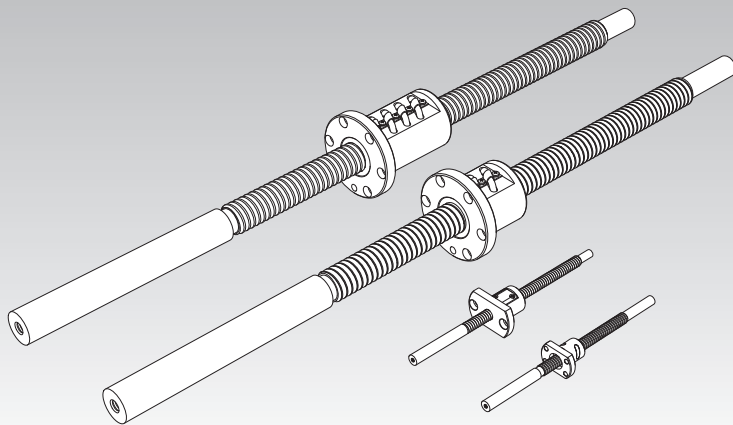


Unfinished Shaft Ends Precision Ball Screw

Standard Stock Models BIF, MDK, MBF and BNF



Point of Selection **A15-8**

Options **A15-352**

Model No. **A15-369**

Precautions on Use **A15-374**

Accessories for Lubrication **A24-1**

Mounting Procedure and Maintenance **B15-104**

Lead Angle Accuracy **A15-11**

Accuracy of the Mounting Surface **A15-14**

Axial clearance **A15-104**

DN Value **A15-33**

Support Unit **A15-316**

Recommended Shapes of Shaft Ends **A15-324**

Structure and Features

This type of Ball Screw is mass manufactured by cutting the standardized screw shafts of Precision Ball Screws to regular lengths. Additional machining of the shaft ends can easily be performed.

To meet various intended purposes, THK offers several Ball Screw models with different types of nuts: the single-nut type (model BNF), the offset preload-nut type (model BIF) and the miniature Ball Screw (models MDK and MBF).

[Contamination Protection]

Nuts of the following model numbers are attached with a labyrinth seal.

- All variations of models BNF and BIF
- Model MDK0802/1002/1202/1402/1404/1405

When dust or other foreign material may enter the Ball Screw, it is necessary to use a contamination protection device (e.g., bellows) to completely protect the screw shaft.

[Lubrication]

The ball screw nuts are supplied with lithium soap-group grease with shipments.

(Models MDK and MBF are applied only with an anti-rust oil.)

[Additional Machining of the Shaft End]

Since only the effective thread of the screw shaft is surface treated with induction-hardening (all variations of models BNF and BIF; model MDK 1405) or carburizing (all variations of model MBF; model MDK0401 to 1404), the shaft ends can additionally be machined easily either by grinding or milling.

In addition, since both ends of the screw shaft have a center hole, they can be cylindrically ground.

Surface hardness of the effect thread : HRC58 to 64

Hardness of the screw shaft ends

All variation of models BNF and BIF; model MDK 1405 : HRC22 to 27

All variations of model MBF; model MDK0401 to 1404 : HRC35 or below

THK has standardized the shapes of the screw shaft ends in order to allow speedy estimation and manufacturing of the Ball Screws.

The shapes of shaft ends are divided into those allowing the standard support units to be used (symbols H, K and J) and those compliant with JIS B 1192-1997 (symbols A, B and C). See **A15-324** for details.

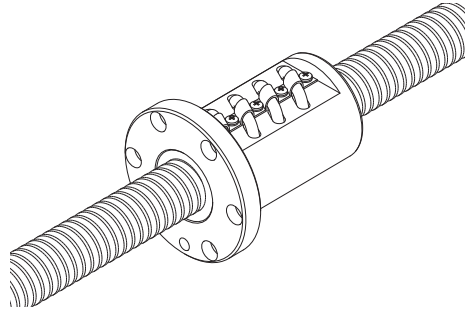
Types and Features

[Preload Type]

Model BIF

Specification Table⇒ **A15-116**

The right and 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.

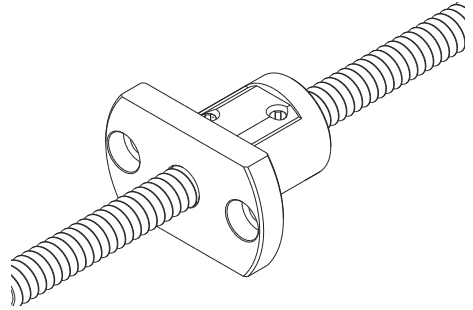


[No Preload Type]

Models MDK and MBF

A miniature type with a screw shaft diameter of $\phi 4$ to $\phi 14$ mm and a lead of 1 to 5mm.

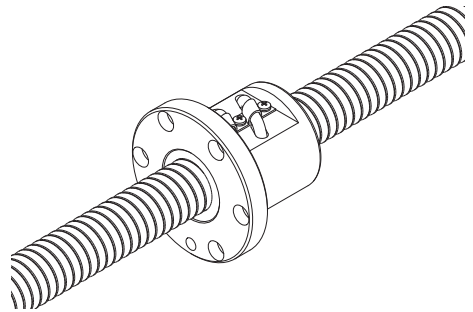
Specification Table⇒ **A15-106**





Model BNF

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

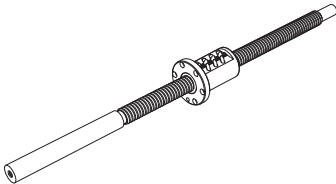
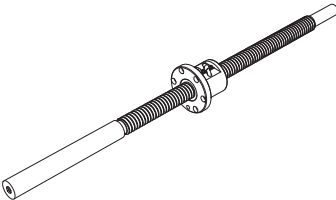
Specification Table⇒ **A15-116**



Nut Types and Axial Clearance

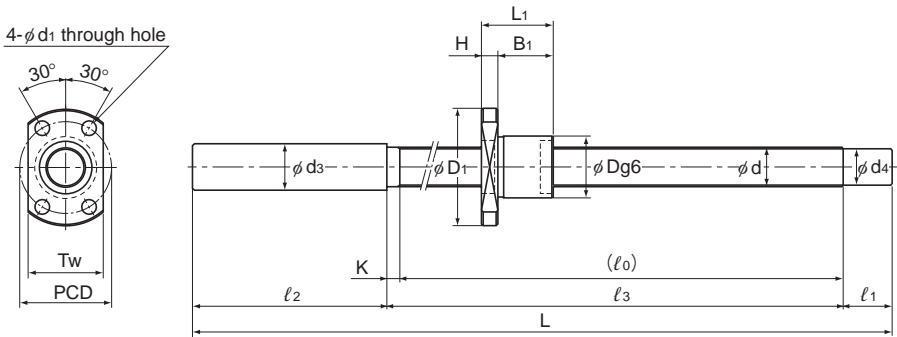
Screw shaft outer diameter (mm)	ϕ 4 to 14			
Nut type	Model MDK		Model MBF	
	 No preload type		 No preload type	
Accuracy grades	C3, C5	C7	C3, C5	C7
Axial clearance (mm)	0.005 or less (GT)	0.02 or less (G2)	0.005 or less (GT)	0.02 or less (G2)

Note) The symbols in the parentheses indicate axial clearance symbols.

Screw shaft out diameter (mm)	ϕ 16 to 50			
Nut type	Model BIF		Model BNF	
	 Preload Type		 No preload type	
Accuracy grades	C5	C7	C5	C7
Axial clearance (mm)	0 or less (G0)	0 or less (G0)	0.01 or less (G1)	0.02 or less (G2)

Note1) The symbols in the parentheses indicate axial clearance symbols.

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	Nut height
						Ca	C _{0a}				
d	Ph	dp	dc	Rows X turns	kN	kN	D	D ₁	L ₁	H	
MDK 0401-3	4	1	4.15	3.4	3×1	0.29	0.42	9	19	13	3
MBF 0401-3.7	4	1	4.15	3.3	1×3.7	0.59	0.93	11	24	18	4
MDK 0601-3	6	1	6.2	5.3	3×1	0.54	0.94	11	23	14.5	3.5
MBF 0601-3.7	6	1	6.15	5.3	1×3.7	0.74	1.5	13	30	21	5

Note) Models MDK/MBF 0401 and 0601 are not provided with a labyrinth seal.

Model number coding

MDK0401-3 GT +95L C5 A

Model number

Overall screw shaft length (in mm)

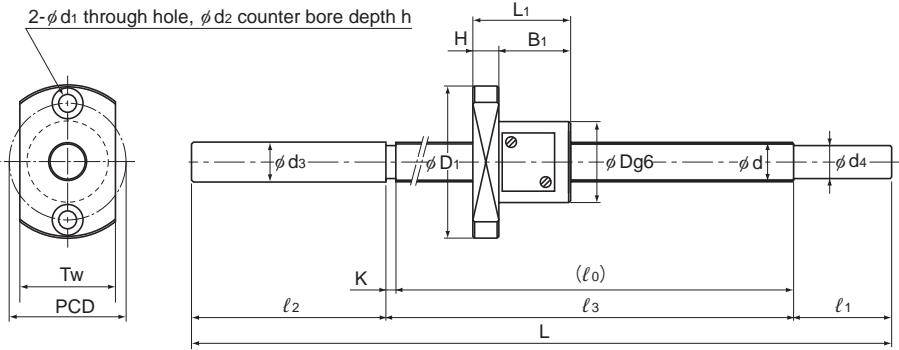
Symbol for standard-stock type (A: with unfinished shaft ends)

Symbol for clearance in the axial direction (*1)

Accuracy symbol (*2)

(*1) See **A15-19**. (*2) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



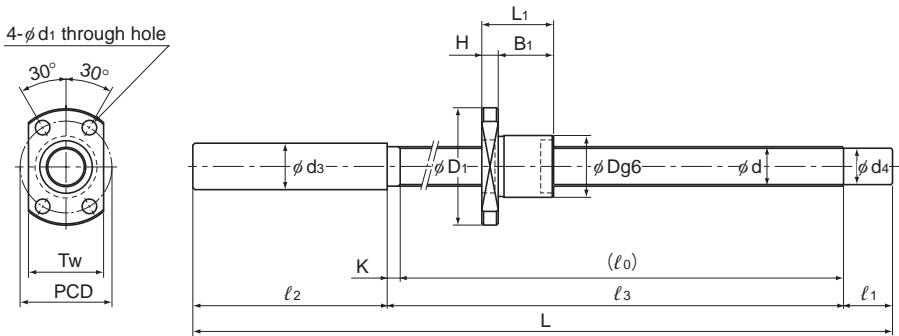
Model MBF

Unit: mm

Dimensions							Screw shaft dimensions							Nut mass kg	Shaft mass kg/m	
B_1	PCD	d_1	d_2	h	T_w	Standard-stock symbol	Overall length L	l_0	l_1	l_2	l_3	d_3	d_4			K
10	14	2.9	—	—	13	A	95	47	10	35	50	6.2	3.2	3	0.01	0.07
							115	67	10	35	70	6.2	3.2	3	0.01	0.07
							145	97	10	35	100	6.2	3.2	3	0.01	0.07
14	17	3.4	6.5	2.5	13	A	90	48	10	30	50	4.3	3.2	2	0.02	0.07
							110	68	10	30	70	4.3	3.2	2	0.02	0.07
							130	88	10	30	90	4.3	3.2	2	0.02	0.07
11	17	3.4	—	—	15	A	120	67	10	40	70	8.2	5.3	3	0.02	0.14
							150	97	10	40	100	8.2	5.3	3	0.02	0.14
							180	127	10	40	130	8.2	5.3	3	0.02	0.14
16	21.5	3.4	6.5	3	17	A	131	58	20	50	61	6.3	5.2	3	0.04	0.14
							161	88	20	50	91	6.3	5.2	3	0.04	0.14
							201	128	20	50	131	6.3	5.2	3	0.04	0.14

Ball Screw

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	H
						Ca kN	C _{0a} kN				
MDK 0801-3	8	1	8.2	7.3	3×1	0.64	1.4	13	26	15	4
MDK 0802-3	8	2	8.3	7	3×1	1.4	2.3	15	28	22	5
MBF 0802-3.7	8	2	8.3	6.6	1×3.7	2.5	4.2	20	40	28	6

Note) Model MDK 0801 is not provided with a labyrinth seal.

Model number coding

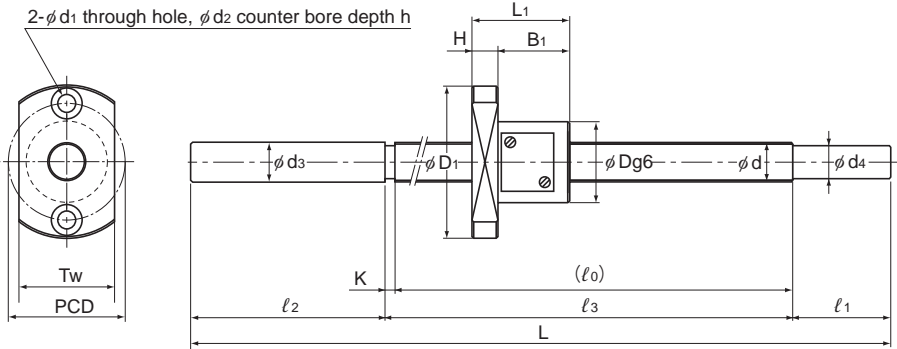
MBF0802-3.7 RR GT +218L C5 A

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (A: with unfinished shaft ends)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw

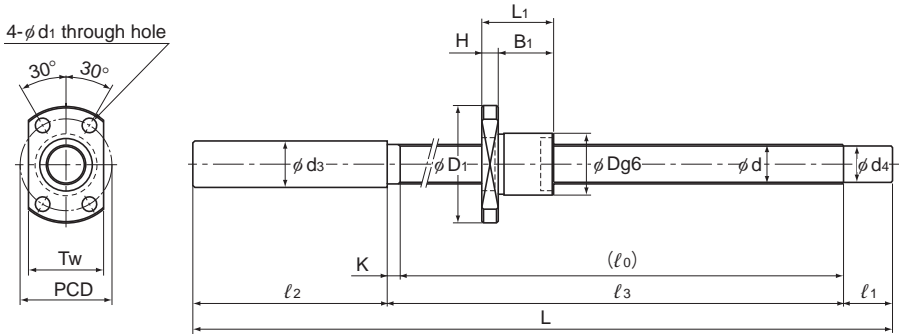


Model MBF

Unit: mm

Dimensions							Screw shaft dimensions							Nut mass kg	Shaft mass kg/m	
B_1	PCD	d_1	d_2	h	T_w	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	ℓ_3	d_3	d_4			K
11	20	3.4	—	—	17	A	130	67	15	45	70	10.2	7.3	3	0.02	0.29
							160	97	15	45	100	10.2	7.3	3	0.02	0.29
							190	127	15	45	130	10.2	7.3	3	0.02	0.29
							240	177	15	45	180	10.2	7.3	3	0.02	0.29
17	22	3.4	—	—	19	A	140	76	15	45	80	10.2	7	4	0.04	0.27
							170	106	15	45	110	10.2	7	4	0.04	0.27
							200	136	15	45	140	10.2	7	4	0.04	0.27
							250	186	15	45	190	10.2	7	4	0.04	0.27
22	30	4.5	8	4	24	A	168	85	25	55	88	8.3	6.2	3	0.1	0.19
							193	110	25	55	113	8.3	6.2	3	0.1	0.19
							218	135	25	55	138	8.3	6.2	3	0.1	0.19

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	Nut height H
						Ca kN	C _{0a} kN				
MDK 1002-3	10	2	10.3	9	3×1	1.5	2.9	17	34	22	5
MBF 1002-3.7	10	2	10.3	8.6	1×3.7	2.8	5.3	23	43	28	6
MDK 1202-3	12	2	12.3	11	3×1	1.7	3.6	19	36	22	5
MBF 1202-3.7	12	2	12.3	10.6	1×3.7	3	6.5	25	47	30	8

Model number coding

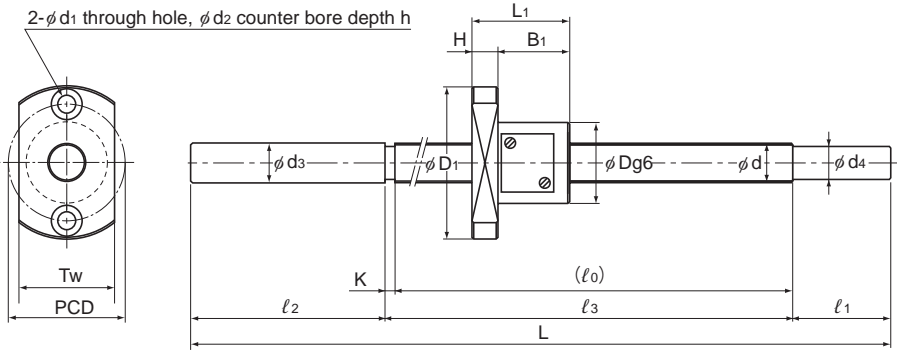
MDK1202-3 RR GT +165L C5 A

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (A: with unfinished shaft ends)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw

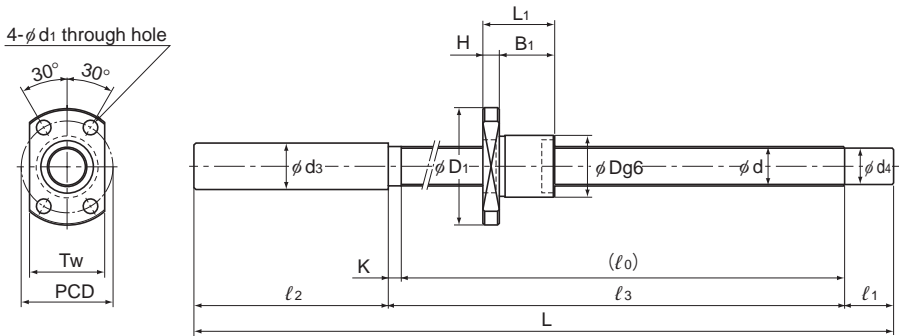


Model MBF

Unit: mm

Dimensions							Screw shaft dimensions							Nut mass kg	Shaft mass kg/m	
B_1	PCD	d_1	d_2	h	Tw	Standard-stock symbol	Overall length L	ℓ_0	ℓ_1	ℓ_2	ℓ_3	d_3	d_4			K
17	26	4.5	—	—	21	A	160	86	15	55	90	12.2	9	4	0.05	0.47
							210	136	15	55	140	12.2	9	4	0.05	0.47
							260	186	15	55	190	12.2	9	4	0.05	0.47
							310	236	15	55	240	12.2	9	4	0.05	0.47
22	33	4.5	8	4	27	A	183	95	25	60	98	10.3	8.2	3	0.11	0.36
							223	135	25	60	138	10.3	8.2	3	0.11	0.36
							273	185	25	60	188	10.3	8.2	3	0.11	0.36
17	28	4.5	—	—	23	A	165	86	15	60	90	14.2	11	4	0.05	0.71
							215	136	15	60	140	14.2	11	4	0.05	0.71
							265	186	15	60	190	14.2	11	4	0.05	0.71
							315	236	15	60	240	14.2	11	4	0.05	0.71
22	36	5.5	9.5	5.5	29	A	210	117	30	60	120	12.3	10.2	3	0.15	0.58
							235	142	30	60	145	12.3	10.2	3	0.15	0.58
							285	192	30	60	195	12.3	10.2	3	0.15	0.58

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications						Nut				
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	Nut height H
						Ca kN	C _{0a} kN				
MDK 1402-3	14	2	14.3	13	3×1	1.8	4.3	21	40	23	6
MBF 1402-3.7	14	2	14.3	12.6	1×3.7	3.3	7.5	26	48	30	8

Model number coding

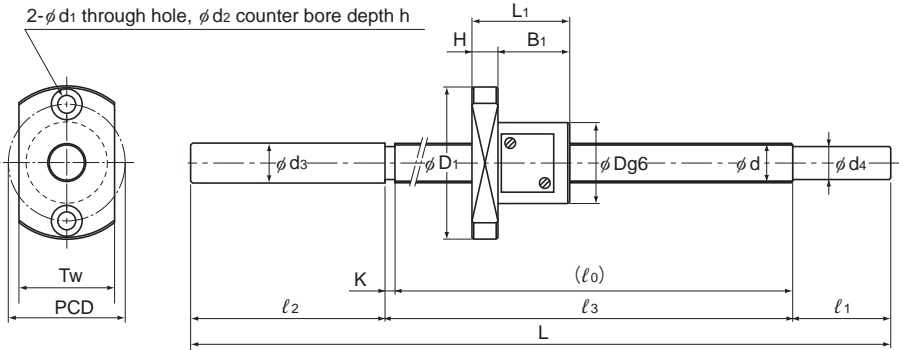
MBF1402-3.7 RR GT +245L C3 A

Model number Seal symbol ^(*1) Overall screw shaft length (in mm) Symbol for standard-stock type (A: with unfinished shaft ends)

Symbol for clearance in the axial direction ^(*2) Accuracy symbol ^(*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



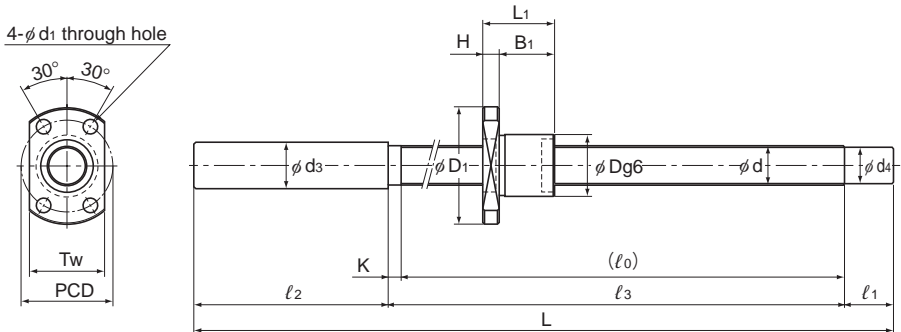
Model MBF

Unit: mm

Dimensions							Screw shaft dimensions							Nut mass kg	Shaft mass kg/m	
B_1	PCD	d_1	d_2	h	T_w	Standard-stock symbol	Overall length L	l_0	l_1	l_2	l_3	d_3	d_4			K
17	31	5.5	—	—	26	A	175	86	25	60	90	15.2	13	4	0.07	1.0
							225	136	25	60	140	15.2	13	4	0.07	1.0
							275	186	25	60	190	15.2	13	4	0.07	1.0
							325	236	25	60	240	15.2	13	4	0.07	1.0
							425	336	25	60	340	15.2	13	4	0.07	1.0
22	37	5.5	9.5	5.5	32	A	205	102	40	60	105	14.3	12.2	3	0.16	0.85
							245	142	40	60	145	14.3	12.2	3	0.16	0.85
							295	192	40	60	195	14.3	12.2	3	0.16	0.85
							345	242	40	60	245	14.3	12.2	3	0.16	0.85

Ball Screw

Unfinished Shaft Ends



Model MDK

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	Nut
						Ca	C _{0a}				
d	Ph	dp	dc	Rows X turns	kN	kN	D	D ₁	L ₁	H	
MDK 1404-3	14	4	14.65	12.2	3×1	4.2	7.6	26	45	33	6
MBF 1404-3.7	14	4	14.3	11.8	1×3.7	5.7	11.1	30	54	38	8
MDK 1405-3	14	5	14.75	11.2	3×1	7	11.6	26	45	42	10

Model number coding

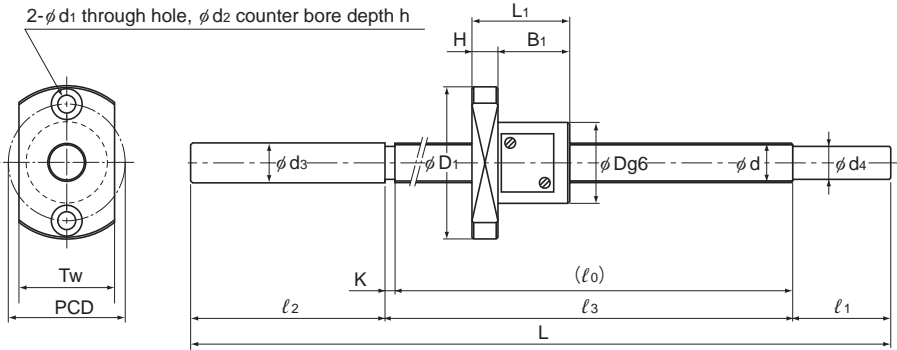
MDK1404-3 RR G2 +240L C7 A

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (A: with unfinished shaft ends)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

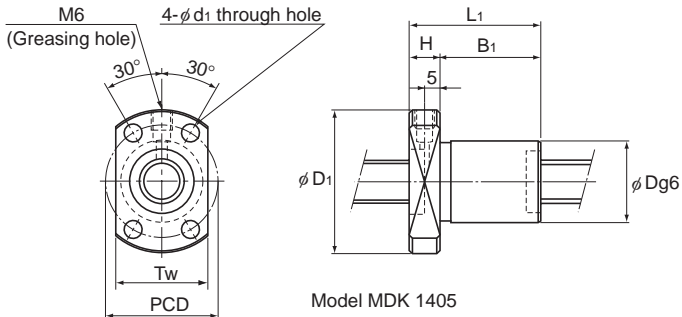
Unfinished Shaft Ends Precision Ball Screw



Model MBF

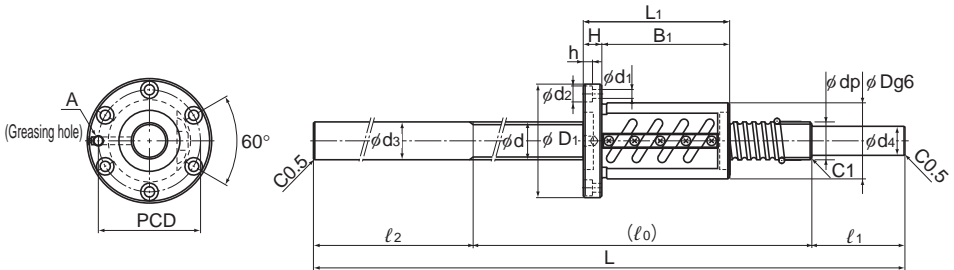
Unit: mm

Dimensions							Screw shaft dimensions							Nut mass kg	Shaft mass kg/m	
B ₁	PCD	d ₁	d ₂	h	T _w	Standard-stock symbol	Overall length L	l ₀	l ₁	l ₂	l ₃	d ₃	d ₄			K
27	36	5.5	—	—	28	A	240	150	25	60	155	15.2	11.9	5	0.14	0.8
							290	200	25	60	205	15.2	11.9	5	0.14	0.8
							340	250	25	60	255	15.2	11.9	5	0.14	0.8
							440	350	25	60	355	15.2	11.9	5	0.14	0.8
							540	450	25	60	455	15.2	11.9	5	0.14	0.8
30	42	5.5	9.5	5.5	34	A	233	129	40	60	133	14.3	11.2	4	0.25	1.2
							293	189	40	60	193	14.3	11.2	4	0.25	1.2
							353	249	40	60	253	14.3	11.2	4	0.25	1.2
							413	309	40	60	313	14.3	11.2	4	0.25	1.2
32	36	5.5	—	—	28	A	250	160	25	60	165	14	11.2	5	0.19	1.2
							300	210	25	60	215	14	11.2	5	0.19	1.2
							350	260	25	60	265	14	11.2	5	0.19	1.2
							450	360	25	60	365	14	11.2	5	0.19	1.2
							550	460	25	60	465	14	11.2	5	0.19	1.2



Model MDK 1405

Unfinished Shaft Ends



Model BIF

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows x turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	Mass kg
						Ca kN	C _{0a} kN				
BNF 1605-2.5 BIF 1605-5	16	5	16.75	13.2	1×2.5	7.4	13.9	40	60	41 56	0.37 0.56
BNF 1810-2.5 BIF 1810-3	18	10	18.8	15.5	1×2.5 1×1.5	7.8 5.1	15.9 9.6	42	65	69 75	0.67 0.75
BNF 2005-5 BIF 2005-5	20	5	20.75	17.2	2×2.5 1×2.5	15.1 8.3	35 17.4	44	67	56 56	0.57 0.57

Model number coding

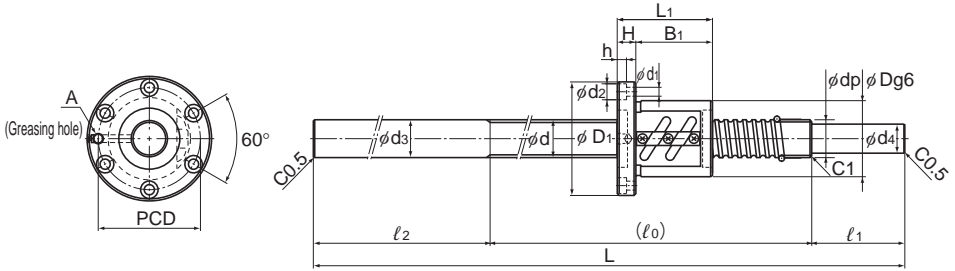
BIF2005-5 RR G0 +610L C5 A

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (symbol A or B)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



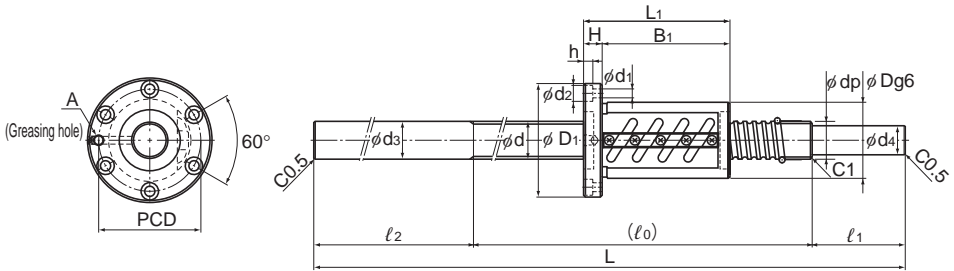
Model BNF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass kg/m
H	B ₁	PCD	d ₁	d ₂	h	Greasing hole A	Standard-stock symbol	Overall length L	ℓ ₀	ℓ ₁	ℓ ₂	d ₃	d ₄		
10	31 46	50	4.5	8	4.5	M6	A	410	200	50	160	16	12.8	0.92	
								510	300	50	160	16	12.8	0.92	
								610	400	50	160	16	12.8	0.92	
								710	500	50	160	16	12.8	1.25	
12	57 63	53	5.5	9.5	5.5	M6	A	410	200	50	160	18	15.3	1.62	
								510	300	50	160	18	15.3	1.62	
								610	400	50	160	18	15.3	1.62	
								710	500	50	160	18	15.3	1.62	
								810	600	50	160	18	15.3	1.62	
11	45 45	55	5.5	9.5	5.5	M6	A	410	200	50	160	20	15.3	1.65	
								510	300	50	160	20	15.3	1.65	
								610	400	50	160	20	15.3	1.65	
								710	500	50	160	20	15.3	1.65	
							B	810	600	50	160	20	16.8	1.65	
								1010	800	50	160	20	16.8	1.65	
								610	300	50	260	20	16.8	1.65	
								710	400	50	260	20	16.8	1.65	

Ball Screw

Unfinished Shaft Ends



Model BIF

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	Mass kg
						Ca kN	C _{0a} kN				
BNF 2505-5 BIF 2505-5	25	5	25.75	22.2	2×2.5 1×2.5	16.7 9.2	44 22	50	73	55 55	0.75 0.75
BNF 2510A-2.5 BIF 2510A-5	25	10	26.3	21.4	1×2.5	15.8	33	58	85	70 100	1.43 1.87

Model number coding

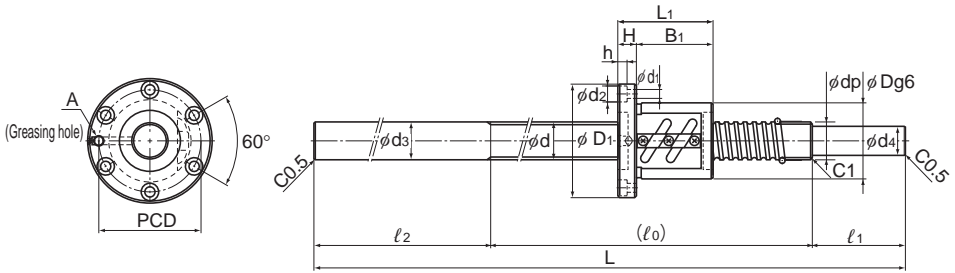
BIF2505-5 RR G0 +720L C5 B

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (symbol A or B)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



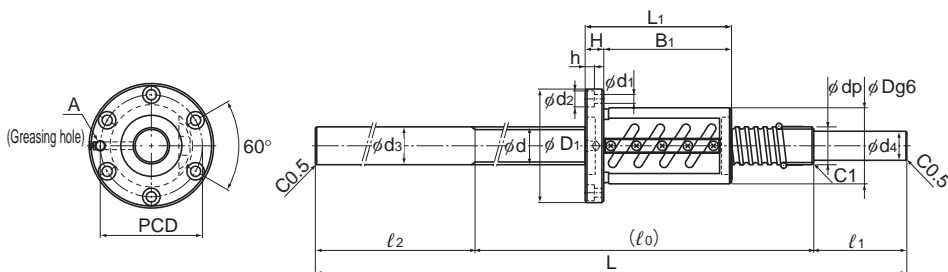
Model BNF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass kg/m
H	B ₁	PCD	d ₁	d ₂	h	Greasing hole A	Standard-stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄		
11	44 44	61	5.5	9.5	5.5	M6		A	520	300	60	160	25	20.3	
								620	400	60	160	25	20.3	2.84	
								720	500	60	160	25	20.3	2.84	
								820	600	60	160	25	20.3	2.84	
								1020	800	60	160	25	21.8	2.84	
								1220	1000	60	160	25	21.8	2.84	
								1420	1200	60	160	25	21.8	2.84	
							B	720	400	60	260	25	21.8	2.84	
								820	500	60	260	25	21.8	2.84	
18	52 82	71	6.6	11	6.5	M6	A	620	400	60	160	25	20.3	2.68	
								820	600	60	160	25	20.3	2.68	
								1020	800	60	160	25	20.3	2.68	
								1220	1000	60	160	25	20.3	2.68	
								1420	1200	60	160	25	20.3	2.68	

Ball Screw

Unfinished Shaft Ends



Model BIF

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	Mass
						Ca	C _{0a}				
d	Ph	dp	dc	Rows X turns	kN	kN	D	D ₁	L ₁	kg	
BNF 2806-5 BIF 2806-5 BIF 2806-10	28	6	28.75	25.2	2×2.5 1×2.5 2×2.5	17.5 9.6 17.5	49.4 24.6 49.4	55	85	68 68 104	1.13 1.0 1.57
BNF 3205-5 BIF 3205-5 BIF 3205-10	32	5	32.75	29.2	2×2.5 1×2.5 2×2.5	18.5 10.2 18.5	56.4 28.1 56.4	58	85	56 56 86	0.93 0.87 1.32

Model number coding

BIF2806-10 RR G0 +1020L C5 A

Model number

Seal symbol (*1)

Overall screw shaft length (in mm)

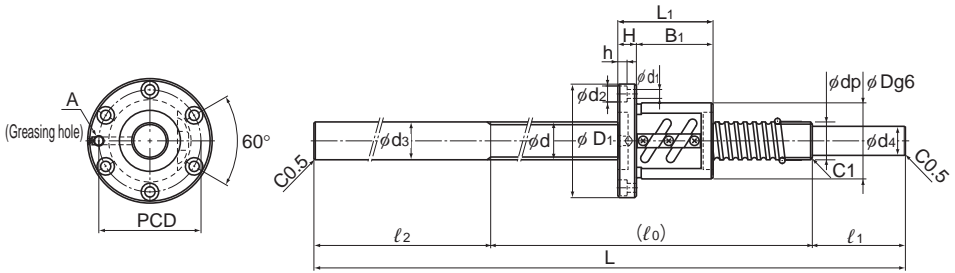
Symbol for standard-stock type (symbol A or B)

Symbol for clearance in the axial direction (*2)

Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



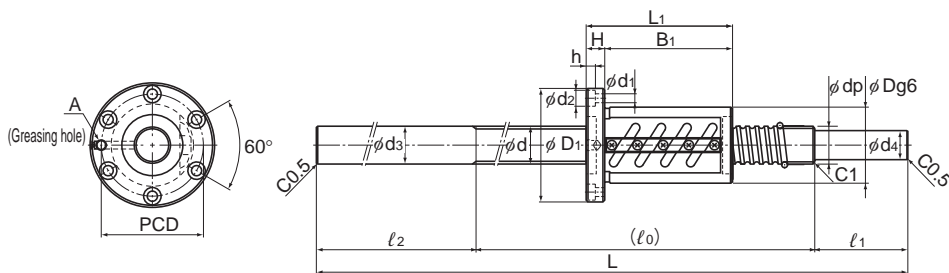
Model BNF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass kg/m
H	B ₁	PCD	d ₁	d ₂	h	Greasing hole A	Standard-stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄		
12	56 56 92	69	6.6	11	6.5	M6		A	520	300	60	160	28	20.3	
								620	400	60	160	28	20.3	3.89	
								720	500	60	160	28	20.3	3.89	
								920	700	60	160	28	20.3	3.89	
								1020	800	60	160	28	24.8	3.89	
								1220	1000	60	160	28	24.8	3.89	
								1420	1200	60	160	28	24.8	3.89	
							B	720	400	70	250	28	24.8	3.89	
								920	500	70	350	28	24.8	3.89	
								1100	700	70	330	28	24.8	3.89	
12	44 44 74	71	6.6	11	6.5	M6	A	730	500	70	160	32	25.3	5.03	
								930	700	70	160	32	25.3	5.03	
								1230	1000	70	160	32	25.3	5.03	
								1430	1200	70	160	32	25.3	5.03	
								1630	1400	70	160	32	27.8	5.03	
								1830	1600	70	160	32	27.8	5.03	

Ball Screw

Unfinished Shaft Ends



Model BIF

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	Mass kg
						Ca kN	C _{0a} kN				
BNF 3206-5 BIF 3206-5 BIF 3206-10	32	6	33	28.4	2 × 2.5 1 × 2.5 2 × 2.5	25.2 13.9 25.2	70.4 35.2 70.4	62	89	63 63 99	1.2 1.2 1.76
BNF 3210A-5 BIF 3210A-5	32	10	33.75	26.4	2 × 2.5 1 × 2.5	47.2 26.1	112.7 56.2	74	108	100 100	2.8 2.8

Model number coding

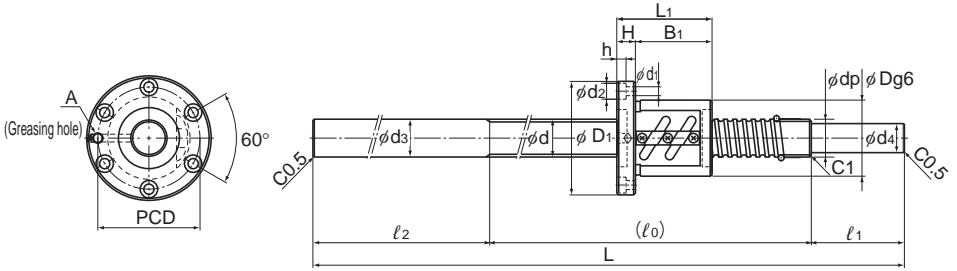
BIF3206-10 RR G0 +1100L C5 B

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (symbol A or B)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



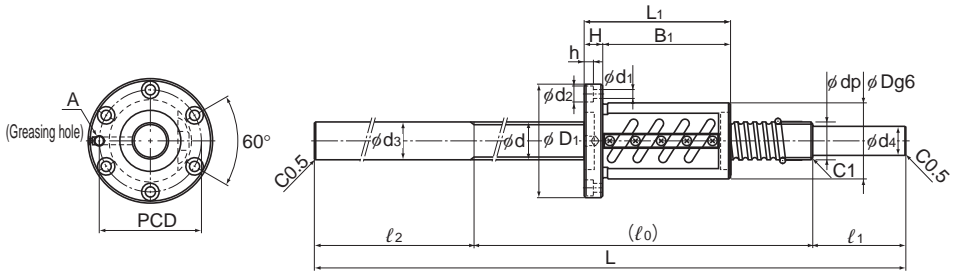
Model BNF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass kg/m
H	B ₁	PCD	d ₁	d ₂	h	Greasing hole A	Standard-stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄		
12	51 51 87	75	6.6	11	6.5	M6		A	730	500	70	160	32	25.3	
							930		700	70	160	32	25.3	4.63	
							1230		1000	70	160	32	25.3	4.63	
							1430		1200	70	160	32	25.3	4.63	
							1630		1400	70	160	32	27.8	4.63	
							1830		1600	70	160	32	27.8	4.63	
							B	930	500	70	360	32	27.8	4.63	
								1100	700	70	330	32	27.8	4.63	
								1430	1000	70	360	32	27.8	4.63	
15	85 85	90	9	14	8.5	M6	A	730	500	70	160	32	25.3	3.66	
								930	700	70	160	32	25.3	3.66	
								1430	1200	70	160	32	25.3	3.66	
								1830	1600	70	160	32	25.3	3.66	

Ball Screw

Unfinished Shaft Ends



Model BIF

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter d	Lead Ph	Ball center-to-center diameter dp	Thread minor diameter dc	No. of loaded circuits Rows X turns	Basic load rating		Outer diameter D	Flange diameter D ₁	Overall length L ₁	Mass kg
						Ca kN	C ₀ a kN				
BNF 3610-5 BIF 3610-5 BIF 3610-10	36	10	37.75	30.5	2×2.5 1×2.5 2×2.5	50.1 27.6 50.1	126.4 63.3 126.4	75	120	111 111 171	3.4 3.4 4.8
BNF 4010-5 BIF 4010-5 BIF 4010-10	40	10	41.75	34.4	2×2.5 1×2.5 2×2.5	52.7 29 52.7	141.1 70.4 141.1	82	124	103 103 163	3.58 3.58 5.18

Model number coding

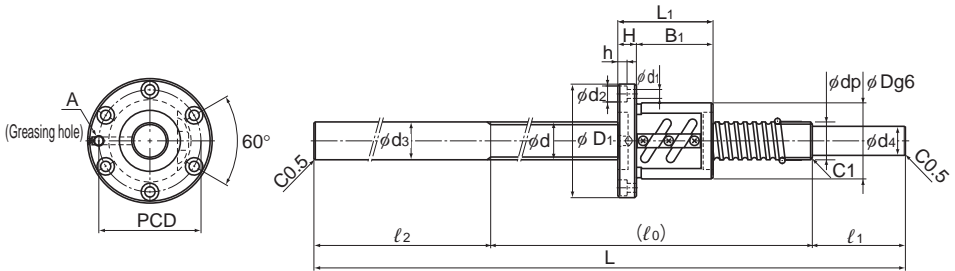
BIF3610-5 RR G0 +1830L C5 A

Model number Seal symbol (*1) Overall screw shaft length (in mm) Symbol for standard-stock type (symbol A or B)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



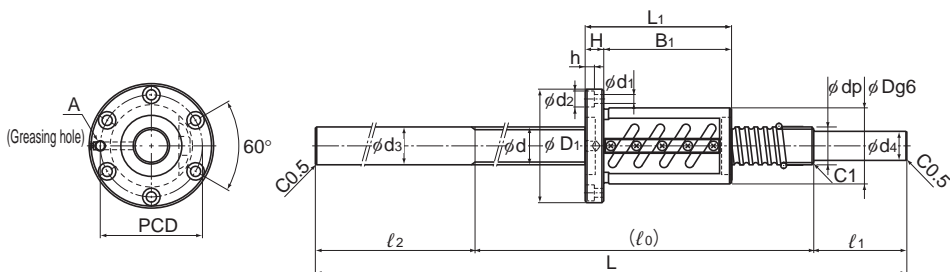
Model BNF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass kg/m
H	B ₁	PCD	d ₁	d ₂	h	Greasing hole A	Standard-stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄		
18	93 93 153	98	11	17.5	11	M6		A	730	500	70	160	36	30.3	
								930	700	70	160	36	30.3	5.03	
								1430	1200	70	160	36	30.3	5.03	
								1830	1600	70	160	36	30.3	5.03	
							B	930	500	100	330	36	30.3	5.03	
								1100	700	100	300	36	30.3	5.03	
								1830	1200	100	530	36	30.3	5.03	
18	85 85 145	102	11	17.5	11	M6	A	1230	1000	70	160	40	30.3	6.59	
								1730	1500	70	160	40	30.3	6.59	
								2030	1800	70	160	40	30.3	6.59	
								2230	2000	70	160	40	30.3	6.59	

Ball Screw

Unfinished Shaft Ends



Model BIF

Model No.	Ball screw specifications							Nut			
	Screw shaft outer diameter	Lead	Ball center-to-center diameter	Thread minor diameter	No. of loaded circuits	Basic load rating		Outer diameter	Flange diameter	Overall length	Mass
						Ca	C _{0a}				
d	Ph	dp	dc	Rows X turns	kN	C _{0a} kN	D	D ₁	L ₁	kg	
BNF 4012-5 BIF 4012-5 BIF 4012-10	40	12	42	34.1	2×2.5 1×2.5 2×2.5	61.6 33.9 61.6	158.8 79.2 158.8	84	126	119 119 191	4.2 4.2 6.24
BNF 5010-5 BIF 5010-5 BIF 5010-10	50	10	51.75	44.4	2×2.5 1×2.5 2×2.5	58.2 32 58.2	176.4 88.2 176.4	93	135	103 103 163	4.4 4.4 6.35

Model number coding

BIF4012-10 RR G0 +1230L C5 A

Model number

Seal symbol (*1)

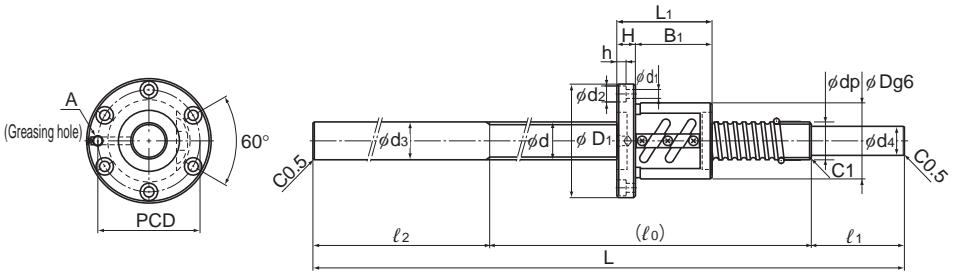
Overall screw shaft length (in mm)

Symbol for standard-stock type (symbol A or B)

Symbol for clearance in the axial direction (*2) Accuracy symbol (*3)

(*1) See **A15-352**. (*2) See **A15-19**. (*3) See **A15-12**.

Unfinished Shaft Ends Precision Ball Screw



Model BNF

Unit: mm

Dimensions								Screw shaft dimensions							Shaft mass kg/m
H	B ₁	PCD	d ₁	d ₂	h	Greasing hole A	Standard-stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄		
18	101 101 173	104	11	17.5	11	M6		A	1230	1000	70	160	40	30.3	
							B	1730	1500	70	160	40	30.3	6.39	
								2030	1800	70	160	40	30.3	6.39	
								2230	2000	70	160	40	30.3	6.39	
								1730	1200	100	430	40	33.8	6.39	
								2030	1200	100	730	40	33.8	6.39	
18	85 85 145	113	11	17.5	11	PT 1/8	A	1300	1000	100	200	50	40.3	11.36	
								1800	1500	100	200	50	40.3	11.36	
								2300	2000	100	200	50	40.3	11.36	
								2800	2500	100	200	50	40.3	11.36	

Ball Screw