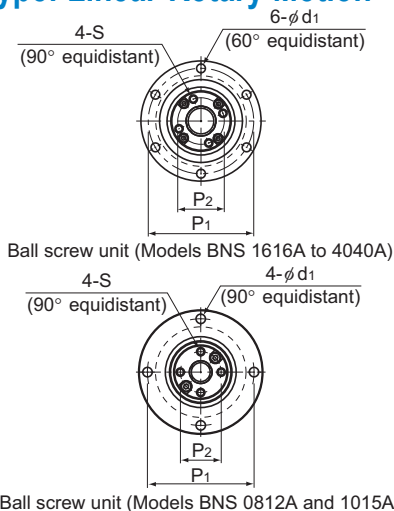


BNS-A Compact Type: Linear-Rotary Motion No Preload

DN value	70,000
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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
				C _a	C _{0a}							
	d	db	Ph	kN	kN	dp	dc	D	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 M _k N·m	Basic torque rating		Outer diameter	Flange diameter	Overall length	D ₆	BE ₁
	C	C ₀		C _T	C _{0T}					
	kN	kN		N·m	N·m	g6	D ₅	L ₂	h7	
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.

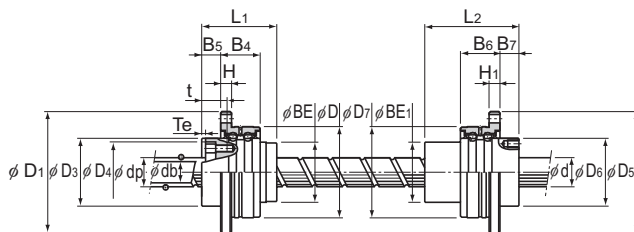
Model number coding

BNS2020A +500L C5

Model number Overall shaft length (in mm) Accuracy symbol¹

¹ See **A15-12**.

Rotary Nut Ball Screw

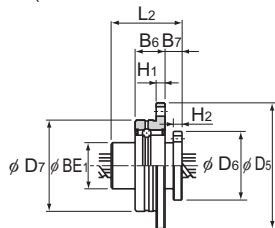


Ball screw unit

(Models BNS 0812A to 4040A)

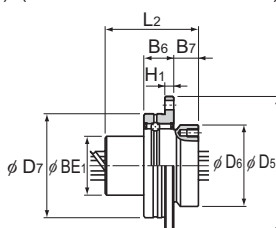
Ball spline

(Models BNS 1616A to 4040A)



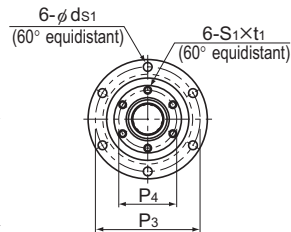
Ball spline

(Model BNS 0812A)



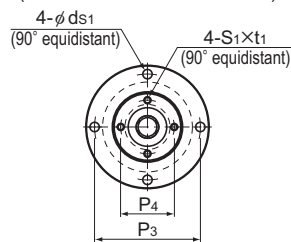
Ball spline

(Model BNS 1015A)



Ball spline

(Models BNS 1616A to 4040A)



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		Nut inertial moment	Screw shaft inertial moment	Nut mass	Shaft mass	Permissible rotational speed
											Ca	C _{0a}					
	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 ×t ₁	ds ₁	Support bearing basic load rating		Nut inertial moment	Nut mass
									C	C ₀		
	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

