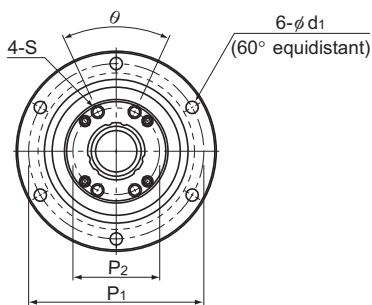


BNS Heavy Load Type: Linear-Rotary Motion No Preload

DN value	70,000
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Ball screw unit

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
				C _a	C _{0a}						
	d	db	Ph	kN	kN	dp	dc	D	D ₁	L ₁	h7
BNS 1616	16	11	16	3.9	7.2	16.65	13.7	52 ⁰ _{-0.007}	68	43.5	40
BNS 2020	20	14	20	6.1	12.3	20.75	17.5	62 ⁰ _{-0.007}	78	54	50
BNS 2525	25	18	25	9.1	19.3	26	21.9	72 ⁰ _{-0.007}	92	65	58
BNS 3232	32	23	32	13	29.8	33.25	28.3	80 ⁰ _{-0.007}	105	80	66
BNS 4040	40	29	40	21.4	49.7	41.75	35.2	110 ⁰ _{-0.008}	140	98	90
BNS 5050	50	36	50	31.8	77.6	52.2	44.1	120 ⁰ _{-0.008}	156	126	100

Ball spline

Model No.	Ball spline dimensions							
	Basic load rating		Static permissible moment	Basic torque rating		Outer diameter	Flange diameter	Overall length
	C	C ₀		C _T	C _{0T}			
	kN	kN	M _A N·m	N·m	N·m	D ₇	D ₅	L ₂
BNS 1616	7.1	12.6	67.6	31.4	34.3	52 ⁰ _{-0.007}	68	50
BNS 2020	10.2	17.8	118	56.8	55.8	56 ⁰ _{-0.007}	72	63
BNS 2525	15.2	25.8	210	105	103	62 ⁰ _{-0.007}	78	71
BNS 3232	20.5	34	290	180	157	80 ⁰ _{-0.007}	105	80
BNS 4040	37.8	60.5	687	418	377	100 ⁰ _{-0.008}	130	100
BNS 5050	60.9	94.5	1,340	842	768	120 ⁰ _{-0.008}	156	125

¹ Dimension U indicates the length from the head of the hexagonal-socket-head type bolt to the ball screw nut end.

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.

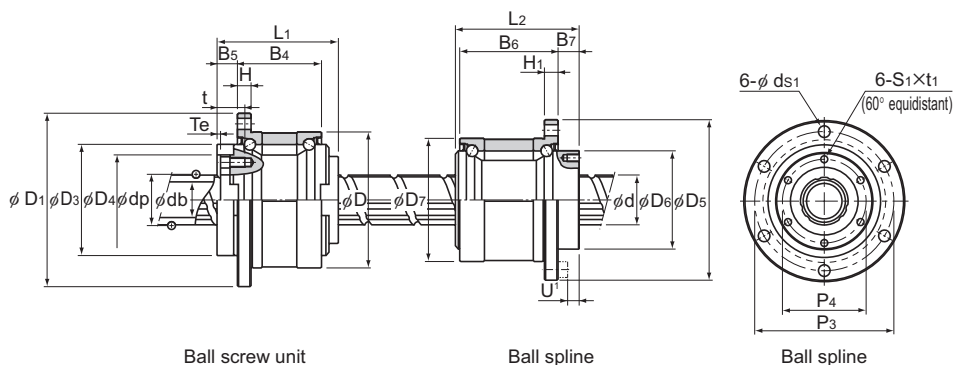
Model number coding

BNS2525 +600L C5

Model number Overall shaft length (in mm) Accuracy symbol¹

¹ See **A15-12**.

Rotary Nut Ball Screw



Unit: mm

	D ₄	H	B ₄	B ₅	T _e	P ₁	P ₂	S	t	d ₁	θ°	Support bearing basic load rating		Nut inertial moment	Screw shaft inertial moment	Nut mass	Shaft mass	Permissible rotational speed
												C _a	C _a a					
	H7	H	B ₄	B ₅	T _e	P ₁	P ₂	S	t	d ₁	θ°	kN	kN	kg·m ²	kg·m ² /mm	kg	kg/m	min ⁻¹
	32	5	27.5	9	2	60	25	M4	12	4.5	40	19.4	19.2	4.80×10 ⁻⁵	3.92×10 ⁻⁸	0.38	0.8	4,200
	39	6	34	11	2	70	31	M5	16	4.5	40	26.8	29.3	1.44×10 ⁻⁴	9.37×10 ⁻⁸	0.68	1.21	3,370
	47	8	43	12.5	3	81	38	M6	19	5.5	40	28.2	33.3	3.23×10 ⁻⁴	2.20×10 ⁻⁷	1.1	1.79	2,690
	58	9	55	14	3	91	48	M6	19	6.6	40	30	39	6.74×10 ⁻⁴	5.92×10 ⁻⁷	1.74	2.96	2,100
	73	11	68	16.5	3	123	61	M8	22	9	50	59.3	74.1	2.79×10 ⁻³	1.43×10 ⁻⁶	3.95	4.51	1,670
	90	12	80	25	4	136	75	M10	28	11	50	62.2	83	5.82×10 ⁻³	3.52×10 ⁻⁶	6.22	7.16	1,340

Unit: mm

	D ₆	H ₁	B ₆	B ₇	P ₃	P ₄	S ₁ ×t ₁	ds ₁	U ¹	Support bearing basic load rating		Nut inertial moment	Nut mass
										C	C ₀		
	h7	H ₁	B ₆	B ₇	P ₃	P ₄	S ₁ ×t ₁	ds ₁	U ¹	kN	kN	kg·m ²	kg
	39.5	5	37	10	60	32	M5×8	4.5	5	12.7	11.8	5.20×10 ⁻⁵	0.51
	43.5	6	48	12	64	36	M5×8	4.5	7	16.3	15.5	8.70×10 ⁻⁵	0.7
	53	6	55	13	70	45	M6×8	4.5	8	17.6	18	1.72×10 ⁻⁴	0.93
	65.5	9	60	17	91	55	M6×10	6.6	10	20.1	24	5.61×10 ⁻⁴	1.8
	79.5	11	74	23	113	68	M6×10	9	13	37.2	42.5	1.47×10 ⁻³	3.9
	99.5	12	97	25	136	85	M10×15	11	13	41.7	54.1	6.25×10 ⁻³	6.7

