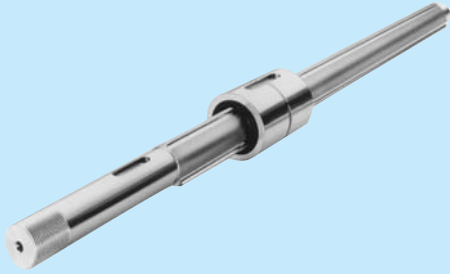
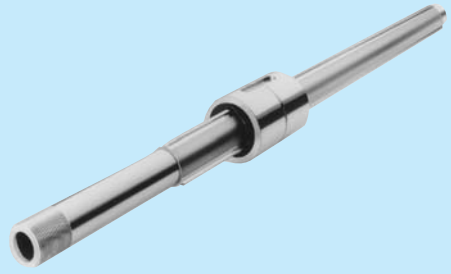


Precision Solid Spline Shaft (standard type)



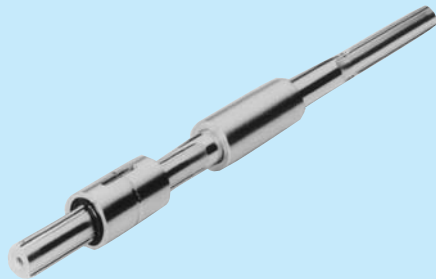
The spline shaft is formed by cold drawing, and the raceways are cut into the shaft to a high degree of precision. A spline nut is attached to the resulting spline shaft.

Hollow Spline Shaft (type K)



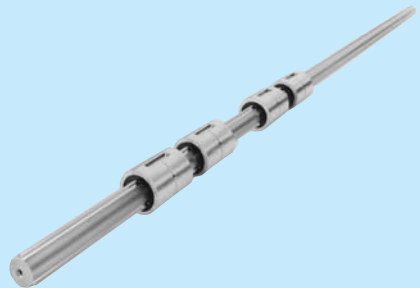
This type is made hollow through cold drawing, to enable it to accommodate pipes and wires and vent air, or to reduce its weight.

Special Spline Shaft



A shaft with a greater diameter at its ends or mid-point can be produced upon request, by machining it to the required spline shape.

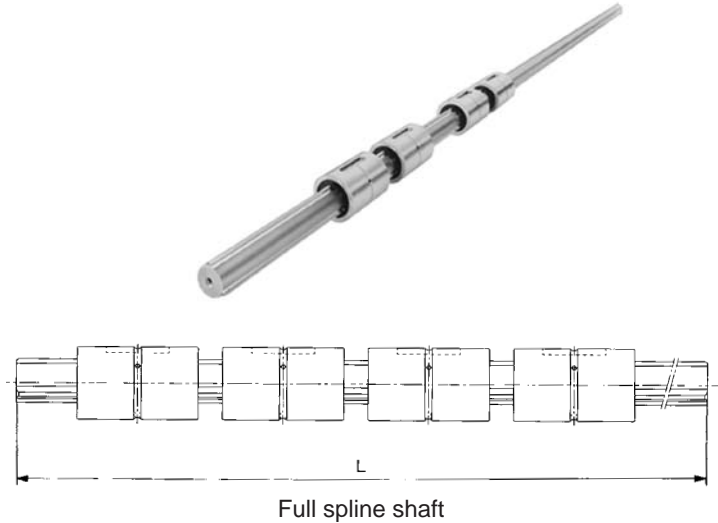
Full Spline (standard off-the-shelf item)



Full Spline Type LBS features more than one spline nut attached to a long, straight shaft. The spline-shaft length and the number of spline nuts can be changed freely as required through reworking.

Full Spline Type LBS (standard off-the-shelf item)

This type has more than one spline nut attached to a long, straight shaft. The spline-shaft length and the number of spline nuts can be changed freely as required, through reworking. For single-spline-nut use with a short spline-shaft length, a number of spline shafts can be cut from this product. Moreover, the length of each shaft to be cut can be freely determined. Type LBS is therefore highly versatile. Only the normal accuracy and clearance, however, are available with this type.



Full spline shaft

Unit: mm

Model No.	Overall length L	Number of spline nuts
LBS 15	1500	5
LBS 20	1800	6
LBS 25	2500	6
LBS 30	3000	6
LBS 40	3000	4
LBS 50	3000	4

Notes:

- Flanged type LBF is also available.
- For model-number coding, see page B-56.

Reworking spline-shaft ends

The spline shafts of this type are induction-hardened on the surface over their entire length. To rework a shaft, follow the procedures specified below.

1. Using a cutting grinding wheel or the like, cut a shaft to the desired length.
2. Using a burner or the like, anneal a shaft end portion to be reworked (cool the remaining portion during annealing whenever possible).
3. Using the spline outer diameter (crest) as reference (i.e., chucking the shaft on the crests), rough and finish the subject portion with a lathe. When the subject portion is long and grinding is required to perform finishing, provide center holes.
4. If the amount of working that can be performed is limited, it is recommended that the spline-shaft crests be roughed, and then finished with a cylindrical grinding machine.