

Ball Splines

Both Ends Tapped

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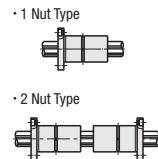


RoHS10

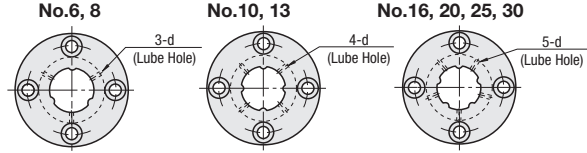
Both Ends Tapped	Spline Shafts \square EN 1.3505 Equiv. Nut \square EN 1.7242 Equiv. \square Hardness: 58HRC-		Spline Shaft, Nut \square Material: EN 1.4125 Equiv. \square Hardness: 58HRC-
	Nut 1 pc.	Nut 2 pcs.	Nut 1 pc.
With Round Flange Nut	BSHM	BSH2M	BASBFS
With Compact Flange Nut	BSHN	BSH2N	-
With Straight Nut	BSHS	BSH2S	-

When selecting Overall Length (L Dimension), check the Annealing Range. \square P.340
Accuracy \square P.339 For the included nut, please select a shape from below.

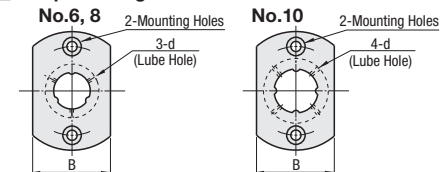
Flanged Nut Orientation



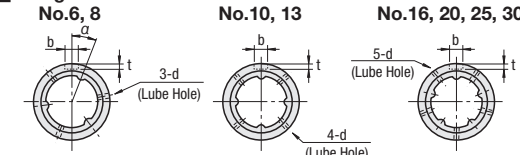
Round Flange Nuts



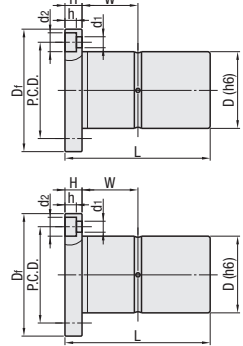
Compact Flange Nuts



Straight Nuts

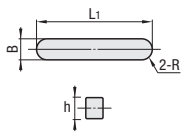


* Please refrain from machining the nuts as it may have adverse effects on the accuracy.



* The key is press-fit into the nut.

Dimension of Included Key



Spline Shafts

Part Number	Type	L 1mm Increment		M (Coarse) / N (Coarse) Selection					D	Mass (kg/m)	
		No.	1-Nut Type	2-Nut Type							
BSHM BSHN BSHS BSH2M BSH2N BSH2S BASBFS	*6	60-400(190)	60-400	3						6	0.23
	*8	60-400(190)	60-400	3	4				8	0.39	
	*10	60-600(390)	90-600	3	4	5				10.4	0.65
	*13	60-600(390)	100-600	4	5	6				13.4	1.11
	*16	70-600(390)	110-600	4	5	6	8			16.6	1.65
	20	80-700	130-700		5	6	8	10		20.6	2.57
	25	90-900	150-900		5	6	8	10	12	25.8	4.04
	30	100-1150	170-1150		6	8	10	12	16	30.8	5.85

For BASBFS, only * marked sizes are available, and the Max. L dimension is in ().

For BSHN and BSH2N, only No. 6, 8 and 10 are available.

Round Flange Nuts, Compact Flange Nuts

No.	D(h6)	L	Df	H	P.C.D.	d1	d2	h	W	d	B	Basic Rated Torque		Basic Load Rating		Allowable Static Moment		Mass (kg)
												Dynamic C _i (N·m)	Static C _o (N·m)	Dynamic C _i (kN)	Static C _o (kN)	M _{o1} (N·m)	M _{o2} (N·m)	
6	14	25	30	6	22	3.5	6	3.1	6.5	18	21	3.8	7	1.2	2.1	5	36	0.03
8	16	32	32	6	24	4.5	8	4.4(5.3)	14(8.5)	1.5	25	4.8	8.7	1.2	2.1	5	36	0.04
10	21	40(33)	42(41)	6(8)	32(30)	4.5	8	4.4	18		25	19(11)	34(21)	3.8(2.4)	6.9(4.3)	26(15)	181(102)	0.09
13	24	44(36)	44(45)	7(8)	33(34)	4.5	8	4.4	15(10)		25	28(20)	52(37)	4.6(3.3)	8.3(5.9)	36(22)	251(148)	0.11
16	31	50	51	7	40	5.5	9.5	4.4	18		2	51	93	6.2	11.1	56	386	0.2
20	35	63	58	9	45	5.5	9.5	5.4	22.5		2	85	154	8.5	15.3	83	611	0.3
25	42	71	65	9	52	5.5	9.5	5.4	26.5		2	193	348	15.4	27.7	173	1248	0.4
30	47	80	75	10	60	6.6	11	6.5	30	2.5	2	272	490	18.5	33.3	212	1581	0.57

Dimensions in () are for EN 1.4125 Equiv. Allowable static moment Mo1 is a value measured when a single nut is used, and Mo2 is a value measured when two nuts are used.

Straight Nuts

No.	D (h6)	L	b	Tolerance	t	d	α	Basic Rated Torque		Basic Load Rating		Allowable Static Moment		Mass (kg)	Dimensions of Key (Included)					
								Dynamic C _i (N·m)	Static C _o (N·m)	Dynamic C _i (kN)	Static C _o (kN)	M _{o1} (N·m)	M _{o2} (N·m)		M _{o1} (kN)	M _{o2} (kN)	B	Tolerance	h	Tolerance
6	14	25	2.5	+0.014	1.2	1.5	15°	3.8	7	1.2	2.1	5	36	0.012	2.5	+0.016	2.5	0	10.5	1.25
8	16	32	3	0	1.5	1.5	25°	4.8	8.7	1.2	2.1	5	36	0.013	2.5	+0.016	2.5	0	10.5	1.25
10	21	40(33)	3	0	1.5	1.5	-	19(11)	34(21)	3.8(2.4)	6.9(4.3)	26(15)	181(102)	0.06	3	+0.016	3	-0.025	17(14)	1.5
13	24	44(36)	3	0	1.5	1.5	-	28(20)	52(37)	4.6(3.3)	8.3(5.9)	36(22)	251(148)	0.07	3	+0.016	3	-0.025	17(14)	1.5
16	31	50	3.5	0	2	2	-	51	93	6.2	11.1	56	386	0.15	3.5	+0.024	3.5	0	18	1.75
20	35	63	4	0	2	2	-	85	154	8.5	15.3	83	611	0.2	4	+0.024	4	0	29	2
25	42	71	4	0	2.5	2	-	193	348	15.4	27.7	173	1248	0.29	4	+0.012	4	-0.030	33	2
30	47	80	4	0	2.5	2	-	272	490	18.5	33.3	212	1581	0.37	4	+0.012	4	-0.030	42	2

Dimensions in () are for EN 1.4125 Equiv. Allowable static moment Mo1 is a value measured when a single nut is used, and Mo2 is a value measured when two nuts are used.

Part Number	Type	No.	Unit Price										
			Min. L -150	L151 -200	L201 -300	L301 -400	L401 -500	L501 -600	L601 -700	L701 -800	L801 -900	L901 -1000	L1001 -1150
BSHM BSH2M	Price of BSH2M = BSHM + Additional price shown below	6	-	-	-	-	-	-	-	-	-	-	-
		8	-	-	-	-	-	-	-	-	-	-	-
		10	-	-	-	-	-	-	-	-	-	-	-
		13	-	-	-	-	-	-	-	-	-	-	-
		16	-	-	-	-	-	-	-	-	-	-	-
		20	-	-	-	-	-	-	-	-	-	-	-
BSHN BSH2N	Price of BSH2N = BSHN + Additional price shown below	6	-	-	-	-	-	-	-	-	-	-	
		8	-	-	-	-	-	-	-	-	-	-	
		10	-	-	-	-	-	-	-	-	-	-	
		13	-	-	-	-	-	-	-	-	-	-	
		16	-	-	-	-	-	-	-	-	-	-	
		20	-	-	-	-	-	-	-	-	-	-	
BSHS BSH2S	Price of BSH2S = BSHS + Additional price shown below	6	-	-	-	-	-	-	-	-	-	-	
		8	-	-	-	-	-	-	-	-	-	-	
		10	-	-	-	-	-	-	-	-	-	-	
		13	-	-	-	-	-	-	-	-	-	-	
		16	-	-	-	-	-	-	-	-	-	-	
		20	-	-	-	-	-	-	-	-	-	-	

Part Number	Type	No.	Unit Price					
			Min. L -150	L151 -200	L201 -250	L251 -300	L301 -350	L351 -390
BASBFS	Price of BASBFS = BSHM + Additional price shown below	6	-	-	-	-	-	-
		8	-	-	-	-	-	-
		10	-	-	-	-	-	-
		13	-	-	-	-	-	-
		16	-	-	-	-	-	-
		20	-	-	-	-	-	-

No.	Additional Price for 2-Nut Type		
	Round Flange Nuts	Compact Flange Nuts	Straight Nuts
6	-	-	-
8	-	-	-
10	-	-	-
13	-	-	-
16	-	-	-
20	-	-	-
25	-	-	-
30	-	-	-

Alterations \square Part Number - L - M - N - (SC, FC)
BSHN10 - 270 - M5 - N5 - SC15

Ordering Example
Part Number - L - M - N
BSHS8 - 270 - M4 - N4
BSHS8G - 270 - M4 - N4
BSHS8L - 270 - M4 - N4

Alternative grease types available.
For Days to Ship, Price and Performance, see \square P.340

Alterations	Wrench Flats	Set Screw Flat
Code	SC	FC
Spec.	Adds a wrench flat. SC=1mm Increment SC+L1≤L	Adds a set screw flat. Ordering Code FC10-A8 FC, A=1mm Increment FC≤3xD 1.5xD<FC >> FC≤L/2 A=0 or A≥2

When selecting multiple alteration additions, more than 2 mm is needed between each feature to be added.

Cautions for Ball Spline Assembly

- Check Assembly Position**
Match Mark No.'s are entered on nuts and spline shafts (see diagram on right).
When re-assembling, match the character orientations of Match Mark No.'s, and positional relationship.
- Tolerance for Mating Bores**
An H7 tolerance is recommended for mating bores for the spline nuts.