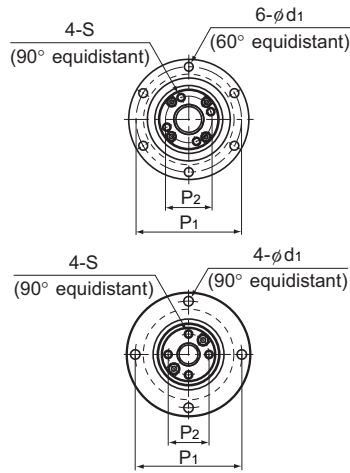
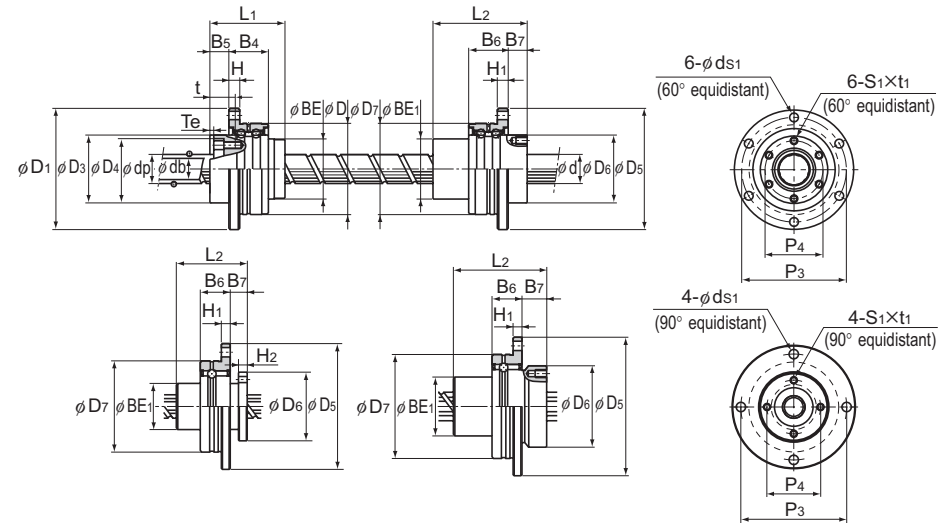


# Model BNS-A Compact Type: Straight-curved Motion



Models BNS 0812A and 1015A



Model BNS 0812A

Model BNS 1015A

Models BNS 0812A and 1015A

Unit: mm

## Ball screw unit

Model No.	Screw shaft outer diameter d	Screw shaft inner diameter db	Lead Ph	Ball screw dimensions													Support bearing basic load rating		Nut inertial moment kg·cm <sup>2</sup>	Screw shaft inertial moment/mm J·kg·cm <sup>2</sup> /mm	Nut mass kg	Shaft mass kg/m						
				Basic load rating		Ball center-to-center diameter dp	Thread minor diameter dc	Outer diameter D	Flange diameter D1	Overall length L1	D3	D4	BE	H	B4	B5	Te	P1					P2	S	t	d1	Ca	C0a
				Ca	C0a																							
BNS 0812A	8	—	12	1.1	1.8	8.4	6.6	32	44	28.5	22	19	19	3	10.5	7	1.5	38	14.5	M2.6	10	3.4	0.8	0.5	0.03	3.16×10 <sup>-5</sup>	0.08	0.35
BNS 1015A	10	—	15	1.7	2.7	10.5	8.3	36	48	34.5	26	23	23	3	10.5	8	1.5	42	18	M3	11.5	3.4	0.9	0.7	0.08	7.71×10 <sup>-5</sup>	0.15	0.52
BNS 1616A	16	11	16	3.9	7.2	16.65	13.7	48	64	40	36	32	32	6	21	10	2	56	25	M4	13.5	4.5	8.7	10.5	0.35	3.92×10 <sup>-4</sup>	0.31	0.8
BNS 2020A	20	14	20	6.1	12.3	20.75	17.5	56	72	48	43.5	39	39	6	21	11	2.5	64	31	M5	16.5	4.5	9.7	13.4	0.85	9.37×10 <sup>-4</sup>	0.54	1.21
BNS 2525A	25	18	25	9.1	19.3	26	22	66	86	58	52	47	47	7	25	13	3	75	38	M6	20	5.5	12.7	18.2	2.12	2.2×10 <sup>-3</sup>	0.88	1.79
BNS 3232A	32	23	32	13	29.8	33.25	28.3	78	103	72	63	58	58	8	25	14	3	89	48	M6	21	6.6	13.6	22.3	5.42	5.92×10 <sup>-3</sup>	1.39	2.96
BNS 4040A	40	29	40	21.4	49.7	41.75	35.2	100	130	88	79.5	73	73	10	33	16.5	3	113	61	M8	24.5	9	21.5	36.8	17.2	1.43×10 <sup>-2</sup>	3.16	4.51

## Ball spline

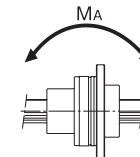
Unit: mm

Model No.	Ball spline dimensions													Support bearing basic load rating		Nut inertial moment kg·cm <sup>2</sup>	Nut mass kg					
	Basic load rating		Static permissible moment MA N·m	Basic torque rating		Outer diameter D7	Flange diameter D5	Overall length L2	D6	BE1	H1	B6	B7	H2	P3			P4	S1×t1	ds1	C	C0
	C	C0		CT	C0T																	
BNS 0812A	1.5	2.6	5.9	2	2.9	32	44	25	24	16	3	10.5	6	3	38	19	M2.6×3	3.4	0.6	0.2	0.03	0.08
BNS 1015A	2.7	4.9	15.7	3.9	7.8	36	48	33	28	21	3	10.5	9	—	42	23	M3×4	3.4	0.8	0.3	0.08	0.13
BNS 1616A	7.1	12.6	67.6	31.4	34.3	48	64	50	36	31	6	21	10	—	56	30	M4×6	4.5	6.7	6.4	0.44	0.35
BNS 2020A	10.2	17.8	118	56.8	55.8	56	72	63	43.5	35	6	21	12	—	64	36	M5×8	4.5	7.4	7.8	0.99	0.51
BNS 2525A	15.2	25.8	210	105	103	66	86	71	52	42	7	25	13	—	75	44	M5×8	5.5	9.7	10.6	2.2	0.79
BNS 3232A	20.5	34	290	180	157	78	103	80	63	52	8	25	17	—	89	54	M6×10	6.6	10.5	12.5	5.17	1.25
BNS 4040A	37.8	60.5	687	418	377	100	130	100	79.5	64	10	33	20	—	113	68	M6×10	9	16.5	20.7	16.1	2.51

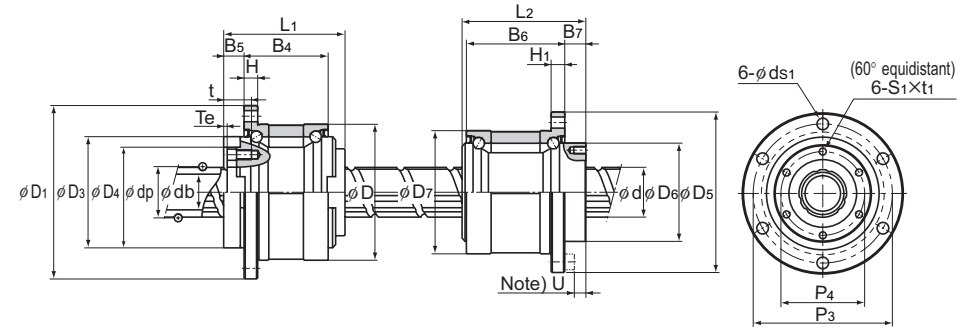
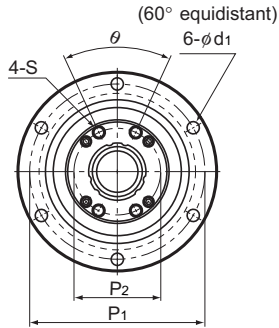
### Model number coding

**BNS2020A +500L**

Model number      Overall shaft length (in mm)



# Model BNS Heavy-load Type: Straight-curved Motion



Ball screw unit

Unit: mm

Model No.	Screw shaft outer diameter d	Screw shaft inner diameter db	Lead Ph	Ball screw dimensions																	Support bearing basic load rating		Nut inertial moment kg·cm <sup>2</sup>	Screw shaft inertial moment/mm J kg·cm <sup>2</sup> /mm	Nut mass kg	Shaft mass kg/m		
				Basic load rating		Ball center-to-center diameter dp	Thread minor diameter dc	Outer diameter D	Flange diameter D <sub>1</sub>	Overall length L <sub>1</sub>	D <sub>3</sub> h7	D <sub>4</sub> H7	H	B <sub>4</sub>	B <sub>5</sub>	T <sub>e</sub>	P <sub>1</sub>	P <sub>2</sub>	S	t	d <sub>1</sub>	θ°					Ca kN	C <sub>0a</sub> kN
				Ca kN	C <sub>0a</sub> kN																							
BNS 1616	16	11	16	3.9	7.2	16.65	13.7	52 <sup>0</sup> <sub>-0.007</sub>	68	43.5	40	32	5	27.5	9	2	60	25	M4	12	4.5	40	19.4	19.2	0.48	3.92×10 <sup>-4</sup>	0.38	0.8
BNS 2020	20	14	20	6.1	12.3	20.75	17.5	62 <sup>0</sup> <sub>-0.007</sub>	78	54	50	39	6	34	11	2	70	31	M5	16	4.5	40	26.8	29.3	1.44	9.37×10 <sup>-4</sup>	0.68	1.21
BNS 2525	25	18	25	9.1	19.3	26	22	72 <sup>0</sup> <sub>-0.007</sub>	92	65	58	47	8	43	12.5	3	81	38	M6	19	5.5	40	28.2	33.3	3.23	2.2×10 <sup>-3</sup>	1.1	1.79
BNS 3232	32	23	32	13	29.8	33.25	28.3	80 <sup>0</sup> <sub>-0.007</sub>	105	80	66	58	9	55	14	3	91	48	M6	19	6.6	40	30	39	6.74	5.92×10 <sup>-3</sup>	1.74	2.96
BNS 4040	40	29	40	21.4	49.7	41.75	35.2	110 <sup>0</sup> <sub>-0.008</sub>	140	98	90	73	11	68	16.5	3	123	61	M8	22	9	50	59.3	74.1	27.9	1.43×10 <sup>-2</sup>	3.95	4.51
BNS 5050	50	36	50	31.8	77.6	52.2	44.1	120 <sup>0</sup> <sub>-0.008</sub>	156	126	100	90	12	80	25	4	136	75	M10	28	11	50	62.2	83	58.2	3.52×10 <sup>-2</sup>	6.22	7.16

Ball spline

Unit: mm

Model No.	Ball spline dimensions																	Support bearing basic load rating		Nut inertial moment kg·cm <sup>2</sup>	Nut mass kg
	Basic load rating		Static permissible moment M <sub>A</sub> N-m	Basic torque rating		Outer diameter D <sub>7</sub>	Flange diameter D <sub>5</sub>	Overall length L <sub>2</sub>	D <sub>6</sub> h7	H <sub>1</sub>	B <sub>6</sub>	B <sub>7</sub>	P <sub>3</sub>	P <sub>4</sub>	S <sub>1</sub> ×t <sub>1</sub>	d <sub>s1</sub>	U	C kN	C <sub>0</sub> kN		
	C kN	C <sub>0</sub> kN		C <sub>T</sub> N-m	C <sub>OT</sub> N-m																
BNS 1616	7.1	12.6	67.6	31.4	34.3	52 <sup>0</sup> <sub>-0.007</sub>	68	50	39.5	5	37	10	60	32	M5×8	4.5	5	12.7	11.8	0.52	0.51
BNS 2020	10.2	17.8	118	56.8	55.8	56 <sup>0</sup> <sub>-0.007</sub>	72	63	43.5	6	48	12	64	36	M5×8	4.5	7	16.2	15.5	0.87	0.7
BNS 2525	15.2	25.8	210	105	103	62 <sup>0</sup> <sub>-0.007</sub>	78	71	53	6	55	13	70	45	M6×8	4.5	8	17.6	18	1.72	0.93
BNS 3232	20.5	34	290	180	157	80 <sup>0</sup> <sub>-0.007</sub>	105	80	65.5	9	60	17	91	55	M6×10	6.6	10	20.1	24	5.61	1.8
BNS 4040	37.8	60.5	687	418	377	100 <sup>0</sup> <sub>-0.008</sub>	130	100	79.5	11	74	23	113	68	M6×10	9	13	37.2	42.5	14.7	3.9
BNS 5050	60.9	94.5	1340	842	768	120 <sup>0</sup> <sub>-0.008</sub>	156	125	99.5	12	97	25	136	85	M10×15	11	13	41.6	54.1	62.5	6.7

Note) Dimension U indicates the length from the head of the hexagonal-socket-head type bolt to the ball screw nut end.

Model number coding

**BNS2525 +600L**

Model number    Overall shaft length (in mm)

