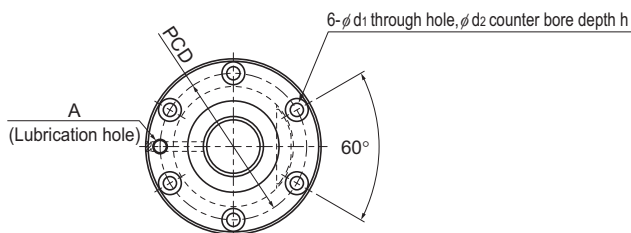
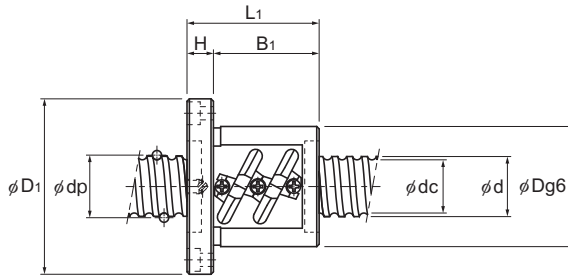


# BNF-V Small No Preload

DN value	100,000
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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 <sub>a</sub> kN	
BNF 1604V-5	16	4	16.5	13.8	2×2.5	7.8	17.4	290
BNF 1605V-2.5	16	5	16.75	13.2	1×2.5	7.4	13.9	170
BNF 1605V-5	16	5	16.75	13.2	2×2.5	13.5	27.9	320
BNF 2004V-2.5	20	4	20.5	17.8	1×2.5	4.8	10.9	180
BNF 2004V-5	20	4	20.5	17.8	2×2.5	8.6	21.8	350
BNF 2005V-2.5	20	5	20.75	17.2	1×2.5	8.3	17.5	200
BNF 2005V-5	20	5	20.75	17.2	2×2.5	15.1	35	380
BNF 2010V-2.5	20	10	20.75	17.2	1×2.5	8.3	17.6	197
BNF 2504V-2.5	25	4	25.5	22.8	1×2.5	5.2	13.7	210
BNF 2504V-5	25	4	25.5	22.8	2×2.5	9.5	27.4	410
BNF 2505V-2.5	25	5	25.75	22.2	1×2.5	9.2	21.9	240
BNF 2505V-5	25	5	25.75	22.2	2×2.5	16.7	43.9	460
BNF 2506V-2.5	25	6	26	21.4	1×2.5	12.4	27.4	250
BNF 2506V-5	25	6	26	21.4	2×2.5	22.6	54.8	470
BNF 2805V-2.5	28	5	28.75	25.2	1×2.5	9.7	24.6	250
BNF 2805V-5	28	5	28.75	25.2	2×2.5	17.5	49.2	500
BNF 2805V-7.5	28	5	28.75	25.2	3×2.5	24.8	73.8	740
BNF 2806V-2.5	28	6	28.75	25.2	1×2.5	9.6	24.6	250
BNF 2806V-5	28	6	28.75	25.2	2×2.5	17.5	49.2	500
BNF 2806V-7.5	28	6	28.75	25.2	3×2.5	24.8	73.8	740
BNF 3205V-2.5	32	5	32.75	29.2	1×2.5	10.2	28.1	280
BNF 3205V-5	32	5	32.75	29.2	2×2.5	18.5	56.3	560
BNF 3205V-7.5	32	5	32.75	29.2	3×2.5	26.2	84.4	810
BNF 3206V-2.5	32	6	33	28.4	1×2.5	13.9	35.2	290
BNF 3206V-5	32	6	33	28.4	2×2.5	25.2	70.3	580



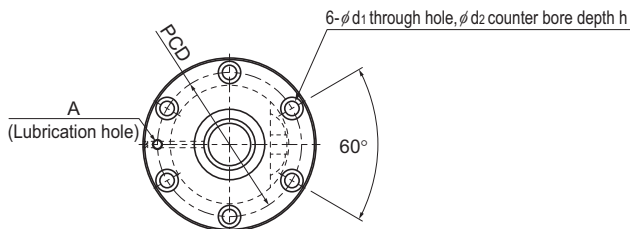
Unit: mm

	Nut dimensions								Screw shaft inertial moment/mm <sup>2</sup>	Nut mass	Shaft mass	Permissible rotational speed
	Outer diameter	Flange diameter	Overall length	H	B <sub>1</sub>	PCD	d <sub>1</sub> × d <sub>2</sub> × h	Lubrication hole				
	D	D <sub>1</sub>	L <sub>1</sub>	H	B <sub>1</sub>	PCD	d <sub>1</sub> × d <sub>2</sub> × h	A	kg·m <sup>2</sup> /mm	kg	kg/m	min <sup>-1</sup>
	36	59	53	11	42	47	5.5×9.5×5.5	M6	5.05×10 <sup>-8</sup>	0.42	1.42	5,000
	40	60	41	10	31	50	4.5×8×4.5	M6	5.05×10 <sup>-8</sup>	0.37	1.37	5,000
	40	60	56	10	46	50	4.5×8×4.5	M6	5.05×10 <sup>-8</sup>	0.49	1.37	5,000
	40	63	37	11	26	51	5.5×9.5×5.5	M6	1.23×10 <sup>-7</sup>	0.3	2.22	4,870
	40	63	49	11	38	51	5.5×9.5×5.5	M6	1.23×10 <sup>-7</sup>	0.49	2.22	4,870
	44	67	41	11	30	55	5.5×9.5×5.5	M6	1.23×10 <sup>-7</sup>	0.46	2.19	4,810
	44	67	56	11	45	55	5.5×9.5×5.5	M6	1.23×10 <sup>-7</sup>	0.6	2.19	4,810
	46	74	58	15	43	59	5.5×9.5×5.5	M6	1.23×10 <sup>-7</sup>	0.68	2.46	4,810
	46	69	36	11	25	57	5.5×9.5×5.5	M6	3.01×10 <sup>-7</sup>	0.21	3.6	3,920
	46	69	48	11	37	57	5.5×9.5×5.5	M6	3.01×10 <sup>-7</sup>	0.55	3.6	3,920
	50	73	40	11	29	61	5.5×9.5×5.5	M6	3.01×10 <sup>-7</sup>	0.52	3.52	3,880
	50	73	55	11	44	61	5.5×9.5×5.5	M6	3.01×10 <sup>-7</sup>	0.68	3.52	3,880
	53	76	44	11	33	64	5.5×9.5×5.5	M6	3.01×10 <sup>-7</sup>	0.61	3.43	3,840
	53	76	62	11	51	64	5.5×9.5×5.5	M6	3.01×10 <sup>-7</sup>	0.91	3.43	3,840
	55	85	44	12	32	69	6.6×11×6.5	M6	4.74×10 <sup>-7</sup>	1.02	4.45	3,470
	55	85	59	12	47	69	6.6×11×6.5	M6	4.74×10 <sup>-7</sup>	1.06	4.45	3,470
	55	85	74	12	62	69	6.6×11×6.5	M6	4.74×10 <sup>-7</sup>	1.16	4.45	3,470
	55	85	50	12	38	69	6.6×11×6.5	M6	4.74×10 <sup>-7</sup>	0.87	4.52	3,470
	55	85	68	12	56	69	6.6×11×6.5	M6	4.74×10 <sup>-7</sup>	1.09	4.52	3,470
	55	85	86	12	74	69	6.6×11×6.5	M6	4.74×10 <sup>-7</sup>	1.3	4.52	3,470
	58	85	41	12	29	71	6.6×11×6.5	M6	8.08×10 <sup>-7</sup>	0.76	5.89	3,050
	58	85	56	12	44	71	6.6×11×6.5	M6	8.08×10 <sup>-7</sup>	0.94	5.89	3,050
	58	85	71	12	59	71	6.6×11×6.5	M6	8.08×10 <sup>-7</sup>	1.13	5.89	3,050
	62	89	45	12	33	75	6.6×11×6.5	M6	8.08×10 <sup>-7</sup>	0.94	5.88	3,030
	62	89	63	12	51	75	6.6×11×6.5	M6	8.08×10 <sup>-7</sup>	1.21	5.88	3,030

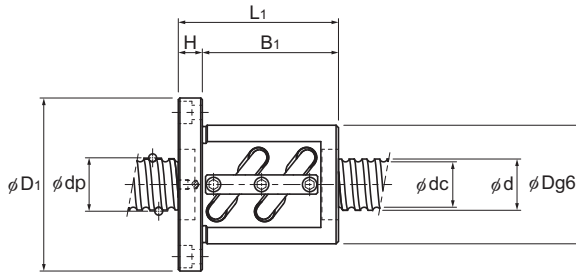
Note: The overall length of the nut will increase when equipping the QZ Lubricator. See **A15-366** for further details.

# BNF-V Medium No Preload

DN value	130,000
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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/ $\mu$ m
						Ca kN	C <sub>0a</sub> kN	
BNF 2508V-2.5	25	8	26.25	20.5	1×2.5	15.8	32.9	250
BNF 2508V-3.5	25	8	26.25	20.5	1×3.5	21.1	46	340
BNF 2508V-5	25	8	26.25	20.5	2×2.5	28.7	65.7	480
BNF 2510V-2.5	25	10	26.25	21.5	1×2.5	15.8	32.9	250
BNF 2810V-2.5	28	10	29.75	22.4	1×2.5	24.3	49	280
BNF 3210V-2.5	32	10	33.75	26.4	1×2.5	26	56.2	310
BNF 3210V-3.5	32	10	33.75	26.4	1×3.5	34.8	78.6	440
BNF 3210V-5	32	10	33.75	26.4	2×2.5	47.3	112.3	620
BNF 3212V-3.5	32	12	34	26.1	1×3.5	40.4	88.5	440
BNF 3216V-5	32	16	33.75	26.4	2×2.5	47.1	113.1	616
BNF 3610V-2.5	36	10	37.75	30.5	1×2.5	27.6	63.3	350
BNF 3610V-5	36	10	37.75	30.5	2×2.5	50.1	126.5	680
BNF 3610V-7.5	36	10	37.75	30.5	3×2.5	71	189.8	990
BNF 3612V-2.5	36	12	38	30.1	1×2.5	32.2	71.2	350
BNF 3612V-5	36	12	38	30.1	2×2.5	58.4	142.3	690
BNF 3616V-2.5	36	16	38	30.1	1×2.5	32.1	71.5	350
BNF 3620V-1.5	36	20	37.75	30.5	1×1.5	17.7	38.4	215
BNF 4010V-2.5	40	10	41.75	34.4	1×2.5	29	70.4	380
BNF 4010V-3.5	40	10	41.75	34.4	1×3.5	38.8	98.5	520
BNF 4010V-5	40	10	41.75	34.4	2×2.5	52.7	140.7	740
BNF 4012V-2.5	40	12	42	34.1	1×2.5	33.9	79.2	390
BNF 4012V-3.5	40	12	42	34.1	1×3.5	45.3	110.8	530
BNF 4012V-5	40	12	42	34.1	2×2.5	61.6	158.3	750
BNF 4016V-5	40	16	42	34.1	2×2.5	61.5	158.8	740
BNF 4020V-5	40	20	41.75	34.4	2×2.5	52.4	142	736



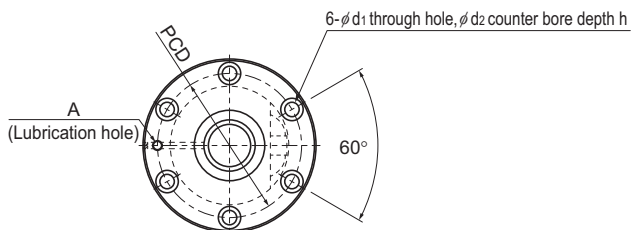
Unit: mm

	Nut dimensions								Screw shaft inertial moment/mm	Nut mass	Shaft mass	Permissible rotational speed
	Outer diameter	Flange diameter	Overall length	H	B <sub>1</sub>	PCD	d <sub>1</sub> ×d <sub>2</sub> ×h	Lubrication hole				
	D	D <sub>1</sub>	L <sub>1</sub>	H	B <sub>1</sub>	PCD	d <sub>1</sub> ×d <sub>2</sub> ×h	A	kg·m <sup>2</sup> /mm	kg	kg/m	min <sup>-1</sup>
	58	85	58	15	43	71	6.6×11×6.5	M6	3.01×10 <sup>-7</sup>	1.07	3.51	4,950
	58	85	66	15	51	71	6.6×11×6.5	M6	3.01×10 <sup>-7</sup>	1.29	3.51	4,950
	58	85	82	15	67	71	6.6×11×6.5	M6	3.01×10 <sup>-7</sup>	1.44	3.51	4,950
	58	85	70	18	52	71	6.6×11×6.5	M6	3.01×10 <sup>-7</sup>	1.43	3.5	4,950
	65	106	86	18	68	85	11×17.5×11	M6	4.74×10 <sup>-8</sup>	2.3	4.15	4,360
	74	108	70	15	55	90	9×14×8.5	M6	8.08×10 <sup>-7</sup>	2.2	5.53	3,850
	74	108	80	15	65	90	9×14×8.5	M6	8.08×10 <sup>-7</sup>	2.44	5.53	3,850
	74	108	100	15	85	90	9×14×8.5	M6	8.08×10 <sup>-7</sup>	2.92	5.53	3,850
	76	121	98	18	80	98	11×17.5×11	M6	8.08×10 <sup>-7</sup>	3.4	5.7	3,820
	74	108	139	18	121	90	9×14×8.5	M6	8.08×10 <sup>-7</sup>	3.81	5.82	3,850
	75	120	81	18	63	98	11×17.5×11	M6	1.29×10 <sup>-6</sup>	2.75	7.1	3,440
	75	120	111	18	93	98	11×17.5×11	M6	1.29×10 <sup>-6</sup>	3.45	7.1	3,440
	75	120	141	18	123	98	11×17.5×11	M6	1.29×10 <sup>-6</sup>	4.15	7.1	3,440
	78	123	87	18	69	100	11×17.5×11	M6	1.29×10 <sup>-6</sup>	3.14	7.99	3,420
	78	123	123	18	105	100	11×17.5×11	M6	1.29×10 <sup>-6</sup>	4.07	7.99	3,420
	78	123	92	18	74	100	11×17.5×11	M6	1.29×10 <sup>-6</sup>	3.27	7.99	3,420
	75	114	82	18	64	93	11×17.5×11	M6	1.29×10 <sup>-6</sup>	2.38	7.54	3,440
	82	124	73	18	55	102	11×17.5×11	M6	1.97×10 <sup>-6</sup>	2.86	8.87	3,110
	82	124	83	18	65	102	11×17.5×11	M6	1.97×10 <sup>-6</sup>	3.14	8.87	3,110
	82	124	103	18	85	102	11×17.5×11	M6	1.97×10 <sup>-6</sup>	3.69	8.87	3,110
	84	126	83	18	65	104	11×17.5×11	M6	1.97×10 <sup>-6</sup>	3.31	8.83	3,090
	84	126	95	18	77	104	11×17.5×11	M6	1.97×10 <sup>-6</sup>	3.66	8.83	3,090
	84	126	119	18	101	104	11×17.5×11	M6	1.97×10 <sup>-6</sup>	4.36	8.83	3,090
	84	126	144	18	126	104	11×17.5×11	M6	1.97×10 <sup>-6</sup>	5.52	9.09	3,090
	82	126	162	18	144	104	11×17.5×11	M6	1.97×10 <sup>-6</sup>	5.17	9.37	3,110

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

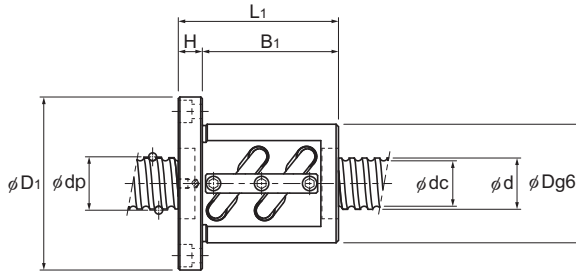
# BNF-V Medium No Preload

DN value	130,000
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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 <sub>a</sub> a kN	
BNF 4510V-2.5	45	10	46.75	39.5	1×2.5	30.6	79.3	420
BNF 4510V-3	45	10	46.75	39.5	2×1.5	35.8	95.1	500
BNF 4510V-5	45	10	46.75	39.5	2×2.5	55.6	158.5	800
BNF 4510V-7.5	45	10	46.75	39.5	3×2.5	78.8	237.8	1,190
BNF 4512V-5	45	12	47	39.2	2×2.5	65.2	178.3	820
BNF 4520V-2.5	45	20	47	39.2	1×2.5	35.8	89.7	424
BNF 5010V-2.5	50	10	51.75	44.4	1×2.5	32.1	88.1	450
BNF 5010V-3.5	50	10	51.75	44.4	1×3.5	42.9	123.4	620
BNF 5010V-5	50	10	51.75	44.4	2×2.5	58.2	176.3	880
BNF 5010V-7.5	50	10	51.75	44.4	3×2.5	82.5	264.4	1,290
BNF 5012V-2.5	50	12	52.25	43.3	1×2.5	43.4	110.1	470
BNF 5012V-3.5	50	12	52.25	43.3	1×3.5	58	154.1	640
BNF 5012V-5	50	12	52.25	43.3	2×2.5	78.8	220.2	910
BNF 5016V-2.5	50	16	52.7	42.9	1×2.5	72.6	183.1	620
BNF 5016V-5	50	16	52.7	42.9	2×2.5	131.8	366.2	1,180
BNF 5020V-2.5	50	20	52.7	42.9	1×2.5	72.5	183.6	620

## Positioning Ball Screw



Unit: mm

	Nut dimensions							Screw shaft inertial moment/mm <sup>2</sup>	Nut mass	Shaft mass	Permissible rotational speed	
	Outer diameter	Flange diameter	Overall length	H	B <sub>1</sub>	PCD	d <sub>1</sub> ×d <sub>2</sub> ×h					Lubrication hole
	D	D <sub>1</sub>	L <sub>1</sub>	H	B <sub>1</sub>	PCD	d <sub>1</sub> ×d <sub>2</sub> ×h	A	kg·m <sup>2</sup> /mm	kg	kg/m	min <sup>-1</sup>
	88	132	81	18	63	110	11×17.5×11	Rc1/8 (PT1/8)	3.16×10 <sup>-6</sup>	3.43	11.36	2,780
	88	132	94	18	76	110	11×17.5×11		3.16×10 <sup>-6</sup>	3.83	11.36	2,780
	88	132	111	18	93	110	11×17.5×11		3.16×10 <sup>-6</sup>	4.35	11.36	2,780
	88	132	141	18	123	110	11×17.5×11		3.16×10 <sup>-6</sup>	5.26	11.36	2,780
	90	130	119	18	101	110	11×17.5×11		3.16×10 <sup>-6</sup>	4.74	11.32	2,760
	90	130	102	18	84	110	11×17.5×11		3.16×10 <sup>-6</sup>	4.28	11.1	2,760
	93	135	73	18	55	113	11×17.5×11		4.82×10 <sup>-6</sup>	3.33	14.16	2,510
	93	135	83	18	65	113	11×17.5×11		4.82×10 <sup>-6</sup>	3.66	14.16	2,510
	93	135	103	18	85	113	11×17.5×11		4.82×10 <sup>-6</sup>	4.31	14.16	2,510
	93	135	133	18	115	113	11×17.5×11		4.82×10 <sup>-6</sup>	5.28	14.16	2,510
	100	146	87	22	65	122	14×20×13		4.82×10 <sup>-6</sup>	4.57	13.82	2,480
	100	146	99	22	77	122	14×20×13		4.82×10 <sup>-6</sup>	5.05	13.82	2,480
	100	146	123	22	101	122	14×20×13		4.82×10 <sup>-6</sup>	6.02	13.82	2,480
	105	152	116	25	91	128	14×20×13		4.82×10 <sup>-6</sup>	6.98	13.71	2,460
	105	152	164	25	139	128	14×20×13		4.82×10 <sup>-6</sup>	9.18	13.71	2,460
	105	152	141	28	113	128	14×20×13		4.82×10 <sup>-6</sup>	8.32	14.05	2,460

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