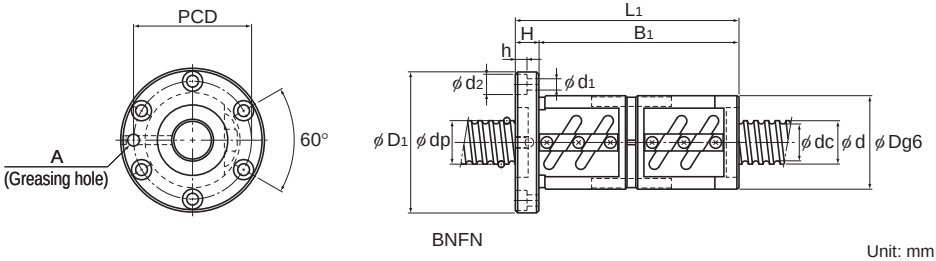
BLW

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1	D2
40	12	BIF 4012-5	42	34.1	1×2.5	33.9	79.2	770	84	126	—
		BIF 4012-7	42	34.1	1×3.5	45.4	110.7	1070	84	126	—
		BIF 4012-10	42	34.1	2×2.5	61.6	158.8	1490	84	126	—
		DIK 4012-6	41.75	34.4	3×1	30.6	72.3	790	62	104	—
		DIK 4012-8	41.75	34.4	4×1	39.2	96.4	1030	62	104	—
	16	DIK 4016-4	41.75	34.4	2×1	21.5	68.4	540	62	104	—
		BNFN 4016-5	42	34.1	2×2.5	61.4	158.8	1500	84	126	—
	20	DKN 4020-3	41.75	34.7	3×1	29.4	69.3	750	62	104	—
	40	BLW 4040-3.6	41.75	35.2	2×1.8	38.7	99.2	1090	84	121	73

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see **A15-360**.
Model BLW cannot be attached with seal.







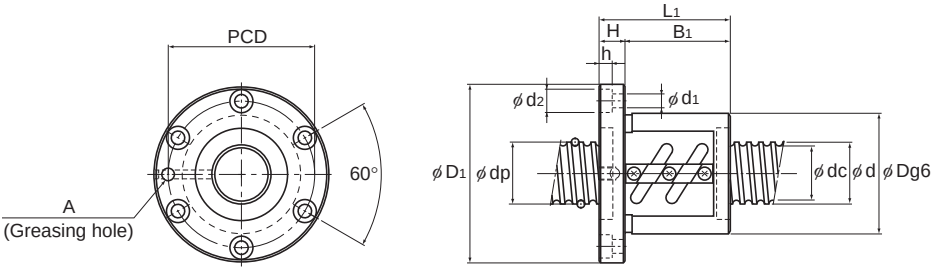
Unit: mm

Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length											Greasing hole			
L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
119	18	101	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	4.36	8.12
143	18	125	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	4.93	8.12
191	18	173	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	6.47	8.12
138	18	120	35	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.44	8.5
163	18	145	45	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.78	8.5
120	18	102	30	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.19	8.83
280	22	258	—	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	9.27	8.55
223	18	205	25	—	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	3.61	9.03
191	17	158	54.5	70.5	100	11	—	—	87	7	M6	1.97×10^{-2}	6.16	9.01

For model number coding, see A15-248.

Preload Type of Precision Ball Screw

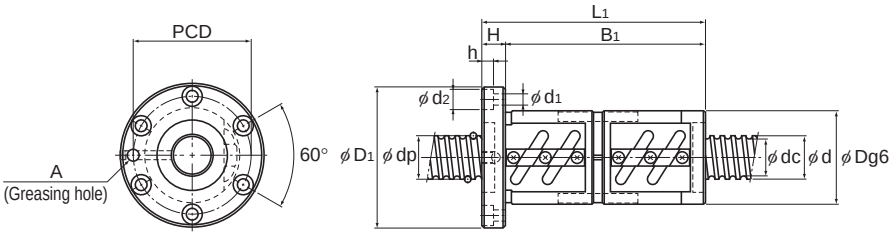
Screw shaft outer diameter	45
Lead	6 to 20



BIF

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm
45	6	BIF 4506A-5	46	41.4	1×2.5	16	49.6	770
		BIF 4506A-10	46	41.4	2×2.5	29	99	1500
		BNFN 4506A-7.5	46	41.4	3×2.5	41.2	150	2210
	8	BIF 4508-5	46.25	40.6	1×2.5	20.7	59.5	790
		BIF 4508-10	46.25	40.6	2×2.5	37.4	118.6	1540
		BNFN 4508-7.5	46.25	40.6	3×2.5	53.1	178.4	2270
	10	BIF 4510-5	46.75	39.5	1×2.5	30.7	79.3	830
		BIF 4510-6	46.75	39.5	2×1.5	35.9	95.2	990
		BIF 4510-10	46.75	39.5	2×2.5	55.6	158.8	1610
		BNFN 4510-7.5	46.75	39.5	3×2.5	78.8	238.1	2370
	12	BIF 4512-10	47	39.2	2×2.5	65.2	178.4	1640
	20	BIF 4520-3	47.7	37.9	1×1.5	44.2	99	690

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

Unit: mm

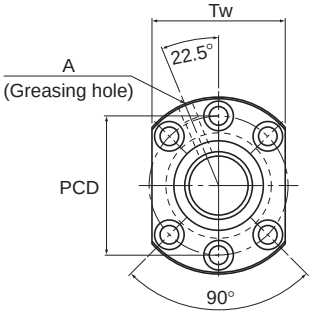
	Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg•cm²/mm	kg	kg/m
	80	114	71	15	56	—	96	9×14×8.5	PT 1/8	3.16×10^{-2}	2.18	11.31
	80	114	107	15	92	—	96	9×14×8.5	PT 1/8	3.16×10^{-2}	3.05	11.31
	80	114	161	15	146	—	96	9×14×8.5	PT 1/8	3.16×10^{-2}	4.25	11.31
	85	127	92	18	74	—	105	11×17.5×11	PT 1/8	3.16×10^{-2}	3.42	11.21
	85	127	140	18	122	—	105	11×17.5×11	PT 1/8	3.16×10^{-2}	4.86	11.21
	85	127	212	18	194	—	105	11×17.5×11	PT 1/8	3.16×10^{-2}	6.74	11.21
	88	132	111	18	93	—	110	11×17.5×11	PT 1/8	3.16×10^{-2}	4.35	10.65
	88	132	144	18	126	—	110	11×17.5×11	PT 1/8	3.16×10^{-2}	5.35	10.65
	88	132	171	18	153	—	110	11×17.5×11	PT 1/8	3.16×10^{-2}	6.19	10.65
	88	132	261	18	243	—	110	11×17.5×11	PT 1/8	3.16×10^{-2}	8.92	10.65
	90	130	191	18	173	—	110	11×17.5×11	PT 1/8	3.16×10^{-2}	6.98	10.54
	98	142	135	20	115	—	120	11×17.5×11	PT 1/8	3.16×10^{-2}	6.56	10.37

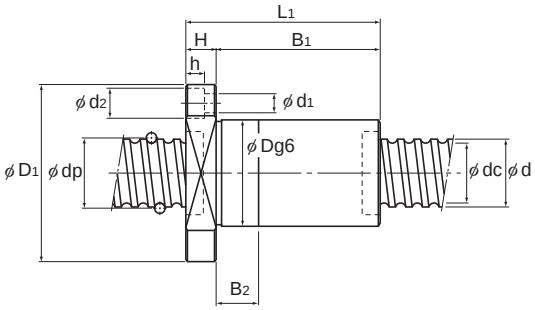
For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	50
Lead	5 to 10

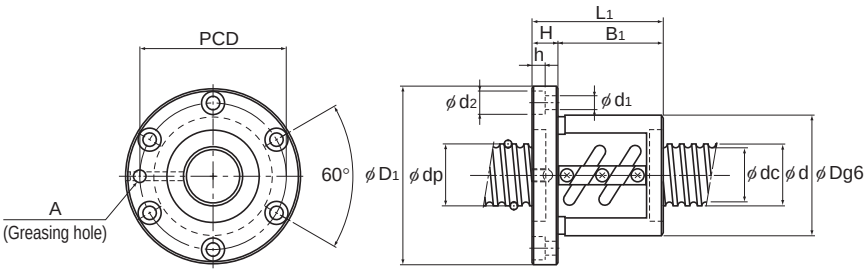




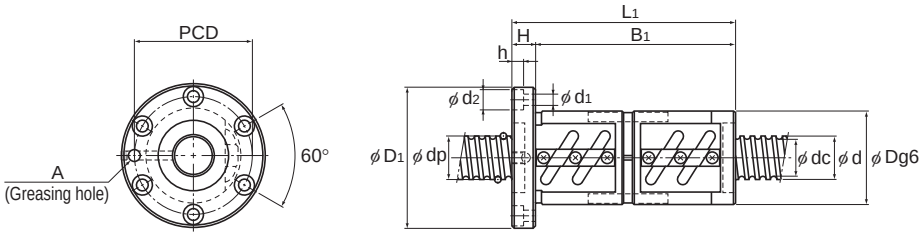
DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm
50	5	○ BIF 5005-6	50.75	47.2	2×1.5	14.2	53	970
		○ BIF 5005-10	50.75	47.2	2×2.5	22.0	88.2	1570
	8	○ BIF 5008-5	51.25	45.5	1×2.5	21.6	66.2	860
		○ BIF 5008-10	51.25	45.5	2×2.5	39.1	132.3	1680
		○ BNFN 5008-7.5	51.25	45.5	3×2.5	55.4	198.9	2470
	10	DIK 5010-6	51.75	44.4	3×1	33.9	90.7	940
		DIK 5010-8	51.75	44.4	4×1	43.4	120.5	1230
		DIK 5010-10	51.75	44.4	5×1	52.5	150.9	1530
		○ BIF 5010-5	51.75	44.4	1×2.5	32	88.2	900
		○ BIF 5010-6	51.75	44.4	2×1.5	37.5	105.8	1080
		○ BIF 5010-7	51.75	44.4	1×3.5	42.8	123.5	1240
		○ BIF 5010-10	51.75	44.4	2×2.5	58.2	176.4	1750
		○ BNFN 5010-7.5	51.75	44.4	3×2.5	82.5	264.6	2580

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see ▲15-360.



BIF



BNFN

Unit: mm

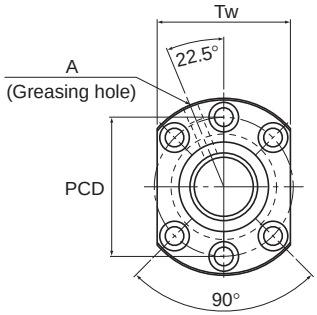
Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
80	114	83	15	68	—	96	9×14×8.5	—	PT 1/8	4.82×10^{-2}	2.38	14.42
80	114	93	15	78	—	96	9×14×8.5	—	PT 1/8	4.82×10^{-2}	2.43	14.42
87	129	85	18	67	—	107	11×17.5×11	—	PT 1/8	4.82×10^{-2}	3.16	14.0
87	129	133	18	115	—	107	11×17.5×11	—	PT 1/8	4.82×10^{-2}	4.51	14.0
87	129	205	18	187	—	107	11×17.5×11	—	PT 1/8	4.82×10^{-2}	6.35	14.0
72	123	114	18	96	30	101	11×17.5×11	92	PT 1/8	4.82×10^{-2}	2.65	13.38
72	123	137	18	119	35	101	11×17.5×11	92	PT 1/8	4.82×10^{-2}	3.03	13.38
72	123	160	18	142	45	101	11×17.5×11	92	PT 1/8	4.82×10^{-2}	3.41	13.38
93	135	103	18	85	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	4.31	13.38
93	135	140	18	122	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	5.55	13.38
93	135	123	18	105	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	5.03	13.38
93	135	163	18	145	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	6.26	13.38
93	135	253	18	235	—	113	11×17.5×11	—	PT 1/8	4.82×10^{-2}	9.19	13.38

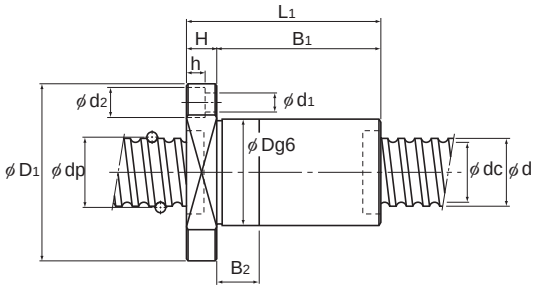
For model number coding, see A15-248.

Options⇒A15-351

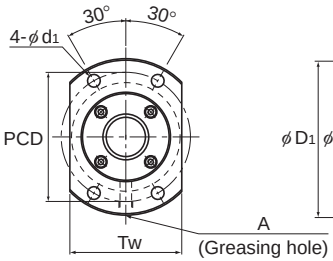
Preload Type of Precision Ball Screw

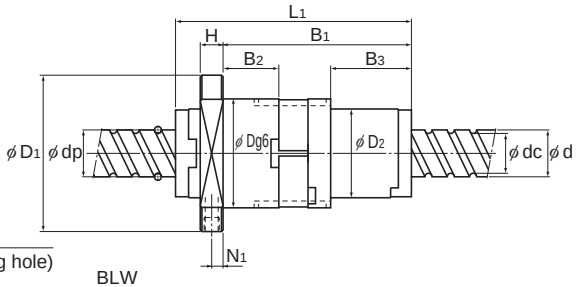
Screw shaft outer diameter	50
Lead	12 to 50





DIK (2805 to 6312)

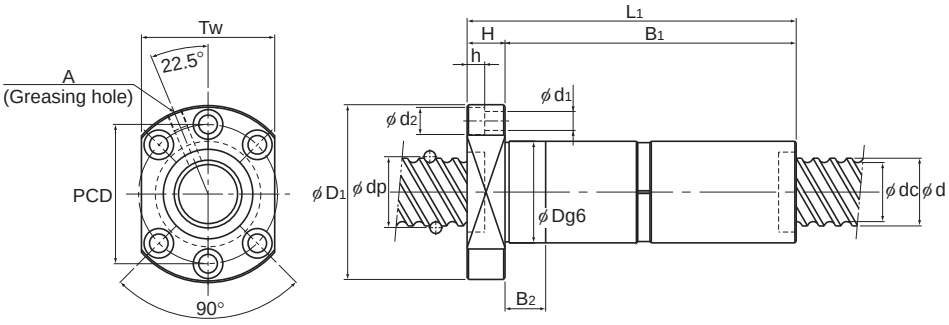




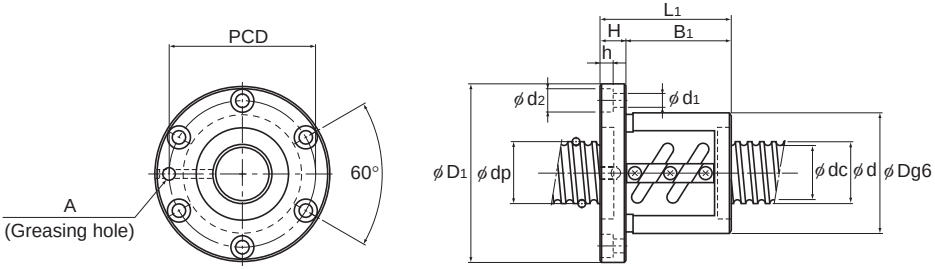
BLW

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity	Outer diameter	Flange diameter	
						Ca	C0a	K			
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D1	D2
50	12	DIK 5012-6	52.25	43.3	3×1	45.8	113	970	75	129	—
		DIK 5012-8	52.25	43.3	4×1	58.6	150.6	1270	75	129	—
		○ BIF 5012-5	52.25	43.3	1×2.5	43.4	109.8	930	100	146	—
		○ BIF 5012-7	52.25	43.3	1×3.5	58	153.9	1280	100	146	—
		○ BIF 5012-10	52.25	43.3	2×2.5	78.8	220.5	1810	100	146	—
	16	DIK 5016-4	52.25	43.3	2×1	32.3	75.5	660	75	129	—
		DIK 5016-6	52.25	43.3	3×1	45.7	113.3	970	75	129	—
		○ BIF 5016-5	52.7	42.9	1×2.5	72.6	183.3	1230	105	152	—
		○ BIF 5016-10	52.7	42.9	2×2.5	132.3	366.5	2360	105	152	—
	20	DKN 5020-3	52.25	43.6	3×1	44.2	108.8	930	75	129	—
		○ BIF 5020-5	52.7	42.9	1×2.5	72.5	183.3	1230	105	152	—
	50	BLW 5050-3.6	52.2	44.1	2×1.8	57.8	155	1340	106	149	90

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.
Model BLW cannot be attached with seal.



DKN



BIF

Unit: mm

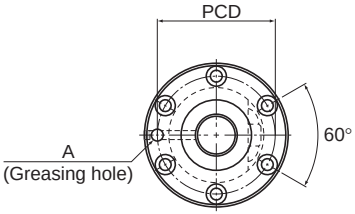
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	B_3	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	145	22	123	35	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.83	12.74
	170	22	148	45	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	4.31	12.74
	123	22	101	—	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	6.02	12.74
	147	22	125	—	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	7.2	12.74
	195	22	173	—	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	9.05	12.74
	129	22	107	30	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.52	13.41
	175	22	153	45	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	4.41	13.41
	164	25	139	—	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	9.18	12.5
	260	25	235	—	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	13.30	12.5
	243	28	215	30	—	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	6.0	13.8
	201	28	173	—	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	11.02	13.1
	245	20	203.8	70.7	91.7	126	14	—	—	108	8	M6	4.82×10^{-2}	9.06	14.08

For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

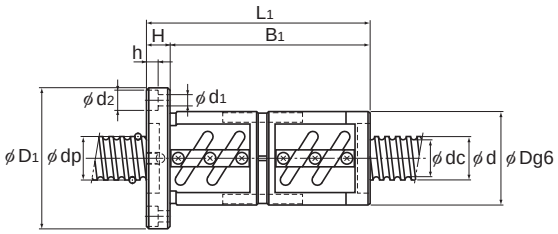
Screw shaft outer diameter	55
Lead	10 to 20



BNFN

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity
						Ca	C_0a	K
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm
55	10	BNFN 5510-2.5	56.75	49.5	1×2.5	33.4	97	970
		BNFN 5510-5	56.75	49.5	2×2.5	60.7	194	1890
		BNFN 5510-7.5	56.75	49.5	3×2.5	85.9	291.1	2770
	12	BNFN 5512-2.5	57	49.2	1×2.5	39.3	108.8	990
		BNFN 5512-3	57	49.2	2×1.5	46	131.3	1180
		BNFN 5512-3.5	57	49.2	1×3.5	52.4	152.9	1360
		BNFN 5512-5	57	49.2	2×2.5	71.3	218.5	1920
		BNFN 5512-7.5	57	49.2	3×2.5	100.9	327.3	2830
	16	BNFN 5516-2.5	57.7	47.9	1×2.5	76.1	201.9	1310
		BNFN 5516-5	57.7	47.9	2×2.5	138.2	402.8	2550
	20	BNFN 5520-2.5	57.7	47.9	1×2.5	76	201.9	1320
		BNFN 5520-5	57.7	47.9	2×2.5	138.2	403.8	2550

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

Unit: mm

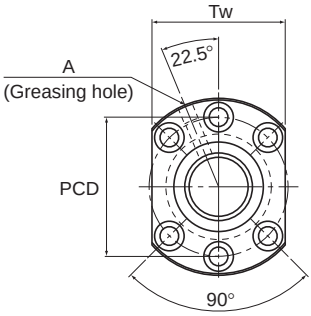
Nut dimensions								Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg•cm²/mm	kg	kg/m
102	144	141	18	123	122	11×17.5×11	PT 1/8	7.05×10^{-2}	6.54	16.43
102	144	201	18	183	122	11×17.5×11	PT 1/8	7.05×10^{-2}	8.88	16.43
102	144	261	18	243	122	11×17.5×11	PT 1/8	7.05×10^{-2}	11.23	16.43
105	147	165	18	147	125	11×17.5×11	PT 1/8	7.05×10^{-2}	8.07	16.29
105	147	191	18	173	125	11×17.5×11	PT 1/8	7.05×10^{-2}	9.17	16.29
105	147	189	18	171	125	11×17.5×11	PT 1/8	7.05×10^{-2}	9.09	16.29
105	147	237	18	219	125	11×17.5×11	PT 1/8	7.05×10^{-2}	11.13	16.29
105	147	309	18	291	125	11×17.5×11	PT 1/8	7.05×10^{-2}	14.19	16.29
110	158	196	25	171	133	14×20×13	PT 1/8	7.05×10^{-2}	11.28	15.46
110	158	292	25	267	133	14×20×13	PT 1/8	7.05×10^{-2}	15.94	15.46
112	158	227	28	199	134	14×20×13	PT 1/8	7.05×10^{-2}	13.49	16.1
112	158	347	28	319	134	14×20×13	PT 1/8	7.05×10^{-2}	19.61	16.1

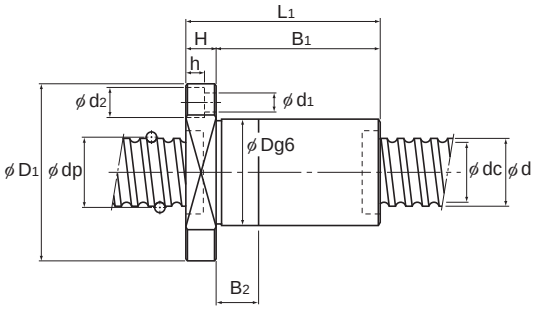
For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

Screw shaft outer diameter	63
Lead	10 to 20

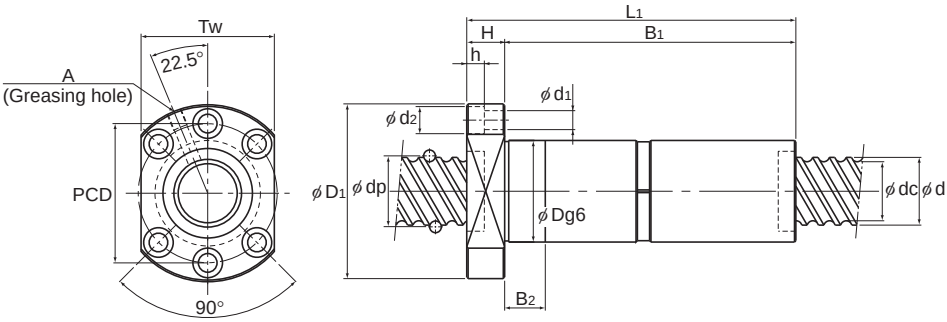




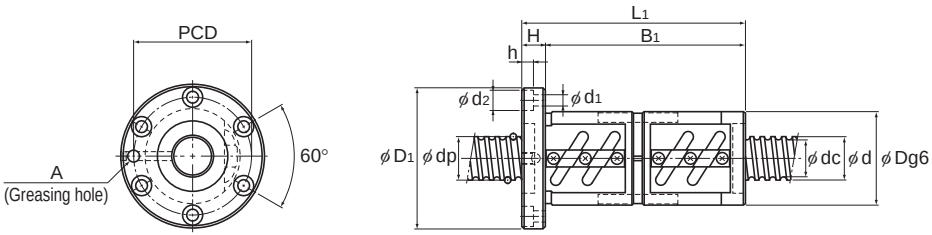
DIK (2805 to 6312)

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C_{0a} kN	Rigidity K N/μm
63	10	DIK 6310-8	64.75	57.7	4×1	49.5	160.7	1550
		BNFN 6310-2.5	64.75	57.7	1×2.5	35.4	111.7	1090
		BNFN 6310-5	64.75	57.7	2×2.5	64.2	222.5	2100
		BNFN 6310-7.5	64.75	57.7	3×2.5	90.9	334.2	3090
	12	DIK 6312-6	65.25	56.3	3×1	51.9	147.4	1200
		DIK 6312-8	65.25	56.3	4×1	66.4	196.6	1570
		BNFN 6312A-2.5	65.25	56.3	1×2.5	48.1	139.2	1120
		BNFN 6312A-5	65.25	56.3	2×2.5	87.4	278.3	2160
	16	BNFN 6316-2.5	65.7	55.9	1×2.5	81.1	231.3	1470
		BNFN 6316-5	65.7	55.9	2×2.5	147	462.6	2840
	20	BNFN 6320-2.5	65.7	55.9	1×2.5	81	231.3	1470
		BNFN 6320-5	65.7	55.9	2×2.5	147	463.5	2640
		DKN 6320-3	65.7	55.9	3×1	83.5	229.3	1470

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



DKN



BNFN

Unit: mm

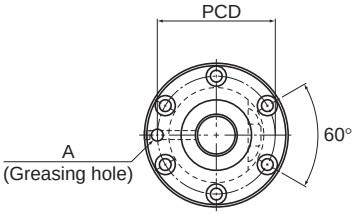
Nut dimensions									Screw shaft inertial moment/mm	Nut mass	Shaft mass
Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	B_2	PCD	$d_1 \times d_2 \times h$	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
85	146	141	22	119	35	122	14×20×13	110	PT 1/8	1.21×10^{-1}	4.16	21.93
108	154	137	22	115	—	130	14×20×13	—	PT 1/8	1.21×10^{-1}	6.98	21.93
108	154	197	22	175	—	130	14×20×13	—	PT 1/8	1.21×10^{-1}	9.4	21.93
108	154	257	22	235	—	130	14×20×13	—	PT 1/8	1.21×10^{-1}	11.81	21.93
90	146	146	22	124	35	122	14×20×13	110	PT 1/8	1.21×10^{-1}	4.93	21.14
90	146	171	22	149	45	122	14×20×13	110	PT 1/8	1.21×10^{-1}	5.56	21.14
115	161	159	22	137	—	137	14×20×13	—	PT 1/8	1.21×10^{-1}	9.32	21.14
115	161	231	22	209	—	137	14×20×13	—	PT 1/8	1.21×10^{-1}	12.84	21.14
122	184	208	24	184	—	152	18×26×17.5	—	PT 1/8	1.21×10^{-1}	14.61	20.85
122	184	304	24	280	—	152	18×26×17.5	—	PT 1/8	1.21×10^{-1}	20.19	20.85
122	180	227	28	199	—	150	18×26×17.5	—	PT 1/8	1.21×10^{-1}	15.91	20.85
122	180	347	28	319	—	150	18×26×17.5	—	PT 1/8	1.21×10^{-1}	22.88	20.85
95	159	243	28	215	30	129	18×26×17.5	121	PT 1/8	1.21×10^{-1}	9.5	20.85

For model number coding, see A15-248.

Options⇒A15-351

Preload Type of Precision Ball Screw

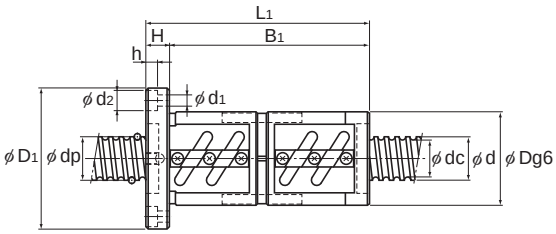
Screw shaft outer diameter	70 to 100
Lead	10 to 20



BNFN

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C_{0a} kN	Rigidity K N/μm
70	10	BNFN 7010-2.5	71.75	64.5	1×2.5	36.8	123.5	1180
		BNFN 7010-5	71.75	64.5	2×2.5	66.9	247	2280
		BNFN 7010-7.5	71.75	64.5	3×2.5	94.9	371.4	3350
	12	BNFN 7012-2.5	72	64.2	1×2.5	43.5	139.2	1200
		BNFN 7012-5	72	64.2	2×2.5	78.9	278.3	2320
		BNFN 7012-7.5	72	64.2	3×2.5	111.7	417.5	3420
	20	BNFN 7020-5	72.7	62.9	2×2.5	153.9	514.5	3090
80	10	BNFN 8010-2.5	81.75	75.2	1×2.5	38.9	141.1	1300
		BNFN 8010-5	81.75	75.2	2×2.5	70.6	283.2	2530
		BNFN 8010-7.5	81.75	75.2	3×2.5	100	424.3	3720
	12	BNFN 8012-5	82.3	74.1	2×2.5	96.5	353.8	2620
	20	BNFN 8020A-2.5	82.7	72.9	1×2.5	90.1	294	1770
		BNFN 8020A-5	82.7	72.9	2×2.5	163.7	589	3430
100	20	BNFN 10020A-2.5	102.7	92.9	1×2.5	99	368.5	2110
		BNFN 10020A-5	102.7	92.9	2×2.5	179.3	737	4080
		BNFN 10020A-7.5	102.7	92.9	3×2.5	253.8	1105.4	6010

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNFN

Unit: mm

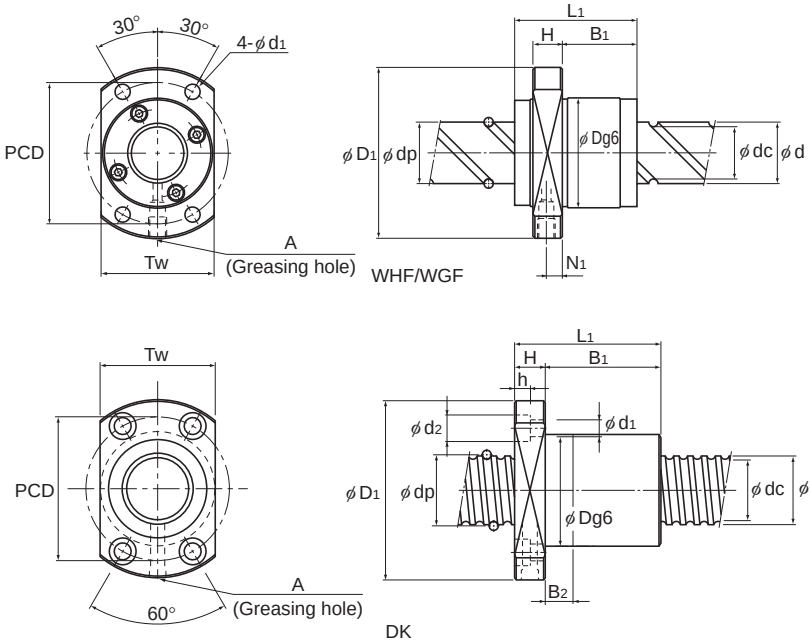
	Nut dimensions								Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Outer diameter D	Flange diameter D_1	Overall length L_1	H	B_1	PCD	$d_1 \times d_2 \times h$	Greasing hole A	kg•cm²/mm	kg	kg/m
	125	167	141	18	123	145	11×17.5×11	PT 1/8	1.85×10^{-1}	9.19	27.4
	125	167	201	18	183	145	11×17.5×11	PT 1/8	1.85×10^{-1}	12.57	27.4
	125	167	261	18	243	145	11×17.5×11	PT 1/8	1.85×10^{-1}	15.96	27.4
	128	170	165	18	147	148	11×17.5×11	PT 1/8	1.85×10^{-1}	11.26	27.24
	128	170	237	18	219	148	11×17.5×11	PT 1/8	1.85×10^{-1}	15.63	27.24
	128	170	309	18	291	148	11×17.5×11	PT 1/8	1.85×10^{-1}	20.0	27.24
	130	186	325	28	297	158	18×26×17.5	PT 1/8	1.85×10^{-1}	23.4	27.0
	130	176	137	22	115	152	14×20×13	PT 1/8	3.16×10^{-1}	9.15	36.26
	130	176	197	22	175	152	14×20×13	PT 1/8	3.16×10^{-1}	12.41	36.26
	130	176	257	22	235	152	14×20×13	PT 1/8	3.16×10^{-1}	15.67	36.26
	135	181	231	22	209	157	14×20×13	PT 1/8	3.16×10^{-1}	16.02	35.26
	143	204	227	28	199	172	18×26×17.5	PT 1/8	3.16×10^{-1}	20.08	35.81
	143	204	347	28	319	172	18×26×17.5	PT 1/8	3.16×10^{-1}	28.97	35.81
	170	243	231	32	199	205	22×32×21.5	PT 1/8	7.71×10^{-1}	28.15	57.13
	170	243	351	32	319	205	22×32×21.5	PT 1/8	7.71×10^{-1}	39.99	57.13
	170	243	471	32	439	205	22×32×21.5	PT 1/8	7.71×10^{-1}	51.84	57.13

For model number coding, see A15-248.

Options⇒A15-351

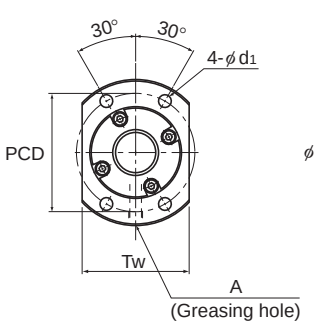
No Preload Type of Precision Ball Screw

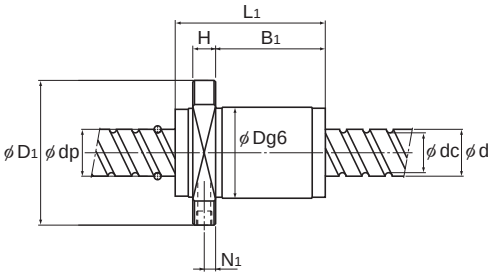
Screw shaft outer diameter	4 to 15
Lead	1 to 40



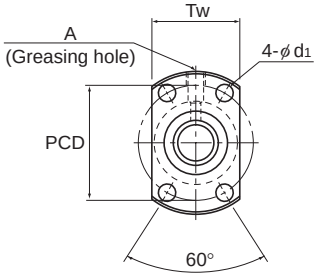
Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C₀a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows X turns	kN	kN	N/μm	D	D₁
4	1	MDK 0401-3	4.15	3.4	3×1	0.29	0.42	35	9	19
6	1	MDK 0601-3	6.2	5.3	3×1	0.54	0.94	60	11	23
8	1	MDK 0801-3	8.2	7.3	3×1	0.64	1.4	80	13	26
	2	MDK 0802-3	8.3	7	3×1	1.4	2.3	80	15	28
	12	WGF 0812-3	8.4	6.6	2×1.65	2.2	3.9	110	18	31
10	2	MDK 1002-3	10.3	9	3×1	1.5	2.9	100	17	34
	15	WGF 1015-3	10.5	8.3	2×1.65	3.3	6.2	140	23	40
12	2	MDK 1202-3	12.3	11	3×1	1.7	3.6	120	19	36
13	20	WGF 1320-3	13.5	10.8	2×1.65	4.7	9.6	180	28	45
14	2	MDK 1402-3	14.3	13	3×1	1.8	4.3	190	21	40
	4	MDK 1404-3	14.65	12.2	3×1	4.2	7.6	190	26	45
		DK 1404-4	14.5	11.8	4×1	5.4	10.2	180	26	45
		DK 1404-6	14.5	11.8	6×1	7.7	15.4	270	26	45
	5	MDK 1405-3	14.75	11.2	3×1	7	11.6	140	26	45
15	10	BLK 1510-5.6	15.75	12.5	2×2.8	14.3	27.8	340	34	57
	20	WGF 1520-1.5	15.75	12.5	1×1.5	4.4	7.9	100	32	53
		WGF 1520-3	15.75	12.5	2×1.5	8.1	15.8	190	32	53
	30	WGF 1530-1	15.75	12.5	2×0.6	3.5	5.4	90	32	53
		WGF 1530-3	15.75	12.5	2×1.6	8.1	14.6	220	32	53
		WHF 1530-3.4	15.75	12.5	2×1.7	8	14.4	195	32	53
	40	WGF 1540-1.5	15.75	12.5	2×0.75	3.9	7.4	110	32	53
		WHF 1540-3.4	15.75	12.5	2×1.7	7.7	16.3	209	34	57

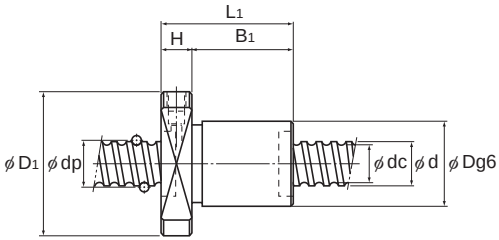
Note) Models MDK0401, 0601 and 0801 is not provided with a labyrinth seal.
Models MDK0401, 0601, 0801, model WHF, model WGF and Large Lead Precision Ball Screw model BLK cannot be attached with seal.





BLK





MDK

Unit: mm

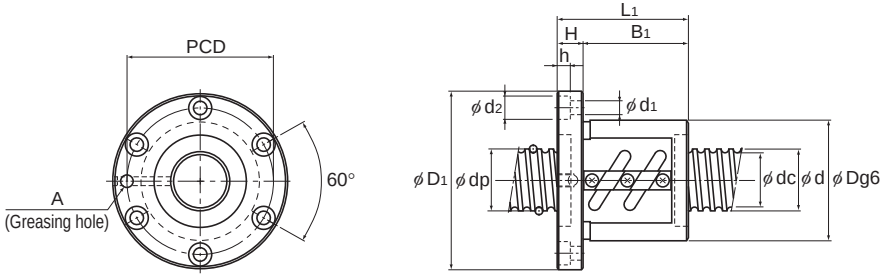
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	13	3	10	—	14	2.9	—	—	13	—	—	1.97×10^{-6}	0.01	0.07
	14.5	3.5	11	—	17	3.4	—	—	15	—	—	9.99×10^{-6}	0.017	0.14
	15	4	11	—	20	3.4	—	—	17	—	—	3.16×10^{-5}	0.024	0.29
	22	5	17	—	22	3.4	—	—	19	—	—	3.16×10^{-5}	0.034	0.27
	27	4	17	—	25	3.4	—	—	20	—	—	3.16×10^{-5}	0.054	0.35
	22	5	17	—	26	4.5	—	—	21	—	—	7.71×10^{-5}	0.045	0.47
	33	5	22	—	32	4.5	—	—	25	—	—	7.71×10^{-5}	0.11	0.55
	22	5	17	—	28	4.5	—	—	23	—	—	1.6×10^{-4}	0.05	0.71
	43	5	29	—	37	4.5	—	—	30	—	—	2.2×10^{-4}	0.18	0.96
	23	6	17	—	31	5.5	—	—	26	—	—	2.96×10^{-4}	0.15	1.0
	33	6	27	—	36	5.5	—	—	28	—	—	2.96×10^{-4}	0.13	0.8
	48	10	38	10	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.2	1
	60	10	50	10	35	4.5	8	4.5	29	—	M6	2.96×10^{-4}	0.23	1
	42	10	32	—	36	5.5	—	—	28	—	M6	2.96×10^{-4}	0.18	0.91
	44	10	24	—	45	5.5	—	—	40	5	M6	3.9×10^{-4}	0.34	0.31
	45	10	28	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.29	1.22
	45	10	28	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.29	1.22
	33	10	17	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.23	1.26
	63	10	47	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.38	1.26
	64.5	10	47.5	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.38	1.26
	42	10	26.3	—	43	5.5	—	—	33	5	M6	3.9×10^{-4}	0.28	1.28
	81.6	10	64.6	—	45	5.5	—	—	40	5	M6	3.9×10^{-4}	0.48	1.28

For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

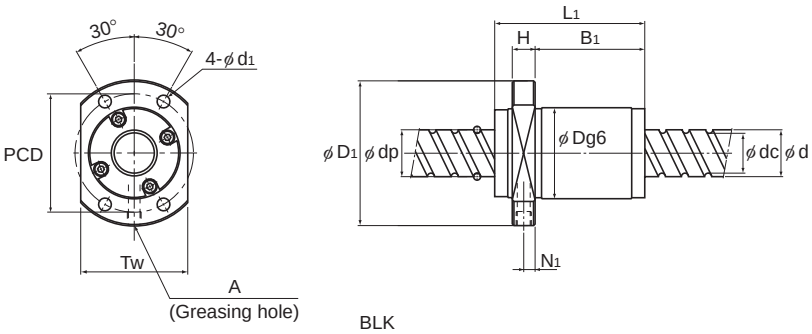
Screw shaft outer diameter	16 to 18
Lead	4 to 16

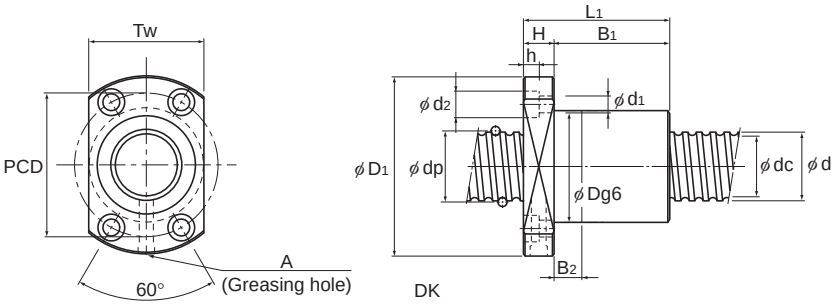


BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity	Outer diameter	Flange diameter
						Ca	C0a	K		
d	Ph		dp	dc	Rows X turns	kN	kN	N/μm	D	D1
16	4	BNF 1604-3	16.5	13.8	2×1.5	5.1	10.5	180	36	59
	5	BNF 1605-2.5	16.75	13.2	1×2.5	7.4	13.9	170	40	60
		BNF 1605-3	16.75	13.2	2×1.5	8.7	16.8	200	40	60
		BNF 1605-5	16.75	13.2	2×2.5	13.5	27.8	320	40	60
		DK 1605-3	16.75	13.1	3×1	7.4	13	160	30	49
		DK 1605-4	16.75	13.1	4×1	9.5	17.4	210	30	49
	6	BNF 1606-2.5	16.8	13.2	1×2.5	7.5	14	170	40	60
		BNF 1606-5	16.8	13.2	2×2.5	13.5	28	320	40	60
	10	BNF 1610-1.5	16.8	13.5	1×1.5	4.8	8.5	100	40	63
	16	BLK 1616-2.8	16.65	13.7	1×2.8	5.2	9.9	180	32	53
		BLK 1616-3.6	16.65	13.7	2×1.8	7.1	14.3	220	32	53
18	10	BNF 1810-2.5	18.8	15.5	1×2.5	7.8	15.9	190	42	65
		BNF 1810-3	18.8	15.5	2×1.5	9.2	19.1	220	42	65

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.





Unit: mm

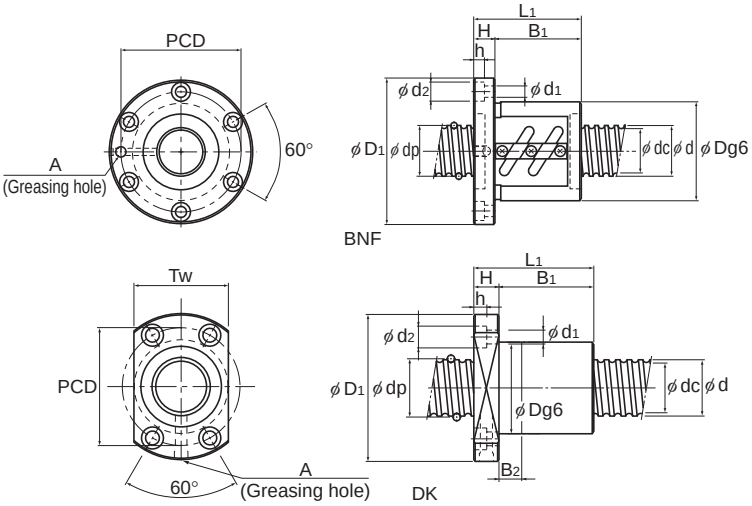
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	45	11	34	—	47	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.32	1.35
	41	10	31	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.37	1.24
	51	10	41	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.47	1.24
	56	10	46	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.49	1.24
	45	10	35	10	39	4.5	8	4.5	31	—	M6	5.05×10^{-4}	0.24	1.25
	50	10	40	10	39	4.5	8	4.5	31	—	M6	5.05×10^{-4}	0.26	1.25
	44	10	34	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.41	1.3
	62	10	52	—	50	4.5	8	4.5	—	—	M6	5.05×10^{-4}	0.49	1.3
	42	11	31	—	51	5.5	9.5	5.5	—	—	M6	5.05×10^{-4}	0.32	1.41
	54	10	37.5	—	42	4.5	—	—	38	5	M6	5.05×10^{-4}	0.32	1.41
	38	10	21.5	—	42	4.5	—	—	38	5	M6	5.05×10^{-4}	0.21	1.41
	69	12	57	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	0.67	1.81
	75	12	63	—	53	5.5	9.5	5.5	—	—	M6	8.09×10^{-4}	0.63	1.81

For model number coding, see A15-248.

Options⇒A15-351

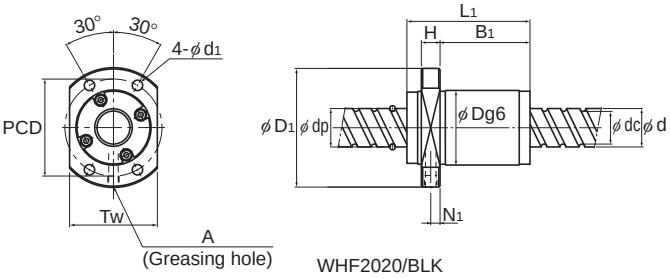
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	20
Lead	4 to 60

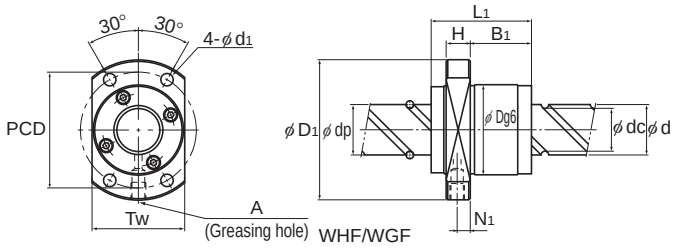


Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D_1
20	4	BNF 2004-2.5	20.5	17.8	1×2.5	4.8	10.9	180	40	63
		BNF 2004-5	20.5	17.8	2×2.5	8.6	21.8	350	40	63
		DK 2004-3	20.5	17.8	3×1	5.2	11.6	190	32	56
		DK 2004-4	20.5	17.8	4×1	6.6	15.5	250	32	56
	5	BNF 2005-2.5	20.75	17.2	1×2.5	8.3	17.4	200	44	67
		BNF 2005-3	20.75	17.2	2×1.5	9.7	21	240	44	67
		BNF 2005-3.5	20.75	17.2	1×3.5	11.1	24.5	270	44	67
		BNF 2005-5	20.75	17.2	2×2.5	15.1	35	380	44	67
		DK 2005-3	20.75	17.1	3×1	8.5	17.3	200	34	58
		DK 2005-4	20.75	17.1	4×1	11	23.1	260	34	58
	6	BNF 2006-2.5	20.75	17.2	1×2.5	8.3	17.5	200	48	71
		BNF 2006-3	20.75	17.2	2×1.5	9.7	21	240	48	71
		BNF 2006-3.5	20.75	17.2	1×3.5	11.1	24.5	270	48	71
		BNF 2006-5	20.75	17.2	2×2.5	15.1	35	380	48	71
		DK 2006-3	21	16.4	3×1	11.4	21.5	410	35	58
		DK 2006-4	21	16.4	4×1	14.6	28.6	540	35	58
	8	BNF 2008-2.5	21	16.4	1×2.5	11.1	21.9	210	46	74
		DK 2008-4	21	16.4	4×1	14.6	28.8	270	35	58
	10	BNF 2010A-1.5	21	16.4	1×1.5	7.2	13.2	130	46	74
	12	BNF 2012-1.5	21	16.4	1×1.5	7.1	12.5	130	48	71
	20	BLK 2020-2.8	20.75	17.5	1×2.8	8.1	17.2	230	39	62
		WHF 2020-3.4	20.75	17.5	2×1.7	9.6	21	225	42	64
		BLK 2020-3.6	20.75	17.5	2×1.8	11.1	24.7	290	39	62
	25	WHF 2025-3.4	20.75	17.6	2×1.7	9.8	22.3	236	39	62
	30	WHF 2030-3.4	20.75	17.6	2×1.7	9.9	23.5	243	39	62
	40	WGF 2040-1	20.75	17.5	2×0.65	4.3	8	110	37	57
		WGF 2040-3	20.75	17.5	2×1.65	9.5	20.2	280	37	57
		WHF 2040-3.4	20.75	17.5	2×1.7	9.6	20.3	256	37	57
	60	WGF 2060-1.5	20.75	17.5	2×0.75	4.5	11	140	37	57

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Model WHF, model WGF and Large Lead Precision Ball Screw model BLK cannot be attached with seal.



WHF2020/BLK



WHF/WGF

Unit: mm

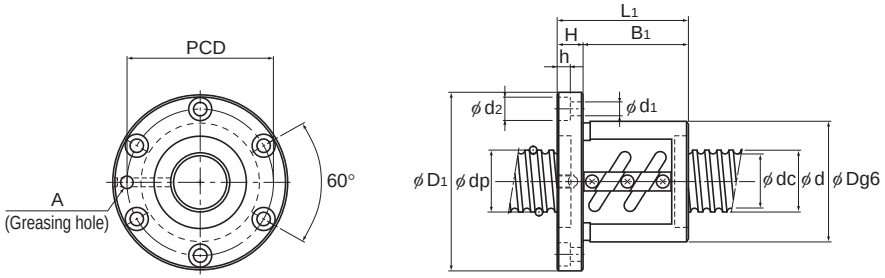
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	37	11	26	—	51	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.3	2.18
	49	11	38	—	51	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.49	2.18
	42	11	31	10	44	5.5	9.5	5.5	35	—	M6	1.23×10^{-3}	0.26	2.18
	46	11	35	10	44	5.5	9.5	5.5	35	—	M6	1.23×10^{-3}	0.27	2.18
	41	11	30	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.46	2.05
	52	11	41	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.53	2.05
	45	11	34	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.53	2.05
	56	11	45	—	55	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.6	2.05
	46	11	35	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.31	2.06
	51	11	40	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.34	2.06
	44	11	33	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.51	2.12
	56	11	45	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.68	2.12
	50	11	39	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.62	2.12
	62	11	51	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.8	2.12
	52	11	41	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.36	1.93
	59	11	48	10	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.39	1.93
	60	15	45	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.69	2.06
	69	11	58	15	46	5.5	9.5	5.5	36	—	M6	1.23×10^{-3}	0.45	2.06
	58	15	43	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.77	2.14
	64	18	46	—	59	5.5	9.5	5.5	—	—	M6	1.23×10^{-3}	0.9	2.19
	65	10	47.5	—	50	5.5	—	—	46	5	M6	1.23×10^{-3}	0.49	2.25
	47.1	10	24.1	—	53	5.5	—	—	46	5	M6	1.23×10^{-3}	0.49	2.25
	45	10	27.5	—	50	5.5	—	—	46	5	M6	1.23×10^{-3}	0.35	2.25
	56.2	10	33.2	—	50	5.5	—	—	46	5	M6	1.23×10^{-3}	0.51	2.26
	65.3	10	43.3	—	50	5.5	—	—	46	5	M6	1.23×10^{-3}	0.55	2.28
	41	10	25	—	47	5.5	—	—	38	5.5	M6	1.23×10^{-3}	0.24	2.34
	81	10	65	—	47	5.5	—	—	38	5.5	M6	1.23×10^{-3}	0.48	2.34
	82.7	10	65.7	—	47	5.5	—	—	38	5	M6	1.23×10^{-3}	0.58	2.34
	60	10	40.1	—	47	5.5	—	—	38	5	M6	1.23×10^{-3}	0.4	2.37

For model number coding, see **A15-248**.

Options⇒A15-351

No Preload Type of Precision Ball Screw

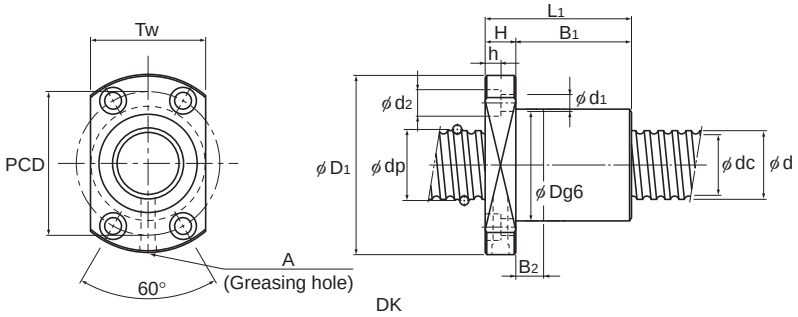
Screw shaft outer diameter	25
Lead	4 to 16



BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C_0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows X turns	kN	kN	N/μm	D	D_1
25	4	BNF 2504-2.5	25.5	22.8	1×2.5	5.2	13.7	210	46	69
		BNF 2504-5	25.5	22.8	2×2.5	9.5	27.3	410	46	69
		DK 2504-3	25.5	22.8	3×1	5.7	15	230	38	63
		DK 2504-4	25.5	22.8	4×1	7.4	19.9	310	38	63
	5	BNF 2505-2.5	25.75	22.2	1×2.5	9.2	22	240	50	73
		BNF 2505-3	25.75	22.2	2×1.5	10.8	26.4	280	50	73
		BNF 2505-3.5	25.75	22.2	1×3.5	12.3	30.7	320	50	73
		BNF 2505-5	25.75	22.2	2×2.5	16.7	44	460	50	73
		DK 2505-3	25.75	22.1	3×1	9.7	22.6	250	40	63
		DK 2505-4	25.75	22.1	4×1	12.4	30.3	320	40	63
	6	BNF 2506-2.5	26	21.4	1×2.5	12.5	27.3	250	53	76
		BNF 2506-3	26	21.4	2×1.5	14.6	32.8	290	53	76
		BNF 2506-3.5	26	21.4	1×3.5	15.1	35.9	330	53	76
		BNF 2506-5	26	21.4	2×2.5	22.5	54.8	470	53	76
		DK 2506-3	26	21.4	3×1	12.8	27	250	40	63
		DK 2506-4	26	21.4	4×1	16.8	37.4	330	40	63
	8	BNF 2508-2.5	26.25	20.5	1×2.5	15.8	32.8	250	58	85
		BNF 2508-3	26.25	20.5	2×1.5	18.5	39.4	290	58	85
		BNF 2508-3.5	26.25	20.5	1×3.5	21.2	46	340	58	85
		BNF 2508-5	26.25	20.5	2×2.5	28.7	65.8	480	58	85
		DK 2508-3	26	21.4	3×1	13.1	28.1	500	40	63
		DK 2508-4	26	21.4	4×1	16.8	37.5	330	40	63
	10	BNF 2510A-2.5	26.3	21.4	1×2.5	15.8	33	250	58	85
		DK 2510-3	26	21.6	3×1	12.7	27	250	40	63
		DK 2510-4	26	21.6	4×1	16.7	37.6	330	40	63
	12	BNF 2512-2.5	26	21.9	1×2.5	12.3	27.6	250	53	76
	16	BNF 2516-1.5	26	21.4	1×1.5	7.9	16.7	150	53	76

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see **A15-360**.



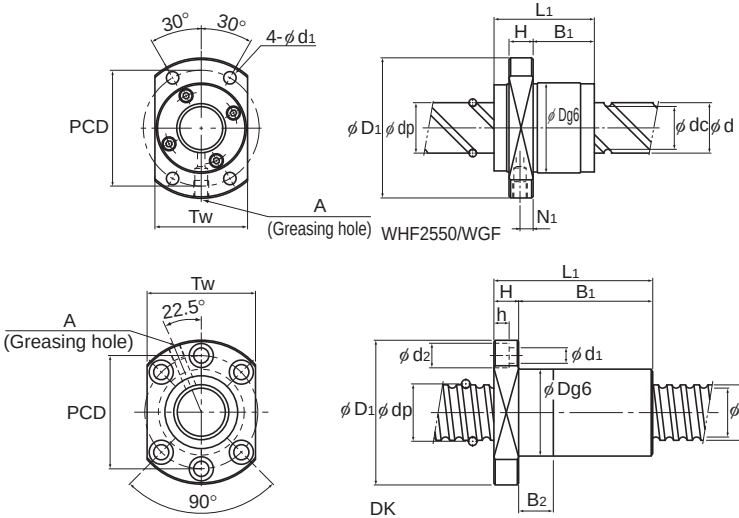
Unit: mm

Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	T_w	A	kg•cm²/mm	kg	kg/m
	36	11	25	—	57	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.21	3.5
	48	11	37	—	57	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.55	3.5
	43	11	32	10	51	5.5	9.5	5.5	39	M6	3.01×10^{-3}	0.33	3.5
	47	11	36	10	51	5.5	9.5	5.5	39	M6	3.01×10^{-3}	0.35	3.5
	40	11	29	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.52	3.34
	52	11	41	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.66	3.34
	45	11	34	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.6	3.34
	55	11	44	—	61	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.68	3.34
	46	11	35	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.38	3.35
	51	11	40	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.41	3.35
	44	11	33	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.61	3.19
	56	11	45	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.85	3.19
	50	11	39	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.79	3.19
	62	11	51	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.91	3.19
	52	11	41	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.41	3.19
	60	11	49	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.46	3.19
	58	15	43	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.07	3.12
	71	15	56	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.27	3.12
	66	15	51	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.29	3.12
	82	15	67	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.44	3.12
	62	12	50	10	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.48	3.35
	71	12	59	15	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.54	3.35
	70	18	52	—	71	6.6	11	6.5	—	M6	3.01×10^{-3}	1.43	3.27
	80	15	65	15	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.62	3.45
	85	15	70	20	51	5.5	9.5	5.5	41	M6	3.01×10^{-3}	0.65	3.45
	60	11	49	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.86	3.51
	60	11	49	—	64	5.5	9.5	5.5	—	M6	3.01×10^{-3}	0.96	3.6

For model number coding, see A15-248.

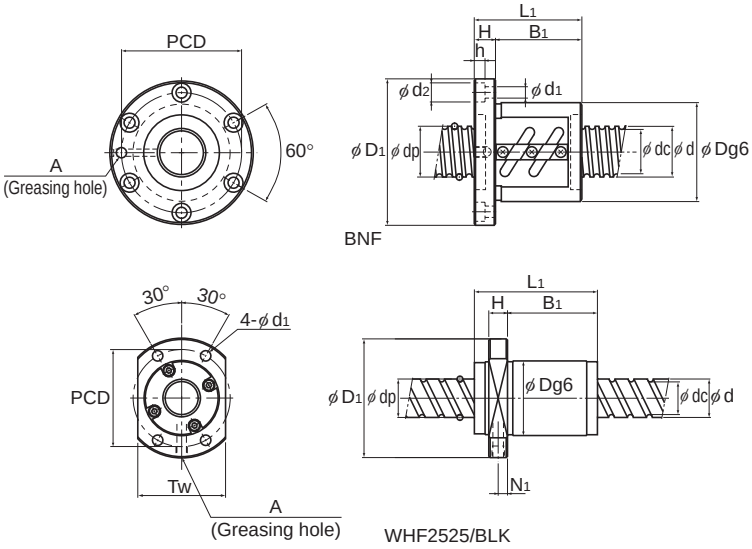
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	25 to 30
Lead	5 to 90



Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C_oa kN	Rigidity K N/μm	Outer diameter D	Flange diameter D_1
25	25	BLK 2525-2.8	26	21.9	1×2.8	12.2	26.9	270	47	74
		WHF 2525-3.4	26	21.9	2×1.7	14.5	33.1	285	50	77
		BLK 2525-3.6	26	21.9	2×1.8	16.6	38.7	350	47	74
	50	WGF 2550-1	26	21.9	2×0.65	6.4	12.5	140	45	69
		WGF 2550-3	26	21.9	2×1.65	14.3	31.7	340	45	69
		WHF 2550-3.4	26	21.9	2×1.7	14.4	31.9	323	45	69
28	5	BNF 2805-2.5	28.75	25.2	1×2.5	9.7	24.6	250	55	85
		BNF 2805-3	28.75	25.2	2×1.5	11.3	29.5	300	55	85
		BNF 2805-3.5	28.75	25.2	1×3.5	12.9	34.4	350	55	85
		BNF 2805-5	28.75	25.2	2×2.5	17.5	49.4	500	55	85
		BNF 2805-7.5	28.75	25.2	3×2.5	24.8	73.8	740	55	85
		DK 2805-3	28.75	25.2	3×1	10.5	26.4	270	43	71
		DK 2805-4	28.75	25.2	4×1	13.4	35.2	360	43	71
	6	BNF 2806-2.5	28.75	25.2	1×2.5	9.6	24.6	250	55	85
		BNF 2806-3.5	28.75	25.2	1×3.5	12.9	34.5	350	55	85
		BNF 2806-5	28.75	25.2	2×2.5	17.5	49.4	500	55	85
		BNF 2806-7.5	28.75	25.2	3×2.5	24.8	73.8	740	55	85
		DK 2806-3	29	24.4	3×1	14	32	280	43	71
		DK 2806-4	29	24.4	4×1	18	42.5	370	43	71
	8	BNF 2808-2.5	29.25	23.6	1×2.5	16.8	36.8	270	60	104
		BNF 2808-3	29.25	23.6	2×1.5	19.6	44.2	320	60	104
		BNF 2808-5	29.25	23.6	2×2.5	30.4	73.7	530	60	104
	10	BNF 2810-2.5	29.75	22.4	1×2.5	24	48.2	280	65	106
		DK 2810-4	29.25	23.6	4×1	22.4	50	370	45	71
30	60	WGF 3060-1	31.25	26.4	2×0.65	8.9	18	170	55	89
		WGF 3060-3	31.25	26.4	2×1.65	19.9	45.7	410	55	89
	90	WGF 3090-1.5	31.25	26.4	2×0.75	9.7	25.8	200	55	89

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Model WHF, model WGF and Large Lead Precision Ball Screw model BLK cannot be attached with seal.



WHF2525/BLK

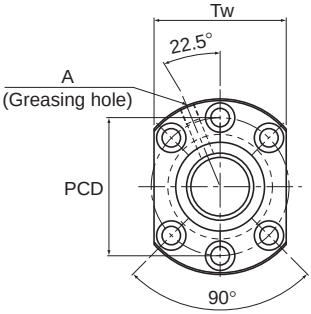
Unit: mm

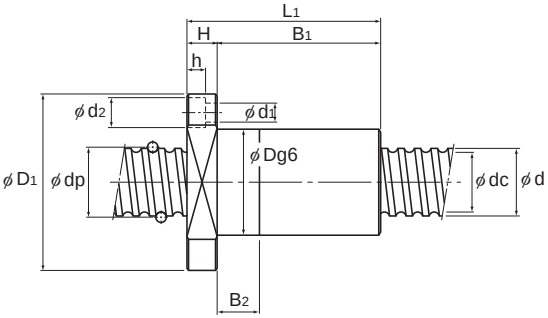
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	80	12	60	—	60	6.6	—	—	56	6	M6	3.01×10^{-3}	0.89	3.52
	58.8	12	31.3	—	63	6.6	—	—	56	6	M6	3.01×10^{-3}	0.65	3.52
	55	12	35	—	60	6.6	—	—	56	6	M6	3.01×10^{-3}	0.64	3.52
	52	12	31.5	—	57	6.6	—	—	46	7	M6	3.01×10^{-3}	0.43	3.66
	102	12	81.5	—	57	6.6	—	—	46	7	M6	3.01×10^{-3}	0.85	3.66
	103.3	12	79.3	—	57	6.6	—	—	46	6	M6	3.01×10^{-3}	0.72	3.66
	44	12	32	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.02	4.27
	54	12	42	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.92	4.27
	49	12	37	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.86	4.27
	59	12	47	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.06	4.27
	74	12	62	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.16	4.27
	49	12	37	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.48	4.27
	54	12	42	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.51	4.27
	50	12	38	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.87	4.36
	56	12	44	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	0.94	4.36
	68	12	56	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.09	4.36
	86	12	74	—	69	6.6	11	6.5	—	—	M6	4.74×10^{-3}	1.3	4.36
	53	12	41	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.5	4.36
	61	12	49	10	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.56	4.36
	68	18	50	—	82	11	17.5	11	—	—	M6	4.74×10^{-3}	1.75	4.02
	80	18	62	—	82	11	17.5	11	—	—	M6	4.74×10^{-3}	1.93	4.02
	92	18	74	—	82	11	17.5	11	—	—	M6	4.74×10^{-3}	2.11	4.02
	86	18	68	—	85	11	17.5	11	—	—	M6	4.74×10^{-3}	2.3	3.66
	84	15	69	20	57	6.6	11	6.5	55	—	M6	4.74×10^{-3}	0.82	4.18
	62	15	37	—	71	9	—	—	56	9	M6	6.24×10^{-3}	1.11	5.28
	122	15	97	—	71	9	—	—	56	9	M6	6.24×10^{-3}	1.9	5.28
	92	15	61.3	—	71	9	—	—	56	9	M6	6.24×10^{-3}	1.51	5.34

For model number coding, see **A15-248**.

No Preload Type of Precision Ball Screw

Screw shaft outer diameter	32
Lead	4 to 12

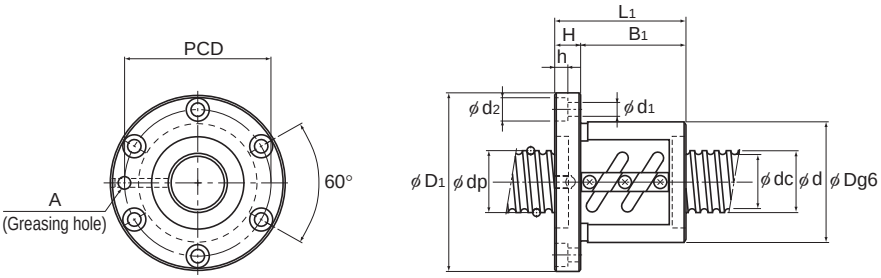




DK

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
32	4	BNF 3204-7.5	32.5	30	3×2.5	14.8	52.7	740	54	81
		DK 3204-3	32.5	30.1	3×1	6.4	19.6	290	45	76
		DK 3204-4	32.5	30.1	4×1	8.2	26.1	380	45	76
	5	○ BNF 3205-2.5	32.75	29.2	1×2.5	10.2	28.1	280	58	85
		○ BNF 3205-3	32.75	29.2	2×1.5	12	33.8	340	58	85
		○ BNF 3205-4.5	32.75	29.2	3×1.5	17	50.7	500	58	85
		○ BNF 3205-5	32.75	29.2	2×2.5	18.5	56.4	560	58	85
		○ BNF 3205-7.5	32.75	29.2	3×2.5	26.3	84.5	810	58	85
		DK 3205-3	32.75	29.2	3×1	11.1	30.2	300	46	76
		DK 3205-4	32.75	29.2	4×1	14.2	40.3	400	46	76
		DK 3205-6	32.75	29.2	6×1	20.1	60.4	600	46	76
	6	○ BNF 3206-2.5	33	28.4	1×2.5	13.9	35.2	290	62	89
		○ BNF 3206-3	33	28.4	2×1.5	16.3	42.2	350	62	89
		○ BNF 3206-5	33	28.4	2×2.5	25.2	70.4	580	62	89
		DK 3206-3	33	28.4	3×1	14.9	37.1	310	48	76
		DK 3206-4	33	28.4	4×1	19.1	49.5	410	48	76
	8	○ BNF 3208A-2.5	33.25	27.5	1×2.5	17.8	42.2	300	66	100
		○ BNF 3208A-3	33.25	27.5	2×1.5	20.9	50.7	360	66	100
		○ BNF 3208A-4.5	33.25	27.5	3×1.5	29.5	76	530	66	100
		○ BNF 3208A-5	33.25	27.5	2×2.5	32.3	84.4	590	66	100
	10	○ BNF 3210A-2.5	33.75	26.4	1×2.5	26.1	56.2	310	74	108
		○ BNF 3210A-3	33.75	26.4	2×1.5	30.5	67.4	380	74	108
		○ BNF 3210A-3.5	33.75	26.4	1×3.5	34.8	78.6	440	74	108
		○ BNF 3210A-5	33.75	26.4	2×2.5	47.2	112.7	620	74	108
		DK 3210-3	33.75	26.4	3×1	25.7	52.2	300	54	87
		DK 3210-4	33.75	26.4	4×1	33	69.7	390	54	87
	12	○ BNF 3212-3.5	34	26.1	1×3.5	40.4	88.5	440	76	121
		DK 3212-4	33.75	26.4	4×1	34.2	73.9	420	54	87

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see **A15-360**.



BNF

Unit: mm

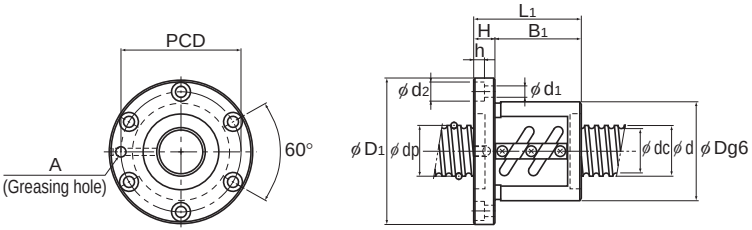
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	A	kg•cm²/mm	kg	kg/m
	60	11	49	—	67	6.6	11	6.5	—	M6	8.08×10^{-3}	0.81	5.86
	44	11	33	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.44	5.86
	48	11	37	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.47	5.86
	41	12	29	—	71	6.6	11	6.5	—	M6	8.08×10^{-3}	0.76	5.67
	53	12	41	—	71	6.6	11	6.5	—	M6	8.08×10^{-3}	0.91	5.67
	63	12	51	—	71	6.6	11	6.5	—	M6	8.08×10^{-3}	1.03	5.67
	56	12	44	—	71	6.6	11	6.5	—	M6	8.08×10^{-3}	0.94	5.67
	71	12	59	—	71	6.6	11	6.5	—	M6	8.08×10^{-3}	1.13	5.67
	47	12	35	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.5	5.67
	52	12	40	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.53	5.67
	62	12	50	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.6	5.67
	45	12	33	—	75	6.6	11	6.5	—	M6	8.08×10^{-3}	0.94	5.47
	57	12	45	—	75	6.6	11	6.5	—	M6	8.08×10^{-3}	1.12	5.47
	63	12	51	—	75	6.6	11	6.5	—	M6	8.08×10^{-3}	1.21	5.47
	53	12	41	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.58	6.31
	61	12	49	10	63	6.6	11	6.5	59	M6	8.08×10^{-3}	0.65	6.31
	58	15	43	—	82	9	14	8.5	—	M6	8.08×10^{-3}	1.5	5.39
	71	15	56	—	82	9	14	8.5	—	M6	8.08×10^{-3}	1.73	5.39
	87	15	72	—	82	9	14	8.5	—	M6	8.08×10^{-3}	2.02	5.39
	82	15	67	—	82	9	14	8.5	—	M6	8.08×10^{-3}	1.93	5.39
	70	15	55	—	90	9	14	8.5	—	M6	8.08×10^{-3}	2.2	4.98
	87	15	72	—	90	9	14	8.5	—	M6	8.08×10^{-3}	2.6	4.98
	80	15	65	—	90	9	14	8.5	—	M6	8.08×10^{-3}	2.44	4.98
	100	15	85	—	90	9	14	8.5	—	M6	8.08×10^{-3}	2.92	4.98
	80	15	65	15	69	9	14	8.5	66	M6	8.08×10^{-3}	1.22	4.98
	90	15	75	20	69	9	14	8.5	66	M6	8.08×10^{-3}	1.34	4.98
	98	18	80	—	98	11	17.5	11	—	M6	8.08×10^{-3}	3.4	4.9
	98	15	83	25	69	9	14	8.5	66	M6	8.08×10^{-3}	1.43	5.2

For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

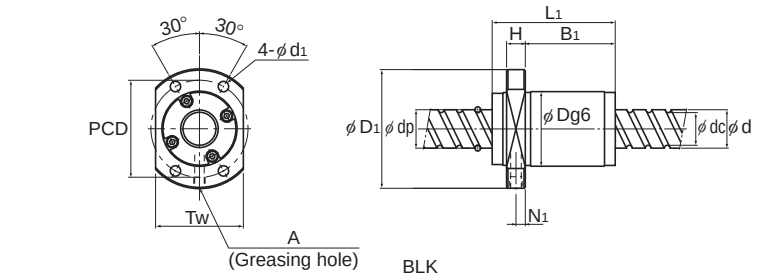
Screw shaft outer diameter	32 to 36
Lead	6 to 36

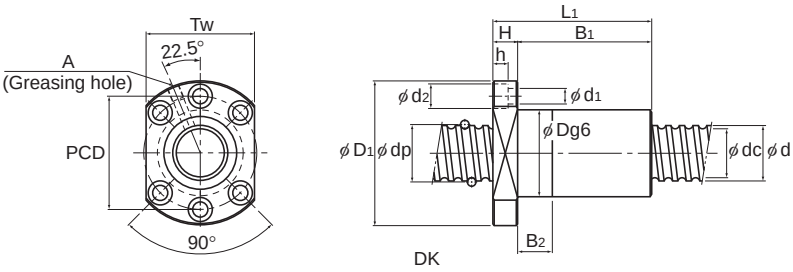


BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows X turns	kN	kN	N/μm	D	D1
32	32	BLK 3232-2.8	33.25	28.3	1×2.8	17.3	41.4	340	58	92
		BLK 3232-3.6	33.25	28.3	2×1.8	23.7	59.5	440	58	92
36	6	○ BNF 3606-2.5	36.75	33.2	1×2.5	10.7	31.8	310	65	100
		○ BNF 3606-3	36.75	33.2	2×1.5	12.5	38	370	65	100
		○ BNF 3606-5	36.75	33.2	2×2.5	19.4	63.4	610	65	100
		○ BNF 3606-7.5	36.75	33.2	3×2.5	27.5	95.2	890	65	100
	8	○ BNF 3608-2.5	37.25	31.6	1×2.5	18.8	47.5	330	70	114
		○ BNF 3608-5	37.25	31.6	2×2.5	34.1	95.1	650	70	114
		○ BNF 3608-7.5	37.25	31.6	3×2.5	48.3	142.1	950	70	114
	10	○ BNF 3610-2.5	37.75	30.5	1×2.5	27.6	63.3	350	75	120
		○ BNF 3610-5	37.75	30.5	2×2.5	50.1	126.4	680	75	120
		○ BNF 3610-7.5	37.75	30.5	3×2.5	71.1	190.1	990	75	120
		DK 3610-3	37.75	30.5	3×1	28.8	63.8	350	58	98
		DK 3610-4	37.75	30.5	4×1	36.8	85	470	58	98
	12	○ BNF 3612-2.5	38	30.1	1×2.5	32.1	71.4	350	78	123
		○ BNF 3612-5	38	30.1	2×2.5	58.4	142.1	690	78	123
	16	○ BNF 3616-2.5	38	30.1	1×2.5	32.1	71.4	350	78	123
	20	○ BNF 3620-1.5	37.75	30.5	1×1.5	17.6	38.3	220	70	103
		BLK 3620-5.6	37.75	31.2	2×2.8	54.9	134.3	760	70	110
	24	BLK 3624-5.6	38	30.7	2×2.8	63.8	151.9	770	75	115
	36	BLK 3636-2.8	37.4	31.7	1×2.8	22.4	54.1	390	66	106
		BLK 3636-3.6	37.4	31.7	2×1.8	30.8	78	490	66	106

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.





Unit: mm

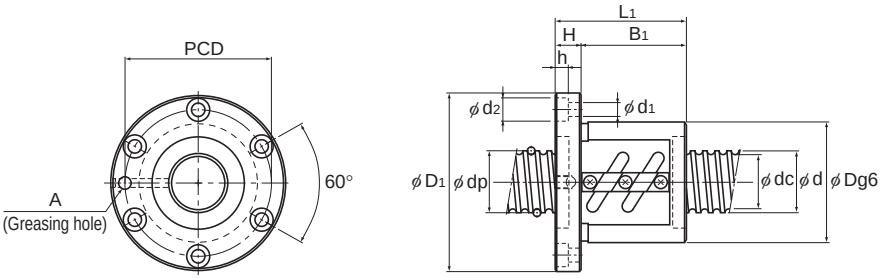
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length										Greasing hole			
L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
102	15	77	—	74	9	—	—	68	7.5	M6	8.08×10^{-3}	1.78	5.83
70	15	45	—	74	9	—	—	68	7.5	M6	8.08×10^{-3}	1.32	5.83
53	15	38	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.29	7.39
62	15	47	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.43	7.39
71	15	56	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.57	7.39
89	15	74	—	82	9	14	8.5	—	—	M6	1.29×10^{-2}	1.85	7.39
68	18	50	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	2.11	6.96
92	18	74	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	2.57	6.96
116	18	98	—	92	11	17.5	11	—	—	M6	1.29×10^{-2}	3.03	6.96
81	18	63	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	2.75	6.51
111	18	93	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	3.45	6.51
141	18	123	—	98	11	17.5	11	—	—	M6	1.29×10^{-2}	4.15	6.51
82	18	64	15	77	11	17.5	11	75	—	M6	1.29×10^{-2}	1.52	6.51
93	18	75	20	77	11	17.5	11	75	—	M6	1.29×10^{-2}	1.66	6.51
87	18	69	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	3.14	6.41
123	18	105	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	4.07	6.41
92	18	74	—	100	11	17.5	11	—	—	M6	1.29×10^{-2}	3.27	6.8
75	15	60	—	85	9	14	8.5	—	—	M6	1.29×10^{-2}	1.91	7.24
78	17	45	—	90	11	—	—	80	8.5	M6	1.29×10^{-2}	2.23	6.49
94	18	59	—	94	11	—	—	86	9	M6	1.29×10^{-2}	3.05	6.39
113	17	86	—	85	11	—	—	76	8.5	M6	1.29×10^{-2}	2.61	7.34
77	17	50	—	85	11	—	—	76	8.5	M6	1.29×10^{-2}	1.93	7.34

For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

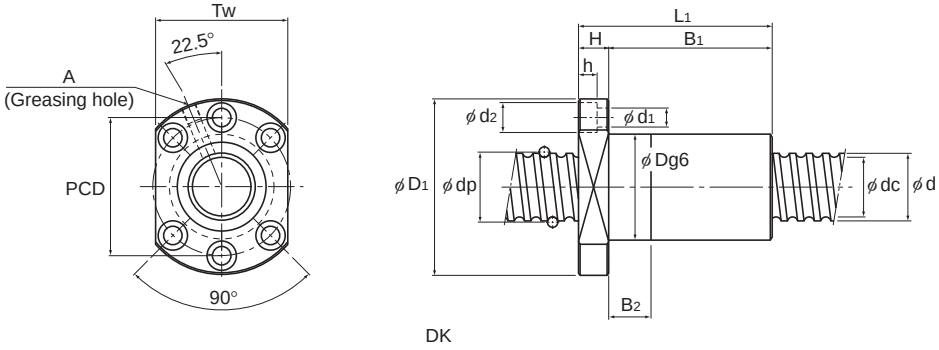
Screw shaft outer diameter	40
Lead	5 to 10



BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C_0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D_1
40	5	BNF 4005-3	40.75	37.2	2×1.5	13	42.3	400	67	101
		BNF 4005-4.5	40.75	37.2	3×1.5	18.5	63.5	600	67	101
		BNF 4005-6	40.75	37.2	4×1.5	23.7	84.7	780	67	101
	6	BNF 4006-2.5	41	36.4	1×2.5	15.3	44.1	350	70	104
		BNF 4006-5	41	36.4	2×2.5	27.7	88.1	690	70	104
		BNF 4006-7.5	41	36.4	3×2.5	39.2	132.3	1010	70	104
	8	BNF 4008-2.5	41.25	35.5	1×2.5	19.6	52.8	360	74	108
		BNF 4008-3	41.25	35.5	2×1.5	22.9	63.4	430	74	108
		BNF 4008-5	41.25	35.5	2×2.5	35.7	105.8	710	74	108
	10	BNF 4010-2.5	41.75	34.4	1×2.5	29	70.4	380	82	124
		BNF 4010-3	41.75	34.4	2×1.5	33.8	84.5	450	82	124
		BNF 4010-3.5	41.75	34.4	1×3.5	38.8	99	520	82	124
		BNF 4010-5	41.75	34.4	2×2.5	52.7	141.1	740	82	124
		DK 4010-3	41.75	34.4	3×1	29.8	69.3	380	62	104
		DK 4010-4	41.75	34.4	4×1	38.1	92.4	500	62	104

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
These models can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.



Unit: mm

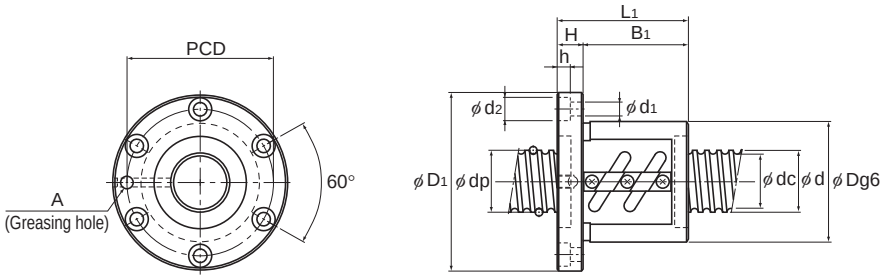
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	A	kg•cm²/mm	kg	kg/m
	56	15	41	—	83	9	14	8.5	—	M6	1.97×10^{-2}	1.31	9.06
	66	15	51	—	83	9	14	8.5	—	M6	1.97×10^{-2}	1.46	9.06
	81	15	66	—	83	9	14	8.5	—	M6	1.97×10^{-2}	1.69	9.06
	48	15	33	—	86	9	14	8.5	—	M6	1.97×10^{-2}	1.32	8.82
	66	15	51	—	86	9	14	8.5	—	M6	1.97×10^{-2}	1.63	8.82
	84	15	69	—	86	9	14	8.5	—	M6	1.97×10^{-2}	1.94	8.82
	58	15	43	—	90	9	14	8.5	—	M6	1.97×10^{-2}	1.7	8.72
	71	15	56	—	90	9	14	8.5	—	M6	1.97×10^{-2}	1.97	8.72
	82	15	67	—	90	9	14	8.5	—	M6	1.97×10^{-2}	2.19	8.72
	73	18	55	—	102	11	17.5	11	—	M6	1.97×10^{-2}	2.86	8.22
	90	18	72	—	102	11	17.5	11	—	M6	1.97×10^{-2}	3.33	8.22
	83	18	65	—	102	11	17.5	11	—	M6	1.97×10^{-2}	3.14	8.22
	103	18	85	—	102	11	17.5	11	—	M6	1.97×10^{-2}	3.69	8.22
	83	18	65	15	82	11	17.5	11	79	PT 1/8	1.97×10^{-2}	3.14	8.22
	93	18	75	20	82	11	17.5	11	79	PT 1/8	1.97×10^{-2}	3.41	8.22

For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

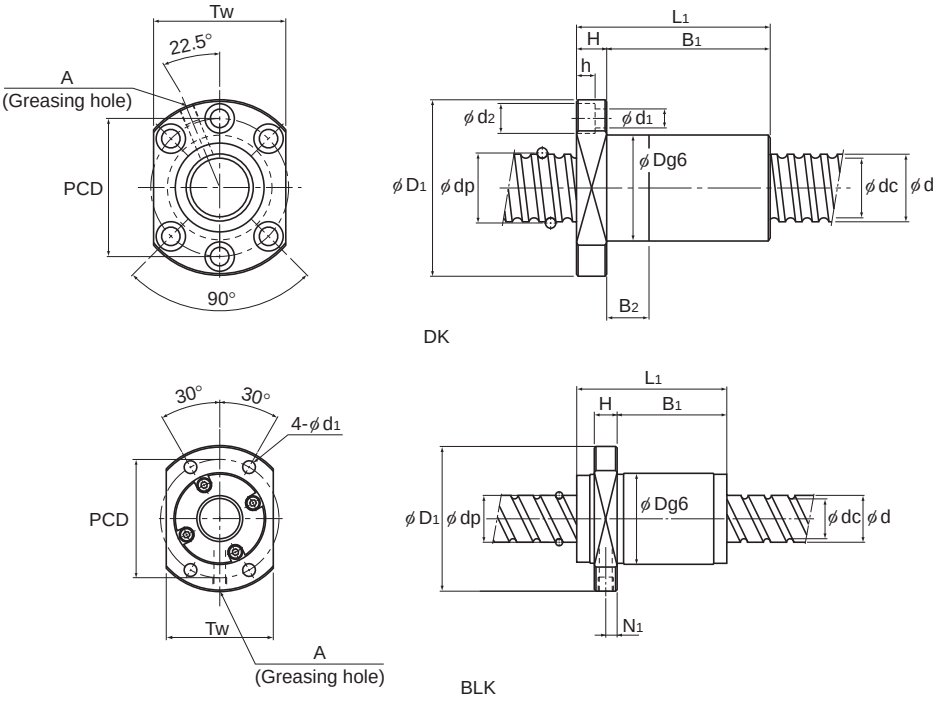
Screw shaft outer diameter	40
Lead	12 to 40



BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity	Outer diameter	Flange diameter
						Ca	C0a	K		
d	Ph		dp	dc	Rows x turns	kN	kN	N/μm	D	D1
40	12	○ BNF 4012-2.5	42	34.1	1×2.5	33.9	79.2	390	84	126
		○ BNF 4012-3.5	42	34.1	1×3.5	45.4	110.7	530	84	126
		○ BNF 4012-5	42	34.1	2×2.5	61.6	158.3	750	84	126
		○ DK 4012-3	41.75	34.4	3×1	30.6	72.3	390	62	104
		○ DK 4012-4	41.75	34.4	4×1	39.2	96.4	520	62	104
	16	○ BNF 4016-5	42	34.1	2×2.5	61.4	158.8	740	84	126
		○ DK 4016-4	41.75	34.4	4×1	39.1	96.8	520	62	104
	20	○ DK 4020-3	41.75	34.7	3×1	29.4	69.3	750	62	104
	40	BLK 4040-2.8	41.75	35.2	1×2.8	28.2	68.9	430	73	114
		BLK 4040-3.6	41.75	35.2	2×1.8	38.7	99.2	550	73	114

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.



Unit: mm

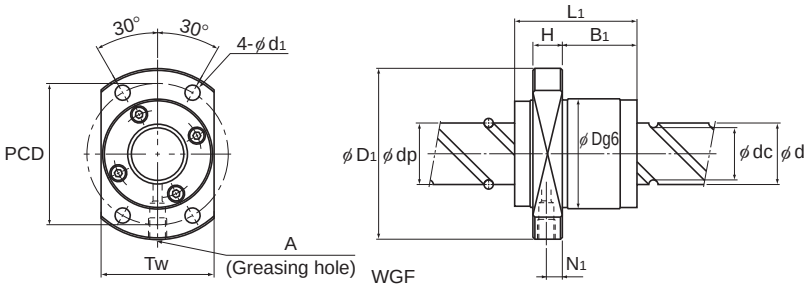
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	83	18	65	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	3.31	8.12
	95	18	77	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	3.66	8.12
	119	18	101	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	4.36	8.12
	90	18	72	20	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	1.77	8.5
	103	18	85	25	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	1.95	8.5
	152	22	130	—	104	11	17.5	11	—	—	M6	1.97×10^{-2}	5.52	8.55
	120	18	102	30	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.19	8.83
	123	18	105	30	82	11	17.5	11	79	—	PT 1/8	1.97×10^{-2}	2.23	9.03
	125	17	96.5	—	93	11	—	—	84	8.5	M6	1.97×10^{-2}	3.4	9.01
	85	17	56.5	—	93	11	—	—	84	8.5	M6	1.97×10^{-2}	2.48	9.01

For model number coding, see A15-248.

Options⇒A15-351

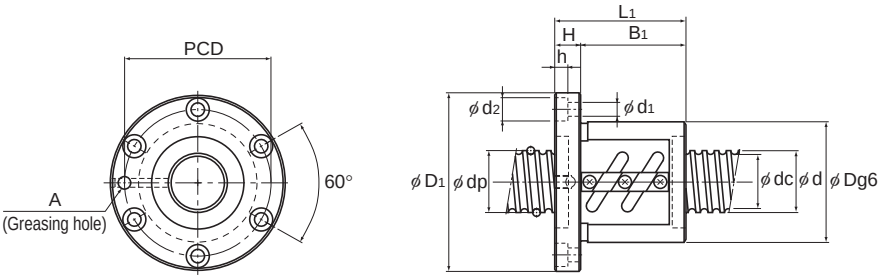
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	40 to 45
Lead	6 to 80



Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D1
40	80	WGF 4080-1	41.75	35.2	2×0.65	15	32.1	220	73	114
		WGF 4080-3	41.75	35.2	2×1.65	33.4	81.4	530	73	114
45	6	BNF 4506A-2.5	46	41.4	1×2.5	16	49.6	390	80	114
		BNF 4506A-5	46	41.4	2×2.5	29	99	750	80	114
		BNF 4506A-7.5	46	41.4	3×2.5	41.2	150	1100	80	114
	8	BNF 4508-2.5	46.25	40.6	1×2.5	20.7	59.5	400	85	127
		BNF 4508-5	46.25	40.6	2×2.5	37.4	118.6	770	85	127
		BNF 4508-7.5	46.25	40.6	3×2.5	53.1	178.4	1140	85	127
	10	BNF 4510-2.5	46.75	39.5	1×2.5	30.7	79.3	420	88	132
		BNF 4510-3	46.75	39.5	2×1.5	35.9	95.2	500	88	132
		BNF 4510-5	46.75	39.5	2×2.5	55.6	158.8	800	88	132
		BNF 4510-7.5	46.75	39.5	3×2.5	78.8	238.1	1190	88	132
	12	BNF 4512-5	47	39.2	2×2.5	65.2	178.4	820	90	130
	20	BNF 4520-1.5	47.7	37.9	1×1.5	44.2	99	350	98	142

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Model WGF cannot be attached with seal.



BNF

Unit: mm

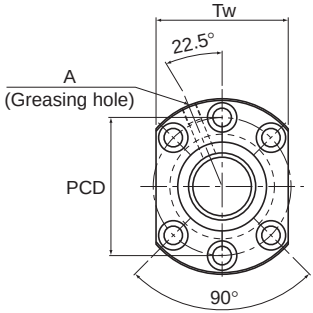
Nut dimensions										Screw shaft inertial moment/mm	Nut mass	Shaft mass
Overall length									Greasing hole			
L_1	H	B_1	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
79	17	50.5	93	11	—	—	74	8.5	M6	1.97×10^{-2}	2.34	9.38
159	17	130.5	93	11	—	—	74	8.5	M6	1.97×10^{-2}	4.18	9.38
53	15	38	96	9	14	8.5	—	—	PT 1/8	3.16×10^{-2}	1.76	11.31
71	15	56	96	9	14	8.5	—	—	PT 1/8	3.16×10^{-2}	2.18	11.31
89	15	74	96	9	14	8.5	—	—	PT 1/8	3.16×10^{-2}	2.59	11.31
68	18	50	105	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	2.76	11.21
92	18	74	105	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	3.42	11.21
116	18	98	105	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	4.09	11.21
81	18	63	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	3.43	10.65
94	18	76	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	3.83	10.65
111	18	93	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	4.35	10.65
141	18	123	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	5.26	10.65
119	18	101	110	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	4.74	10.54
95	20	75	120	11	17.5	11	—	—	PT 1/8	3.16×10^{-2}	5.04	10.37

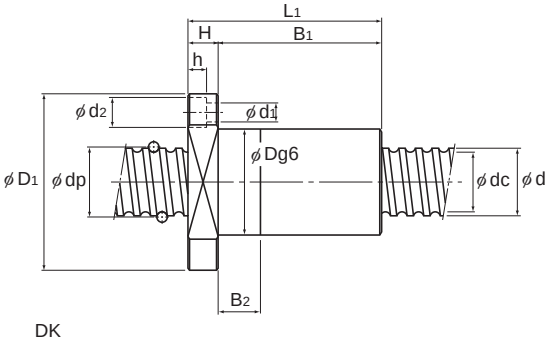
For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

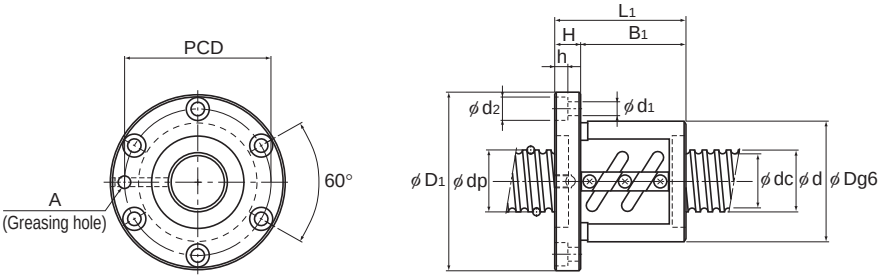
Screw shaft outer diameter	50
Lead	5 to 10





Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C₀a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D₁
50	5	○ BNF 5005-4.5	50.75	47.2	3×1.5	20.2	79.5	710	80	114
	8	○ BNF 5008-2.5	51.25	45.5	1×2.5	21.6	66.2	430	87	129
		○ BNF 5008-5	51.25	45.5	2×2.5	39.1	132.3	840	87	129
		○ BNF 5008-7.5	51.25	45.5	3×2.5	55.4	198.9	1230	87	129
	10	○ BNF 5010-2.5	51.75	44.4	1×2.5	32	88.2	450	93	135
		○ BNF 5010-3	51.75	44.4	2×1.5	37.5	105.8	540	93	135
		○ BNF 5010-3.5	51.75	44.4	1×3.5	42.8	123.5	620	93	135
		○ BNF 5010-5	51.75	44.4	2×2.5	58.2	176.4	880	93	135
		○ BNF 5010-7.5	51.75	44.4	3×2.5	82.5	264.6	1290	93	135
		DK 5010-3	51.75	44.4	3×1	33.9	90.7	470	72	123
		DK 5010-4	51.75	44.4	4×1	43.4	120.5	610	72	123
		DK 5010-6	51.75	44.4	6×1	62.7	186.8	930	72	123

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see A15-360.



BNF

Unit: mm

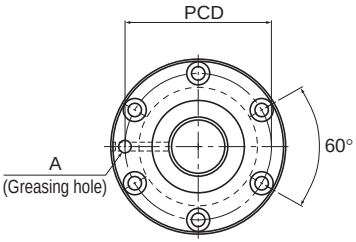
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	Greasing hole A	kg•cm²/mm	kg	kg/m
	68	15	53	—	96	9	14	8.5	—	PT 1/8	4.82×10^{-2}	1.91	14.4
	61	18	43	—	107	11	17.5	11	—	PT 1/8	4.82×10^{-2}	2.52	14.0
	85	18	67	—	107	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.16	14.0
	109	18	91	—	107	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.8	14.0
	73	18	55	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.33	13.38
	90	18	72	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.88	13.38
	83	18	65	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	3.66	13.38
	103	18	85	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	4.31	13.38
	133	18	115	—	113	11	17.5	11	—	PT 1/8	4.82×10^{-2}	5.28	13.38
	83	18	65	15	101	11	17.5	11	92	PT 1/8	4.82×10^{-2}	2.14	13.38
	93	18	75	20	101	11	17.5	11	92	PT 1/8	4.82×10^{-2}	2.3	13.38
	114	18	96	30	101	11	17.5	11	92	PT 1/8	4.82×10^{-2}	2.65	13.38

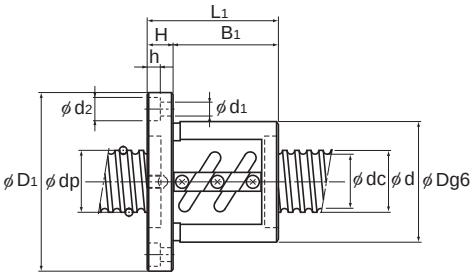
For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

Screw shaft outer diameter	50
Lead	12 to 50

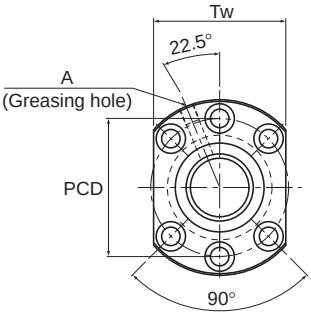


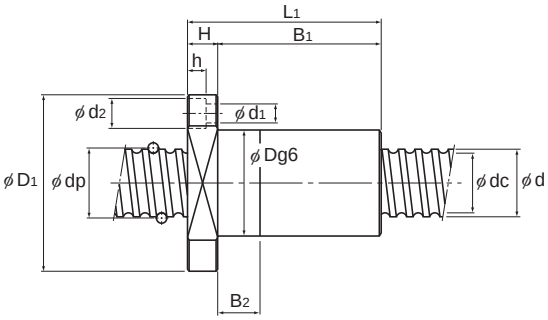


BNF

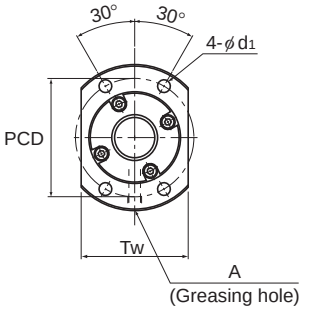
Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating Ca kN	Basic load rating C0a kN	Rigidity K N/μm	Outer diameter D	Flange diameter D1
50	12	DK 5012-3	52.25	43.3	3×1	45.8	113	490	75	129
		DK 5012-4	52.25	43.3	4×1	58.6	150.6	640	75	129
		○ BNF 5012-2.5	52.25	43.3	1×2.5	43.4	109.8	470	100	146
		○ BNF 5012-3.5	52.25	43.3	1×3.5	58	153.9	640	100	146
		○ BNF 5012-5	52.25	43.3	2×2.5	78.8	220.5	910	100	146
	16	DK 5016-3	52.25	43.3	3×1	45.7	113.3	490	75	129
		DK 5016-4	52.25	43.3	4×1	58.5	151	640	75	129
		○ BNF 5016-2.5	52.7	42.9	1×2.5	72.6	183.3	620	105	152
		○ BNF 5016-5	52.7	42.9	2×2.5	132.3	366.5	1180	105	152
	20	DK 5020-3	52.25	43.6	3×1	44.2	108.8	470	75	129
		○ BNF 5020-2.5	52.7	42.9	1×2.5	72.5	183.3	620	105	152
	50	BLK 5050-2.8	52.2	44.1	1×2.8	42.2	107.8	530	90	135
		BLK 5050-3.6	52.2	44.1	2×1.8	57.8	155	670	90	135

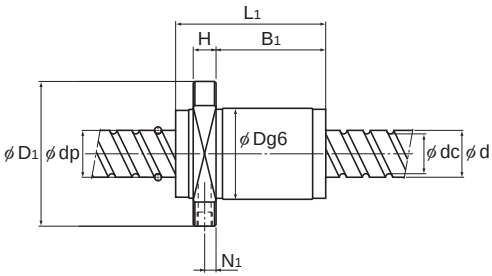
Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Those models marked with ○ can be attached with QZ Lubricator or the wiper ring.
For dimensions of the ball screw nut with either accessory being attached, see **A15-360**.
Large Lead Precision Ball Screw model BLK cannot be attached with seal.





DK





BLK

Unit: mm

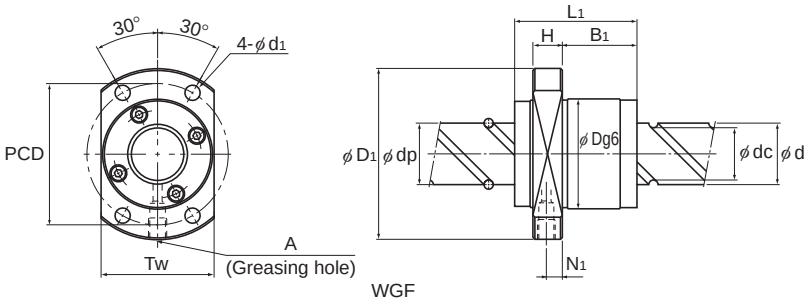
Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length										Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	97	22	75	20	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	2.91	12.74
	110	22	88	25	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.16	12.74
	87	22	65	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	4.57	12.74
	99	22	77	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	5.05	12.74
	123	22	101	—	122	14	20	13	—	—	PT 1/8	4.82×10^{-2}	6.02	12.74
	111	22	89	25	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.18	13.41
	129	22	107	30	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.52	13.41
	116	25	91	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	6.98	12.5
	164	25	139	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	9.18	12.5
	136	28	108	30	105	14	20	13	98	—	PT 1/8	4.82×10^{-2}	3.94	13.8
	141	28	113	—	128	14	20	13	—	—	PT 1/8	4.82×10^{-2}	8.32	13.08
	156	20	122	—	112	14	—	—	104	10	M6	4.82×10^{-2}	6.18	14.08
	106	20	72	—	112	14	—	—	104	10	M6	4.82×10^{-2}	4.45	14.08

For model number coding, see **A15-248**.

Options⇒A15-351

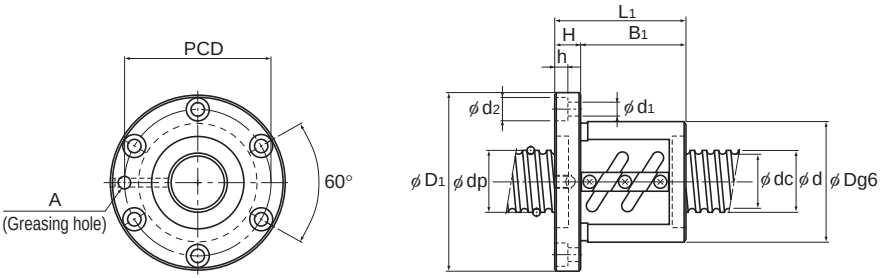
No Preload Type of Precision Ball Screw

Screw shaft outer diameter	50 to 55
Lead	10 to 100



Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D1
50	100	WGF 50100-1	52.2	44.1	2×0.65	22.4	50.1	270	90	135
		WGF 50100-3	52.2	44.1	2×1.65	49.9	127.2	650	90	135
55	10	BNF 5510-2.5	56.75	49.5	1×2.5	33.4	97	490	102	144
		BNF 5510-5	56.75	49.5	2×2.5	60.7	194	950	102	144
		BNF 5510-7.5	56.75	49.5	3×2.5	85.9	291.1	1390	102	144
	12	BNF 5512-2.5	57	49.2	1×2.5	39.3	108.8	500	105	147
		BNF 5512-3	57	49.2	2×1.5	46	131.3	590	105	147
		BNF 5512-3.5	57	49.2	1×3.5	52.4	152.9	680	105	147
		BNF 5512-5	57	49.2	2×2.5	71.3	218.5	960	105	147
		BNF 5512-7.5	57	49.2	3×2.5	100.9	327.3	1420	105	147
	16	BNF 5516-2.5	57.7	47.9	1×2.5	76.1	201.9	650	110	158
		BNF 5516-5	57.7	47.9	2×2.5	138.2	402.8	1280	110	158
	20	BNF 5520-2.5	57.7	47.9	1×2.5	76	201.9	660	112	158
		BNF 5520-5	57.7	47.9	2×2.5	138.2	403.8	1280	112	158

Note) The model numbers in dimmed type indicate semi-standard types. If desiring them, contact THK.
Model WGF cannot be attached with seal.



BNF

Unit: mm

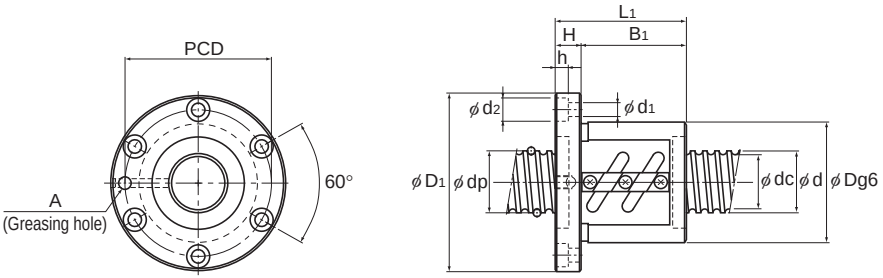
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	PCD	d_1	d_2	h	Tw	N_1	A	kg•cm²/mm	kg	kg/m
	98	20	64	112	14	—	—	92	10	M6	4.82×10^{-2}	4.18	14.66
	198	20	164	112	14	—	—	92	10	M6	4.82×10^{-2}	7.63	14.66
	81	18	63	122	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	4.19	16.43
	111	18	93	122	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.36	16.43
	141	18	123	122	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	6.54	16.43
	93	18	75	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.01	16.29
	107	18	89	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.6	16.29
	105	18	87	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	5.52	16.29
	129	18	111	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	6.54	16.29
	165	18	147	125	11	17.5	11	—	—	PT 1/8	7.05×10^{-2}	8.07	16.29
	116	25	91	133	14	20	13	—	—	PT 1/8	7.05×10^{-2}	7.4	15.46
	164	25	139	133	14	20	13	—	—	PT 1/8	7.05×10^{-2}	9.73	15.46
	127	28	99	134	14	20	13	—	—	PT 1/8	7.05×10^{-2}	8.4	16.1
	187	28	159	134	14	20	13	—	—	PT 1/8	7.05×10^{-2}	11.45	16.1

For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

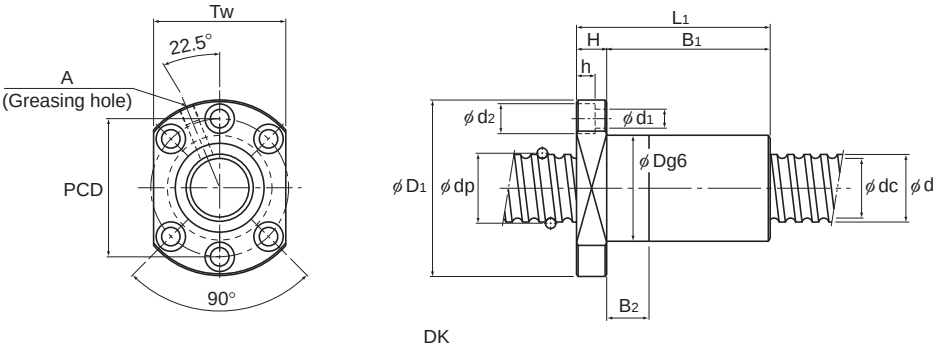
Screw shaft outer diameter	63
Lead	10 to 20



BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C_0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D_1
63	10	BNF 6310-2.5	64.75	57.7	1×2.5	35.4	111.7	550	108	154
		BNF 6310-5	64.75	57.7	2×2.5	64.2	222.5	1050	108	154
		BNF 6310-7.5	64.75	57.7	3×2.5	90.9	334.2	1550	108	154
		DK 6310-4	64.75	57.7	4×1	49.5	160.7	780	85	146
		DK 6310-6	64.75	57.7	6×1	70.3	242.1	1140	85	146
	12	BNF 6312A-2.5	65.25	56.3	1×2.5	48.1	139.2	560	115	161
		BNF 6312A-5	65.25	56.3	2×2.5	87.4	278.3	1090	115	161
		DK 6312-3	65.25	56.3	3×1	51.9	147.4	600	90	146
		DK 6312-4	65.25	56.3	4×1	66.4	196.6	785	90	146
	16	BNF 6316-5	65.7	55.9	2×2.5	147	462.6	1420	122	184
	20	BNF 6320-2.5	65.7	55.9	1×2.5	81	231.3	740	122	180
		BNF 6320-5	65.7	55.9	2×2.5	147	463.5	1420	122	180
		DK 6320-3	65.7	55.9	3×1	83.5	229.3	1470	95	159

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



Unit: mm

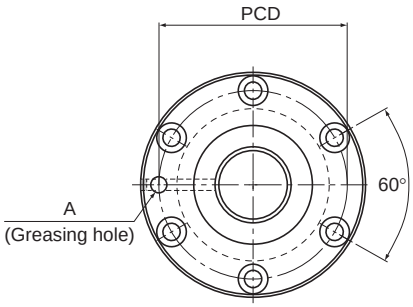
Nut dimensions											Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length									Greasing hole			
	L_1	H	B_1	B_2	PCD	d_1	d_2	h	Tw	A	kg•cm²/mm	kg	kg/m
	77	22	55	—	130	14	20	13	—	PT 1/8	1.21×10^{-1}	4.57	21.93
	107	22	85	—	130	14	20	13	—	PT 1/8	1.21×10^{-1}	5.77	21.93
	137	22	115	—	130	14	20	13	—	PT 1/8	1.21×10^{-1}	6.98	21.93
	97	22	75	20	122	14	20	13	110	PT 1/8	1.21×10^{-1}	3.28	21.93
	118	22	96	30	122	14	20	13	110	PT 1/8	1.21×10^{-1}	3.7	21.93
	87	22	65	—	137	14	20	13	—	PT 1/8	1.21×10^{-1}	5.8	21.14
	123	22	101	—	137	14	20	13	—	PT 1/8	1.21×10^{-1}	7.56	21.14
	98	22	76	20	122	14	20	13	110	PT 1/8	1.21×10^{-1}	3.71	21.14
	111	22	89	25	122	14	20	13	110	PT 1/8	1.21×10^{-1}	4.04	21.14
	160	24	136	—	152	18	26	17.5	—	PT 1/8	1.21×10^{-1}	11.82	20.85
	127	28	99	—	150	18	26	17.5	—	PT 1/8	1.21×10^{-1}	10.1	21.57
	187	28	159	—	150	18	26	17.5	—	PT 1/8	1.21×10^{-1}	13.58	21.57
	136	28	108	30	129	18	26	17.5	121	PT 1/8	1.21×10^{-1}	6.17	21.57

For model number coding, see A15-248.

Options⇒A15-351

No Preload Type of Precision Ball Screw

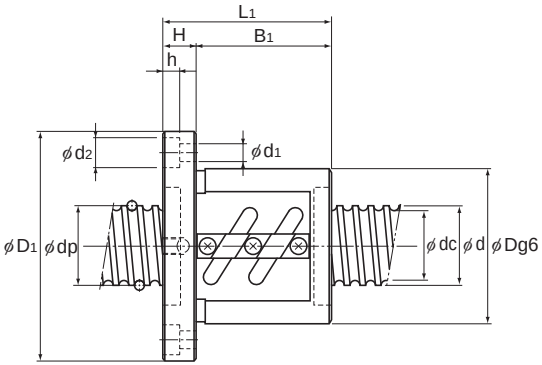
Screw shaft outer diameter	70 to 100
Lead	10 to 20



BNF

Screw shaft outer diameter	Lead	Model No.	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Rigidity		
						Ca	C_0a	K	Outer diameter	Flange diameter
d	Ph		dp	dc	Rows × turns	kN	kN	N/μm	D	D_1
70	10	BNF 7010-2.5	71.75	64.5	1×2.5	36.8	123.5	590	125	167
		BNF 7010-5	71.75	64.5	2×2.5	66.9	247	1140	125	167
		BNF 7010-7.5	71.75	64.5	3×2.5	94.9	371.4	1680	125	167
	12	BNF 7012-2.5	72	64.2	1×2.5	43.5	139.2	600	128	170
		BNF 7012-5	72	64.2	2×2.5	78.9	278.3	1160	128	170
		BNF 7012-7.5	72	64.2	3×2.5	111.7	417.5	1710	128	170
	20	BNF 7020-5	72.7	62.9	2×2.5	153.9	514.5	1550	130	186
80	10	BNF 8010-2.5	81.75	75.2	1×2.5	38.9	141.1	650	130	176
		BNF 8010-5	81.75	75.2	2×2.5	70.6	283.2	1270	130	176
		BNF 8010-7.5	81.75	75.2	3×2.5	100	424.3	1860	130	176
	20	BNF 8020A-2.5	82.7	72.9	1×2.5	90.1	294	890	143	204
		BNF 8020A-5	82.7	72.9	2×2.5	163.7	589	1720	143	204
		BNF 8020A-7.5	82.7	72.9	3×2.5	231.6	883.2	2520	143	204
100	20	BNF 10020A-2.5	102.7	92.9	1×2.5	99	368.5	2110	170	243
		BNF 10020A-5	102.7	92.9	2×2.5	179.3	737	4080	170	243
		BNF 10020A-7.5	102.7	92.9	3×2.5	253.8	1105.4	6010	170	243

Note) The model numbers in dimmed type indicate semi-standard types.
If desiring them, contact THK.



BNF

Unit: mm

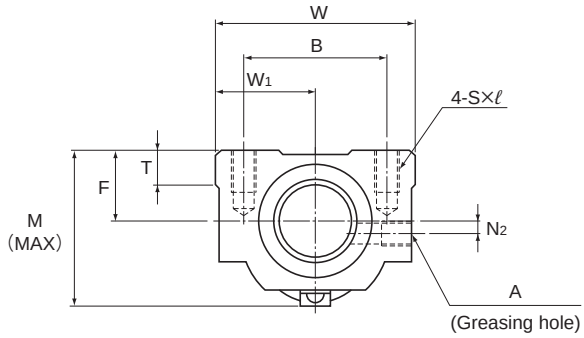
Nut dimensions								Screw shaft inertial moment/mm	Nut mass	Shaft mass
	Overall length						Greasing hole			
	L_1	H	B_1	PCD	d_1	d_2	h	A	kg	kg/m
	81	18	63	145	11	17.5	11	PT 1/8	1.85×10^{-1}	5.8	27.4
	111	18	93	145	11	17.5	11	PT 1/8	1.85×10^{-1}	7.49	27.4
	141	18	123	145	11	17.5	11	PT 1/8	1.85×10^{-1}	9.19	27.4
	93	18	75	148	11	17.5	11	PT 1/8	1.85×10^{-1}	6.89	27.24
	129	18	111	148	11	17.5	11	PT 1/8	1.85×10^{-1}	9.08	27.24
	165	18	147	148	11	17.5	11	PT 1/8	1.85×10^{-1}	11.26	27.24
	185	28	157	158	18	26	17.5	PT 1/8	1.85×10^{-1}	14.5	27.0
	77	22	55	152	14	20	13	PT 1/8	3.16×10^{-1}	5.9	36.26
	107	22	85	152	14	20	13	PT 1/8	3.16×10^{-1}	7.53	36.26
	137	22	115	152	14	20	13	PT 1/8	3.16×10^{-1}	9.15	36.26
	127	28	99	172	18	26	17.5	PT 1/8	3.16×10^{-1}	12.68	35.81
	187	28	159	172	18	26	17.5	PT 1/8	3.16×10^{-1}	17.12	35.81
	247	28	219	172	18	26	17.5	PT 1/8	3.16×10^{-1}	21.56	35.81
	131	32	99	205	22	32	21.5	PT 1/8	7.71×10^{-1}	18.28	57.13
	191	32	159	205	22	32	21.5	PT 1/8	7.71×10^{-1}	24.2	57.13
	251	32	219	205	22	32	21.5	PT 1/8	7.71×10^{-1}	30.12	57.13

For model number coding, see A15-248.

Options⇒A15-351

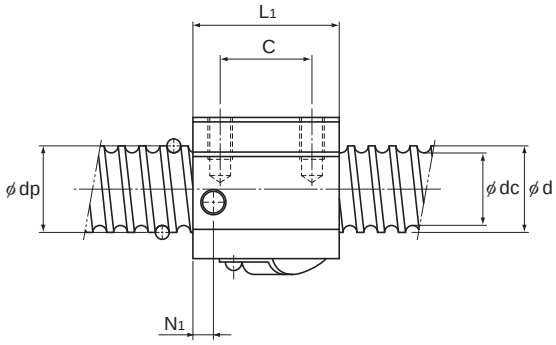
No Preload Type of Precision Ball Screw (Square Nut)

Screw shaft outer diameter	14 to 45
Lead	4 to 12



BNT

Screw shaft outer diameter d	Lead Ph	Model No.	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows × turns	Basic load rating Ca kN	Basic load rating C_0a kN	Rigidity K N/μm
14	4	BNT 1404-3.6	14.4	11.5	1×3.65	6.8	12.6	190
	5	BNT 1405-2.6	14.5	11.2	1×2.65	7.2	12.6	150
16	5	BNT 1605-2.6	16.75	13.5	1×2.65	7.8	14.7	170
18	8	BNT 1808-3.6	19.3	14.4	1×3.65	18.2	34.4	270
20	5	BNT 2005-2.6	20.5	17.2	1×2.65	8.7	18.3	200
	10	BNT 2010-2.6	21.25	16.4	1×2.65	14.7	27.8	220
25	5	BNT 2505-2.6	25.5	22.2	1×2.65	9.6	23	240
	10	BNT 2510-5.3	26.8	20.2	2×2.65	43.4	92.8	520
28	6	BNT 2806-2.6	28.5	25.2	1×2.65	10.1	25.8	270
		BNT 2806-5.3	28.5	25.2	2×2.65	18.3	51.6	510
32	10	BNT 3210-2.6	33.75	27.2	1×2.65	27.3	59.5	330
		BNT 3210-5.3	33.75	27.2	2×2.65	49.6	118.9	640
36	10	BNT 3610-2.6	37	30.5	1×2.65	28.7	65.6	360
		BNT 3610-5.3	37	30.5	2×2.65	52.1	131.2	700
45	12	BNT 4512-5.3	46.5	39.2	2×2.65	68.1	186.7	860



BNT

Unit: mm

Nut dimensions												Screw shaft inertial moment/mm	Nut mass	Shaft mass
Width	Center height	Overall length	Mounting hole			W_1	T	M	N_1	N_2	Greasing hole			
W	F	L_1	B	C	S×ℓ						A	kg•cm²/mm	kg	kg/m
34	13	35	26	22	M4×7	17	6	30	6	2	M6	2.96×10^{-4}	0.15	0.93
34	13	35	26	22	M4×7	17	6	31	6	2	M6	2.96×10^{-4}	0.15	0.92
42	16	36	32	22	M5×8	21	21.5	32.5	6	2	M6	5.05×10^{-4}	0.3	1.24
48	17	56	35	35	M6×10	24	10	44	8	3	M6	8.09×10^{-4}	0.47	1.46
48	17	35	35	22	M6×10	24	9	39	5	3	M6	1.23×10^{-3}	0.28	2.06
48	18	58	35	35	M6×10	24	9	46	10	2	M6	1.23×10^{-3}	0.5	1.99
60	20	35	40	22	M8×12	30	9.5	45	7	5	M6	3.01×10^{-3}	0.41	3.35
60	23	94	40	60	M8×12	30	10	55	10	—	M6	3.01×10^{-3}	1.18	2.79
60	22	42	40	18	M8×12	30	10	50	8	—	M6	4.74×10^{-3}	0.81	4.42
60	22	67	40	40	M8×12	30	10	50	8	—	M6	4.74×10^{-3}	0.78	4.42
70	26	64	50	45	M8×12	35	12	62	10	—	M6	8.08×10^{-3}	1.3	4.98
70	26	94	50	60	M8×12	35	12	62	10	—	M6	8.08×10^{-3}	2.0	4.98
86	29	64	60	45	M10×16	43	17	67	11	—	M6	1.29×10^{-2}	1.8	6.54
86	29	96	60	60	M10×16	43	17	67	11	—	M6	1.29×10^{-2}	2.4	6.54
100	36	115	75	75	M12×20	50	20.5	80	13	—	M6	3.16×10^{-2}	4.1	10.56

For model number coding, see A15-248.

Options⇒A15-351

Model Number Coding

Model number coding