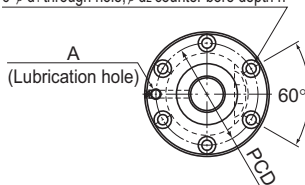


BNF (Unfinished Shaft Ends) No Preload

DN value	70,000
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6- ϕ d₁ through hole, ϕ d₂ counter bore depth h



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 _f	Overall length L ₁	Nut H
						Ca kN	C _{0a} kN				
BNF 1605-2.5	16	5	16.75	13.2	1×2.5	7.4	13.9	40	60	41	10
BNF 1810-2.5	18	10	18.8	15.5	1×2.5	7.8	15.9	42	65	69	12
BNF 2005-5	20	5	20.75	17.2	2×2.5	15.1	35	44	67	56	11
BNF 2505-5	25	5	25.75	22.2	2×2.5	16.7	44	50	73	55	11

Model number coding

BNF2005-5 RR G1 +610L C5 A

Model No.

Symbol for clearance
in the axial direction²

Accuracy symbol³

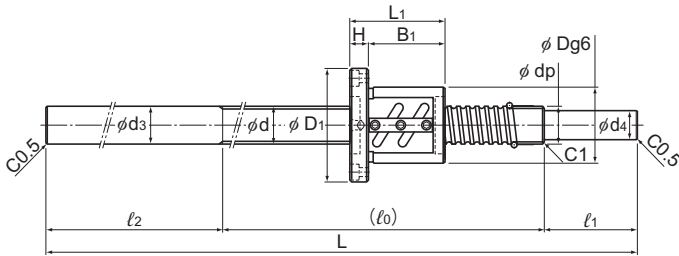
Unfinished shaft ends code (A or B)

Seal symbol¹

Overall screw shaft
length (in mm)

¹ See **A15-356**. ² See **A15-19**. ³ See **A15-12**.

Positioning Ball Screw



Unit: mm

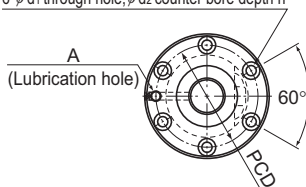
Dimensions						Screw shaft dimensions								Nut mass kg	Shaft mass kg/m	Permissible rotational speed min ⁻¹	
B ₁	PCD	d ₁	d ₂	h	Lubrication hole A	Standard stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄					
31	50	4.5	8	4.5	M6	A	410	200	50	160	16	12.8	0.37	0.92	4,170		
							510	300									
							610	400									
							710	500									
57	53	5.5	9.5	5.5	M6	A	410	200	50	160	18	15.3	0.67	1.62	3,720		
							510	300									
							610	400									
							710	500									
45	55	5.5	9.5	5.5	M6	A	410	200	50	160	20	15.3	0.57	1.65	3,370		
							510	300									
							610	400									
							710	500									
						B	710	400	50	260	20	16.8	0.75	2.84	2,710		
																810	600
																1,010	800
																1,210	1,000
44	61	5.5	9.5	5.5	M6	A	520	300	60	160	25	20.3	0.75	2.84	2,710		
							620	400									
							720	500									
							820	600									
						B	720	400	60	260	25	21.8	0.75	2.84	2,710		
																820	500
																1,020	800
																1,220	1,000
44	61	5.5	9.5	5.5	M6	A	1,420	1,200	60	160	25	21.8	0.75	2.84	2,710		
							1,620	1,400									
							1,820	1,600									
							2,020	1,800									

Ball Screw

BNF (Unfinished Shaft Ends) No Preload

DN value	70,000
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6- ϕ d₁ through hole, ϕ d₂ counter bore depth h



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 _f	Overall length L ₁	Nut height H
						Ca kN	C _{0a} kN				
BNF 2510A-2.5	25	10	26.3	21.4	1×2.5	15.8	33	58	85	70	18
BNF 2806-5	28	6	28.75	25.2	2×2.5	17.5	49.4	55	85	68	12
BNF 3205-5	32	5	32.75	29.2	2×2.5	18.5	56.4	58	85	56	12

Model number coding

BNF2806-10 RR G1 +1020L C5 A

Model No.

Symbol for clearance in the axial direction²

Accuracy symbol³

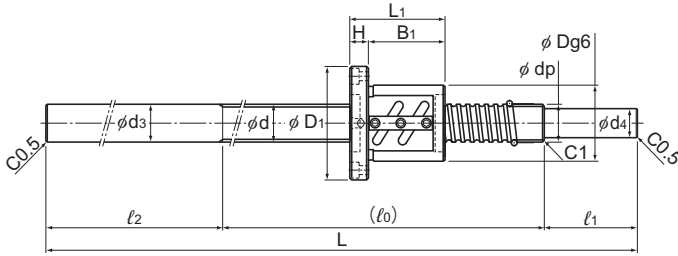
Unfinished shaft ends code (A or B)

Seal symbol¹

Overall screw shaft length (in mm)

¹ See **A15-356**. ² See **A15-19**. ³ See **A15-12**.

Positioning Ball Screw



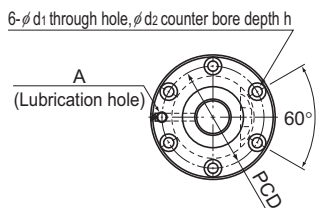
Unit: mm

Dimensions						Screw shaft dimensions							Nut mass kg	Shaft mass kg/m	Permissible rotational speed min ⁻¹
B ₁	PCD	d ₁	d ₂	h	Lubrication hole A	Standard stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄			
52	71	6.6	11	6.5	M6	A	620	400	60	160	25	20.3	1.43	2.68	2,660
							820	600							
							1,020	800							
							1,220	1,000							
							1,420	1,200							
56	69	6.6	11	6.5	M6	A	520	300	60	160	28	20.3	1.13	3.89	2,430
							620	400							
							720	500							
							920	700				24.8			
							1,020	800							
							1,220	1,000							
							1,420	1,200							
						B	720	400	70	250	28	24.8			
							920	500		350					
							1,100	700		330					
44	71	6.6	11	6.5	M6	A	730	500	70	160	32	25.3	0.93	5.03	2,130
							930	700							
							1,230	1,000							
							1,430	1,200				27.8			
							1,630	1,400							
							1,830	1,600							

Ball Screw

BNF (Unfinished Shaft Ends) No Preload

DN value	70,000
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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 _f	Overall length L ₁	Nut H
						Ca kN	C _{0a} kN				
BNF 3206-5	32	6	33	28.4	2×2.5	25.2	70.4	62	89	63	12
BNF 3210A-5	32	10	33.75	26.4	2×2.5	47.2	112.7	74	108	100	15
BNF 3610-5	36	10	37.75	30.5	2×2.5	50.1	126.4	75	120	111	18

Model number coding

BNF3206-10 RR G1 +1100L C5 B

Model No.

Symbol for clearance in the axial direction²

Accuracy symbol³

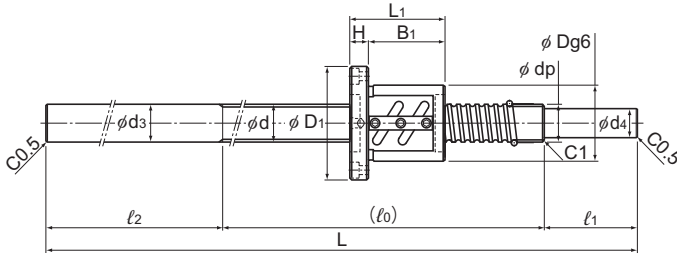
Unfinished shaft ends code (A or B)

Seal symbol¹

Overall screw shaft length (in mm)

¹ See **A15-356**. ² See **A15-19**. ³ See **A15-12**.

Positioning Ball Screw

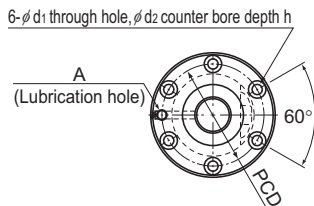


Unit: mm

Dimensions						Screw shaft dimensions						Nut mass kg	Shaft mass kg/m	Permissible rotational speed min ⁻¹	
B ₁	PCD	d ₁	d ₂	h	Lubrication hole A	Standard stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃				d ₄
51	75	6.6	11	6.5	M6	A	730	500	70	160	32	25.3	1.2	4.63	2,120
							930	700							
							1,230	1,000							
							1,430	1,200							
							1,630	1,400							
						1,830	1,600								
						B	930	500	70	360	32	27.8			
							1,100	700		330					
							1,430	1,000		360					
						85	90	9	14	8.5	M6	A			
930	700														
1,430	1,200														
1,830	1,600														
730	500	70	160	36	30.3										
930	700														
1,430	1,200														
1,830	1,600														
B	930					500	100	330	36	30.3					
	1,100	700	300												
	1,830	1,200	530												

BNF (Unfinished Shaft Ends) No Preload

DN value	70,000
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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 _f	Overall length L ₁	Nut H
						Ca kN	C _{0a} kN				
BNF 4010-5	40	10	41.75	34.4	2×2.5	52.7	141.1	82	124	103	18
BNF 4012-5	40	12	42	34.1	2×2.5	61.6	158.8	84	126	119	18
BNF 5010-5	50	10	51.75	44.4	2×2.5	58.2	176.4	93	135	103	18

Model number coding

BNF4012-10 RR G1 +1230L C5 A

Model No.

Symbol for clearance in the axial direction²

Accuracy symbol³

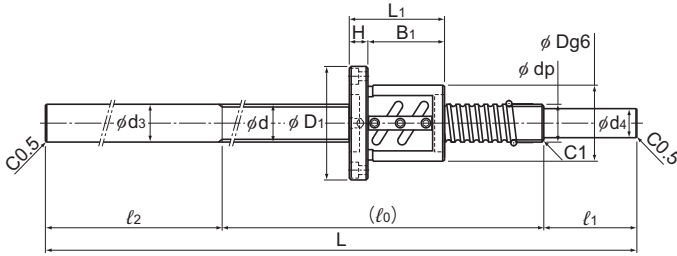
Unfinished shaft ends code (A or B)

Seal symbol¹

Overall screw shaft length (in mm)

¹ See **A15-356**. ² See **A15-19**. ³ See **A15-12**.

Positioning Ball Screw



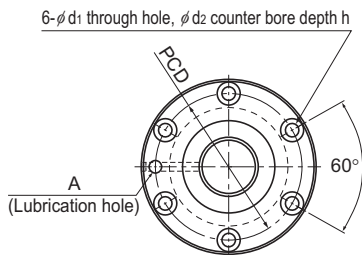
Unit: mm

Dimensions						Screw shaft dimensions								Nut mass kg	Shaft mass kg/m	Permissible rotational speed min ⁻¹
B ₁	PCD	d ₁	d ₂	h	Lubrication hole A	Standard stock symbol	Overall length L	l ₀	l ₁	l ₂	d ₃	d ₄				
85	102	11	17.5	11	M6	A	1,230	1,000	70	160	40	30.3	3.58	6.59	1,670	
							1,730	1,500								
							2,030	1,800								
							2,230	2,000								
101	104	11	17.5	11	M6	A	1,230	1,000	70	160	40	30.3	4.2	6.39	1,660	
							1,730	1,500								
							2,030	1,800								
							2,230	2,000								
						B	1,730	1,200	100	430	40	33.8				
							2,030	1,200		730						
85	113	11	17.5	11	Rc1/8 (PT1/8)	A	1,300	1,000	100	200	50	40.3	4.4	11.36	1,350	
							1,800	1,500								
							2,300	2,000								
							2,800	2,500								

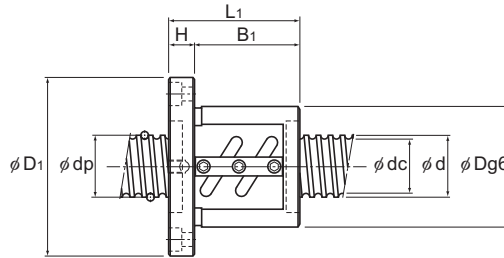
Ball Screw

BNF No Preload

DN value	70,000
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Model No.	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		Rigidity K N/μm
						Ca kN	C _{0a} kN	
BNF 5510-2.5	55	10	56.75	49.5	1×2.5	33.4	97	490
BNF 5510-5	55	10	56.75	49.5	2×2.5	60.7	194	950
BNF 5510-7.5	55	10	56.75	49.5	3×2.5	85.9	291.1	1,390
BNF 5512-2.5	55	12	57	49.2	1×2.5	39.3	108.8	500
BNF 5512-3	55	12	57	49.2	2×1.5	46	131.3	590
BNF 5512-3.5	55	12	57	49.2	1×3.5	52.4	152.9	680
BNF 5512-5	55	12	57	49.2	2×2.5	71.3	218.5	960
BNF 5512-7.5	55	12	57	49.2	3×2.5	100.9	327.3	1,420
BNF 5516-2.5	55	16	57.7	47.9	1×2.5	76.1	201.9	650
BNF 5516-5	55	16	57.7	47.9	2×2.5	138.2	402.8	1,280
BNF 5520-2.5	55	20	57.7	47.9	1×2.5	76	201.9	660
BNF 5520-5	55	20	57.7	47.9	2×2.5	138.2	403.8	1,280
BNF 6310-2.5	63	10	64.75	57.7	1×2.5	35.4	111.7	550
BNF 6310-5	63	10	64.75	57.7	2×2.5	64.2	222.5	1,050
BNF 6310-7.5	63	10	64.75	57.7	3×2.5	90.9	334.2	1,550
BNF 6312A-2.5	63	12	65.25	56.3	1×2.5	48.1	139.2	560
BNF 6312A-5	63	12	65.25	56.3	2×2.5	87.4	278.3	1,090
BNF 6316-5	63	16	65.7	55.9	2×2.5	147	462.6	1,420
BNF 6320-2.5	63	20	65.7	55.9	1×2.5	81	231.3	740
BNF 6320-5	63	20	65.7	55.9	2×2.5	147	463.5	1,420



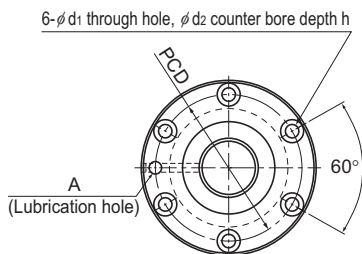
Unit: mm

	Nut dimensions							Lubrication hole A	Screw shaft inertial moment/mm ² kg·m ² /mm	Nut mass kg	Shaft mass kg/m	Permissible rotational speed min ⁻¹
	Outer diameter D	Flange diameter D ₁	Overall length L ₁	H	B ₁	PCD	d ₁ × d ₂ × h					
	102	144	81	18	63	122	11 × 17.5 × 11	Rc1/8 (PT1/8)	7.05 × 10 ⁻⁶	4.19	16.43	1,230
	102	144	111	18	93	122	11 × 17.5 × 11		7.05 × 10 ⁻⁶	5.36	16.43	1,230
	102	144	141	18	123	122	11 × 17.5 × 11		7.05 × 10 ⁻⁶	6.54	16.43	1,230
	105	147	93	18	75	125	11 × 17.5 × 11		7.05 × 10 ⁻⁶	5.01	16.29	1,220
	105	147	107	18	89	125	11 × 17.5 × 11		7.05 × 10 ⁻⁶	5.6	16.29	1,220
	105	147	105	18	87	125	11 × 17.5 × 11		7.05 × 10 ⁻⁶	5.52	16.29	1,220
	105	147	129	18	111	125	11 × 17.5 × 11		7.05 × 10 ⁻⁶	6.54	16.29	1,220
	105	147	165	18	147	125	11 × 17.5 × 11		7.05 × 10 ⁻⁶	8.07	16.29	1,220
	110	158	116	25	91	133	14 × 20 × 13		7.05 × 10 ⁻⁶	7.4	15.46	1,210
	110	158	164	25	139	133	14 × 20 × 13		7.05 × 10 ⁻⁶	9.73	15.46	1,210
	112	158	127	28	99	134	14 × 20 × 13		7.05 × 10 ⁻⁶	8.4	16.1	1,210
	112	158	187	28	159	134	14 × 20 × 13		7.05 × 10 ⁻⁶	11.45	16.1	1,210
	108	154	77	22	55	130	14 × 20 × 13		1.21 × 10 ⁻⁵	4.57	21.93	1,080
	108	154	107	22	85	130	14 × 20 × 13		1.21 × 10 ⁻⁵	5.77	21.93	1,080
	108	154	137	22	115	130	14 × 20 × 13		1.21 × 10 ⁻⁵	6.98	21.93	1,080
	115	161	87	22	65	137	14 × 20 × 13		1.21 × 10 ⁻⁵	5.8	21.14	1,070
	115	161	123	22	101	137	14 × 20 × 13	1.21 × 10 ⁻⁵	7.56	21.14	1,070	
	122	184	160	24	136	152	18 × 26 × 17.5	1.21 × 10 ⁻⁵	11.82	20.85	1,060	
	122	180	127	28	99	150	18 × 26 × 17.5	1.21 × 10 ⁻⁵	10.1	21.57	1,060	
	122	180	187	28	159	150	18 × 26 × 17.5	1.21 × 10 ⁻⁵	13.58	21.57	1,060	

Note: The overall length of the nut will increase when equipping the QZ Lubricator. See **A15-366** for further details.

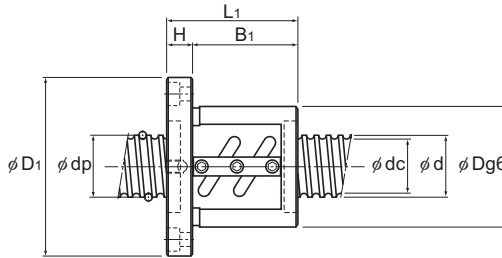
BNF No Preload

DN value	70,000
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Model No.	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		Rigidity K N/μm
						Ca kN	C0a kN	
BNF 7010-2.5	70	10	71.75	64.5	1×2.5	36.8	123.5	590
BNF 7010-5	70	10	71.75	64.5	2×2.5	66.9	247	1,140
BNF 7010-7.5	70	10	71.75	64.5	3×2.5	94.9	371.4	1,680
BNF 7012-2.5	70	12	72	64.2	1×2.5	43.5	139.2	600
BNF 7012-5	70	12	72	64.2	2×2.5	78.9	278.3	1,160
BNF 7012-7.5	70	12	72	64.2	3×2.5	111.7	417.5	1,710
BNF 7020-5	70	20	72.7	62.9	2×2.5	153.9	514.5	1,550
BNF 8010-2.5	80	10	81.75	75.2	1×2.5	38.9	141.1	650
BNF 8010-5	80	10	81.75	75.2	2×2.5	70.6	283.2	1,270
BNF 8010-7.5	80	10	81.75	75.2	3×2.5	100	424.3	1,860
BNF 8020A-2.5	80	20	82.7	72.9	1×2.5	90.1	294	890
BNF 8020A-5	80	20	82.7	72.9	2×2.5	163.7	589	1,720
BNF 8020A-7.5	80	20	82.7	72.9	3×2.5	231.6	883.2	2,520
BNF 10020A-2.5	100	20	102.7	92.9	1×2.5	99	368.5	2,110
BNF 10020A-5	100	20	102.7	92.9	2×2.5	179.3	737	4,080
BNF 10020A-7.5	100	20	102.7	92.9	3×2.5	253.8	1105.4	6,010

Positioning Ball Screw



Unit: mm

	Nut dimensions							Lubrication hole A	Screw shaft inertial moment/mm ² kg·m ² /mm	Nut mass kg	Shaft mass kg/m	Permissible rotational speed min ⁻¹
	Outer diameter D	Flange diameter D ₁	Overall length L ₁	H	B ₁	PCD	d ₁ ×d ₂ ×h					
	125	167	81	18	63	145	11×17.5×11	Rc1/8 (PT1/8)	1.85×10 ⁻⁵	5.8	27.4	970
	125	167	111	18	93	145	11×17.5×11		1.85×10 ⁻⁵	7.49	27.4	970
	125	167	141	18	123	145	11×17.5×11		1.85×10 ⁻⁵	9.19	27.4	970
	128	170	93	18	75	148	11×17.5×11		1.85×10 ⁻⁵	6.89	27.24	970
	128	170	129	18	111	148	11×17.5×11		1.85×10 ⁻⁵	9.08	27.24	970
	128	170	165	18	147	148	11×17.5×11		1.85×10 ⁻⁵	11.26	27.24	970
	130	186	185	28	157	158	18×26×17.5		1.85×10 ⁻⁵	14.5	27	960
	130	176	77	22	55	152	14×20×13		3.16×10 ⁻⁵	5.9	36.26	850
	130	176	107	22	85	152	14×20×13		3.16×10 ⁻⁵	7.53	36.26	850
	130	176	137	22	115	152	14×20×13		3.16×10 ⁻⁵	9.15	36.26	850
	143	204	127	28	99	172	18×26×17.5		3.16×10 ⁻⁵	12.68	35.81	840
	143	204	187	28	159	172	18×26×17.5		3.16×10 ⁻⁵	17.12	35.81	840
	143	204	247	28	219	172	18×26×17.5		3.16×10 ⁻⁵	21.56	35.81	840
	170	243	131	32	99	205	22×32×21.5		7.71×10 ⁻⁵	18.28	57.13	680
	170	243	191	32	159	205	22×32×21.5		7.71×10 ⁻⁵	24.2	57.13	680
	170	243	251	32	219	205	22×32×21.5		7.71×10 ⁻⁵	30.12	57.13	680

Note: The overall length of the nut will increase when equipping the QZ Lubricator. See **A15-366** for further details.