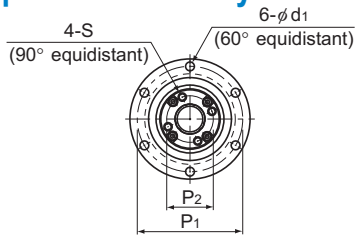
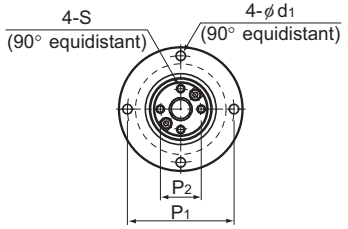
BNS-A Compact Type: Linear-Rotary Motion
No Preload

DN value	70,000



Ball screw unit (Models BNS 1616A to 4040A)



Ball screw unit (Models BNS 0812A and 1015A)

Ball screw unit

Model No.	Screw shaft outer diameter	Screw shaft inner diameter	Lead	Ball screw dimensions								
				Basic load rating		Ball center-to-center diameter	Thread minor diameter	Outer diameter	Flange diameter	Overall length	D_3	D_4
				Ca	C_0a			D				
	d	db	Ph	kN	kN	dp	dc	g6	D_1	L_1	h7	H7
BNS 0812A	8	—	12	1.1	1.8	8.4	6.6	32	44	28.5	22	19
BNS 1015A	10	—	15	1.7	2.7	10.5	8.3	36	48	34.5	26	23
BNS 1616A	16	11	16	3.9	7.2	16.65	13.7	48	64	40	36	32
BNS 2020A	20	14	20	6.1	12.3	20.75	17.5	56	72	48	43.5	39
BNS 2525A	25	18	25	9.1	19.3	26	21.9	66	86	58	52	47
BNS 3232A	32	23	32	13	29.8	33.25	28.3	78	103	72	63	58
BNS 4040A	40	29	40	21.4	49.7	41.75	35.2	100	130	88	79.5	73

Ball spline

Model No.	Ball spline dimensions									
	Basic load rating		Static permissible moment	Basic torque rating		Outer diameter	Flange diameter	Overall length	D_6	
	C	C_0	M_A	C_T	C_{0T}	D_7	D_5	L_2	h7	BE_1
	kN	kN	N·m	N·m	N·m	g6				
BNS 0812A	1.5	2.6	5.9	2	2.9	32	44	25	24	16
BNS 1015A	2.7	4.9	15.7	3.9	7.8	36	48	33	28	21
BNS 1616A	7.1	12.6	67.6	31.4	34.3	48	64	50	36	31
BNS 2020A	10.2	17.8	118	56.8	55.8	56	72	63	43.5	35
BNS 2525A	15.2	25.8	210	105	103	66	86	71	52	42
BNS 3232A	20.5	34	290	180	157	78	103	80	63	52
BNS 4040A	37.8	60.5	687	418	377	100	130	100	79.5	64

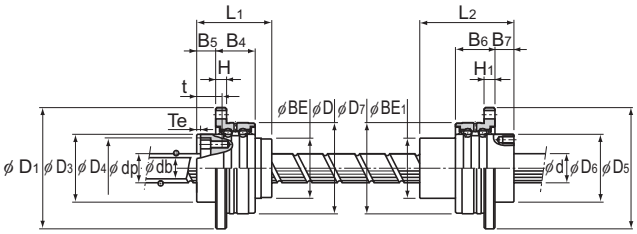
Notes: For K hollow shaft, please refer to the db dimension for the inner bore diameter of the shaft.
A solid shaft is also available upon request. See “Ball Spline” **A3-120** for details.

Model number coding

BNS2020A +500L C5

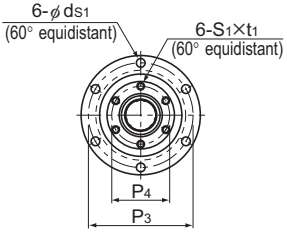
- BNS2020A: Model number
- +500L: Overall shaft length (in mm)
- C5: Accuracy symbol[1]

[1] See **A15-12**.

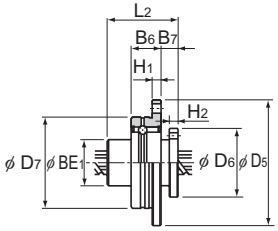


Ball screw unit (Models BNS 0812A to 4040A)

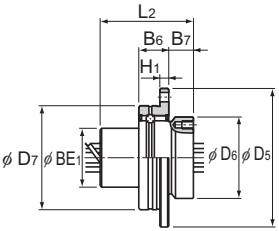
Ball spline (Models BNS 1616A to 4040A)



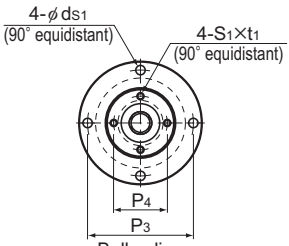
Ball spline (Models BNS 1616A to 4040A)



Ball spline (Model BNS 0812A)



Ball spline (Model BNS 1015A)



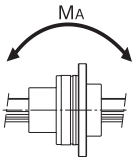
Ball spline (Models BNS 0812A and 1015A)

Unit: mm

BE	H	B_4	B_5	Te	P_1	P_2	S	t	d_1	Support bearing basic load rating Ca kN	Support bearing basic load rating C_0a kN	Nut inertial moment kg·m²	Screw shaft inertial moment kg·m²/mm	Nut mass kg	Shaft mass kg/m	Permissible rotational speed min⁻¹
19	3	10.5	7	1.5	38	14.5	M2.6	10	3.4	0.8	0.5	3.00×10^{-6}	3.16×10^{-9}	0.08	0.35	3,500
23	3	10.5	8	1.5	42	18	M3	11.5	3.4	0.9	0.7	8.00×10^{-6}	7.71×10^{-9}	0.15	0.52	3,500
32	6	21	10	2	56	25	M4	13.5	4.5	8.7	10.5	3.50×10^{-5}	3.92×10^{-8}	0.31	0.8	4,200
39	6	21	11	2.5	64	31	M5	16.5	4.5	9.7	13.4	8.50×10^{-5}	9.37×10^{-8}	0.54	1.21	3,370
47	7	25	13	3	75	38	M6	20	5.5	12.7	18.2	2.12×10^{-4}	2.20×10^{-7}	0.88	1.79	2,690
58	8	25	14	3	89	48	M6	21	6.6	13.6	22.3	5.42×10^{-4}	5.92×10^{-7}	1.39	2.96	2,100
73	10	33	16.5	3	113	61	M8	24.5	9	21.5	36.8	1.72×10^{-3}	1.43×10^{-6}	3.16	4.51	1,670

Unit: mm

H_1	B_6	B_7	H_2	P_3	P_4	$S_1\times t_1$	ds_1	Support bearing basic load rating C kN	Support bearing basic load rating C_0 kN	Nut inertial moment kg·m²	Nut mass kg
3	10.5	6	3	38	19	M2.6×3	3.4	0.69	0.24	3.00×10^{-6}	0.08
3	10.5	9	—	42	23	M3×4	3.4	0.77	0.3	8.00×10^{-6}	0.13
6	21	10	—	56	30	M4×6	4.5	6.7	6.4	4.40×10^{-5}	0.35
6	21	12	—	64	36	M5×8	4.5	7.4	7.8	9.90×10^{-5}	0.51
7	25	13	—	75	44	M5×8	5.5	9.7	10.6	2.20×10^{-4}	0.79
8	25	17	—	89	54	M6×10	6.6	10.5	12.5	5.17×10^{-4}	1.25
10	33	20	—	113	68	M6×10	9	16.5	20.7	1.61×10^{-3}	2.51



Options⇒A15-355