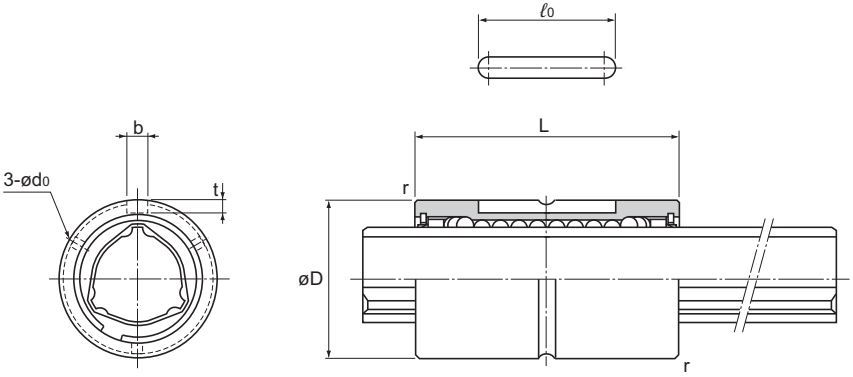
Model LBST (Heavy-Load Type)



Model No.	Spline nut dimensions								
	Outer diameter		Length		Keyway dimensions			r	Lubrication hole
	D	Tolerance	L	Tolerance	b H8	t +0.1 0	ℓ0		d0
○● LBST 20	30	0 −0.016	60	0 −0.2	4	2.5	26	0.5	2
○● LBST 25	37		70	0 −0.3	5	3	33	0.5	2
○● LBST 30	45		80		7	4	41	1	3
○● LBST 40	60	0 −0.019	100		10	4.5	55	1	3
○● LBST 50	75		112		15	5	60	1.5	4
○ LBST 60	90	0 −0.022	127		18	6	68	1.5	4
○● LBST 70	100		135		18	6	68	2	4
○● LBST 85	120		155	0 −0.4	20	7	80	2.5	5
○● LBST 100	140	0 −0.025	175		28	9	93	3	5
○ LBST 120	160		200	0 −0.5	28	9	123	3.5	6
○ LBST 150	205	0 −0.029	250		32	10	157	3.5	6

○: Indicates model numbers able to handle high temperatures (with metal retainers, the operating temperature is up to 100°C).

(Example) LBST25 A CM+400L H
└ High temperature symbol

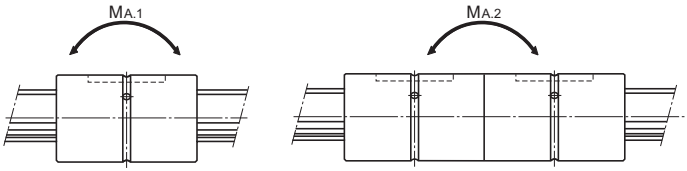
●: Indicates model numbers for which felt seals are available (see A3-128).
A felt seal cannot be attached to ball spline models using metal retainers.

Model number coding

2 LBST50 UU CM +800L H K

- 2: Number of spline nuts on one shaft (no symbol for one nut)
- LBST50: Model No.
- UU: Contamination protection accessory symbol [1]
- CM: Symbol for clearance in the rotational direction [2]
- +800L: Overall spline shaft length[5] (in mm)
- H: Accuracy symbol [3]
- K: Symbol for spline shaft[4]

[1] See A3-128. [2] See A3-32. [3] See A3-37. [4] See A3-71. [5] See A3-123.



Unit: mm

	Basic torque rating		Basic load rating (radial)		Static permissible moment		Mass	
	C_T N·m	C_{0T} N·m	C kN	C_0 kN	$M_{A.1}$[1] N·m	$M_{A.2}$[2] N·m	Spline nut kg	Spline shaft kg/m
	90.2	213	9.4	20.1	103	632	0.17	1.8
	176	381	14.9	28.7	171	1,060	0.29	2.7
	312	657	22.5	41.4	295	1,740	0.5	3.8
	696	1,420	37.1	66.9	586	3,540	1.1	6.8
	1,290	2,500	55.1	94.1	941	5,610	1.9	10.6
	1,870	3,830	66.2	121	1,300	8,280	3.3	15.6
	3,000	6,090	90.8	164	2,080	11,800	3.8	21.3
	4,740	9,550	119	213	3,180	17,300	6.1	32
	6,460	14,400	137	271	4,410	25,400	10.4	45
	8,380	19,400	148	306	5,490	32,400	12.9	69.5
	13,900	32,200	196	405	8,060	55,400	28	116.6

[1] $M_{A.1}$ indicates the permissible moment value in the axial direction when a single spline nut is used, as shown in the figure above.
[2] $M_{A.2}$ indicates the permissible moment value in the axial direction when two spline nuts in close contact with each other are used, as shown in the figure above.
Note: For details on the maximum lengths of ball spline shafts by accuracy, please see A3-123.

Options⇒A3-128

Accessories

Ball spline models LBS and LBST are provided with a standard key as indicated in Table 6.

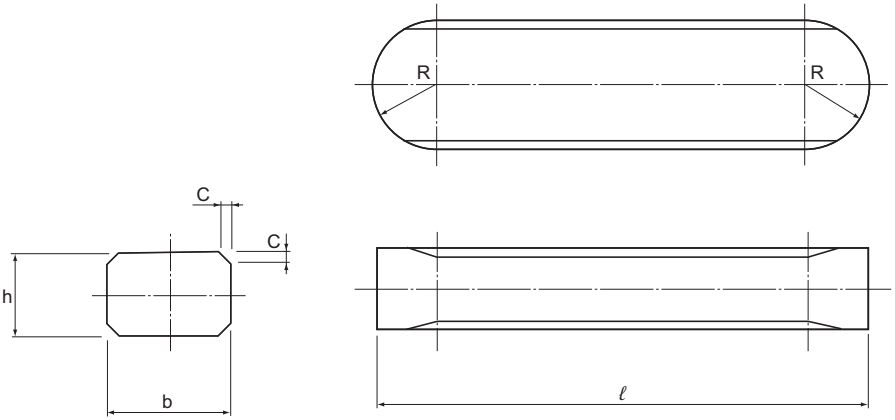


Table 6: Standard Keys for Models LBS and LBST

Unit: mm

Nominal shaft diameter	Width		Height		Length		R	C
	b	Tolerance (p7)	h	Tolerance (h9)	ℓ	Tolerance (h12)		
LBS 15	3.5	+0.024 +0.012	3.5	0 –0.030	20	0 –0.210	1.75	0.5
LBS 20 LBST 20	4		4		26		2	
LBS 25 LBST 25	5		5		33	0 –0.250	2.5	
LBS 30 LBST 30	7	+0.030 +0.015	7	0 –0.036	41		3.5	
LBS 40 LBST 40	10		8		55	0 –0.300	5	0.8
LBS 50 LBST 50	15	+0.036 +0.018	10		60		7.5	
LBST 60 LBS 70 LBST 70	18		12	0 –0.043	68		9	1.2
LBS 85 LBST 85	20	+0.043 +0.022	13		80	0 –0.350	14	
LBS 100 LBST 100	28		18		93	0 –0.400	14	
LBST 120	28		18		123		14	
LBST 150	32	+0.051 +0.026	20	0 –0.052	157		16	2