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Kerk® SS / SZ Series Spline Shafts

The Kerk® Spline Shaft (SS/SZ) series spline shaft system has been designed for light to moderate load applications, where low cost, low friction, and long life are primary design considerations.

Kerk Spline Shafts provide anti-rotation for one axis motion or a drive mechanism with rotation for two axes of motion. They are excellent alternatives for applications where hex shafts, square shafts and high-cost ball splines are typically used.

The assembly consists of a stainless steel spline shaft treated with Haydon Kerk Motion Solutions, Inc. proprietary low friction Kerkote® TFE coating, mated with a Kerkite® composite polymer bushing. The bushing is supplied with an integral brass collar to facilitate various mounting configurations without nut distortion.

Standard shaft straightness is .003-in (.08mm/30cm) per foot. Typical radial and torsional clearance between shaft and bushing for a basic assembly (SSA) is .002-in to .003-in (.05-.08mm). An anti-backlash assembly (SZA) is available for applications requiring minimum torsional play.

As with other Kerk® assemblies, special bushing configurations and end machining configurations are available upon request. Aluminum or carbon steel spline shafts are also available upon request.

Identifying the Kerk® Spline Shafts and Guide Rails part number codes

SPLINE SHAFTS AND GUIDE RAILS

SZ	A	T	04	1	K	- 08 -	XXX
Prefix	Nut Style	Mounting	Rail Diameter	Number of Bushings per Rail	Coating	Length in Inches (Rounded up)	Unique Identifier
SS = Spline Shaft SZ = Anti-Backlash Spline Shaft GR = Guide Rail	A = Assembly B = Bushing only S = Shaft only	T = Threaded (for Spline Shafts only) G = Snap ring groove (for Guide Rails only) P = Plain (no features) S = Shaft only X = Custom	02 = 1/8-in 04 = 1/4-in 06 = 3/8-in 08 = 1/2-in 12 = 3/4-in	0 1 2 3 4 5 Use "0" for Shaft only and "1" if Bushing only	S = Uncoated K = Kerkote® B = Black Ice™ N = Bushing only	06 = 6-in 08 = 8-in 00 = Bushing only Example: 06 = 6-in 08 = 8-in 00 = Bushing only	Proprietary suffix assigned to a specific customer application. The identifier can apply to either a standard or custom part.

NOTE: Dashes must be included in Part Number (-) as shown above. For assistance or order entry, call our engineering team at 603 213 6290.

EXAMPLES:

SZAT041K-12-XXXX = Spline shaft with anti-backlash, shaft and threaded bushing assembly, 1/4-in shaft, 1 bushing per rail, Kerkote® coating, 12-in length, with no special features added.

GRBPO41N-00-XXXX = Guide rail, plain bushing only, 1/4-in shaft, with no special features added.

SS Series Spline Shafts

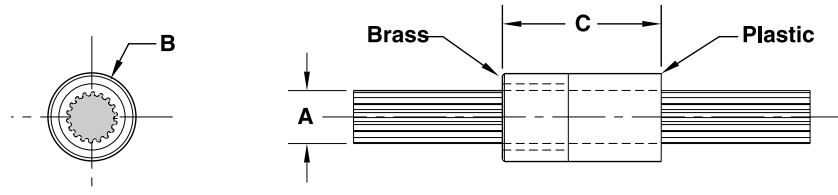
Rail Diameter Code	Shaft	Root Diameter	Tube I.D.	Bushing Diameter	Bushing Length	Thread	Thread Length	Equivalent Diameter**	
	A			B	C	M	N	inch (mm)	
	in ± .002 (mm ± 0.05)	in ± .002 (mm ± 0.05)	in ± .002 (mm ± 0.05)	in ± .001 (mm ± 0.025)	in ± .01 (mm ± 0.25)		in ± .002 (mm ± 0.05)		
SS/SZ	02	0.125 (3.18)	0.095 (2.41)	NA	0.375 (9.53)	0.500 (12.70)	3/8-24	0.250 (6.35)	0.110 (2.79)
	04	0.250 (6.35)	0.202 (5.13)	NA	0.500 (12.70)	0.75 (19.1)	7/16-20	0.250 (6.35)	0.226 (5.74)
	06	0.375 (9.53)	0.306 (7.77)	NA	0.625 (15.88)	1.00 (25.4)	9/16-20	0.375 (9.53)	0.341 (8.65)
	08	0.500 (12.70)	0.419 (10.64)	NA	0.813 (20.65)	1.50 (38.1)	3/4-20	0.500 (12.70)	0.458 (11.63)
	12	0.750 (19.05)	0.630 (16.00)	NA	1.125 (28.58)	2.25 (57.2)	1-16	0.750 (19.05)	0.690 (17.53)

Maximum Twist:
3°/ft about Spline Shaft axis

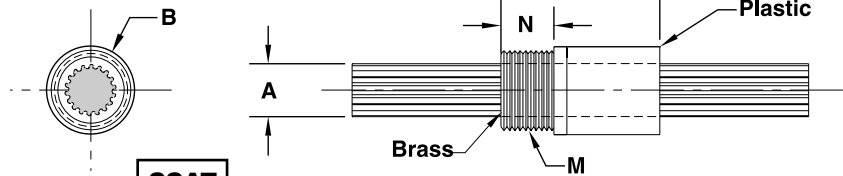
Torsional Clearance (SSA):
3° Bushing to Shaft

Spline Shaft stiffness may be modeled as a round rod with diameters given.

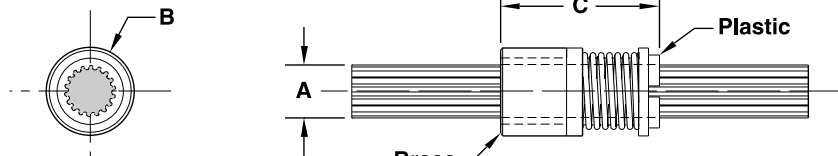
0.125-in rail size only available in SSAP and SSAT styles.



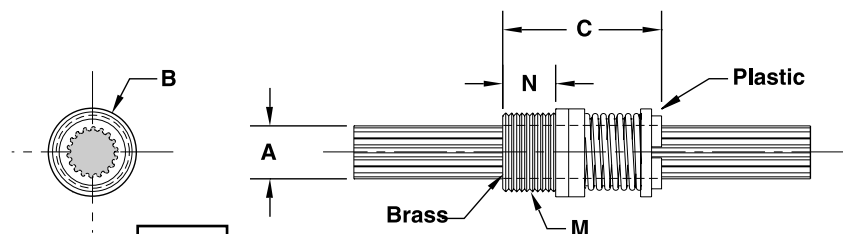
SSAP



SSAT



SZAP



SZAT

Other Motion Tech Products



Precision in the Extreme



Other Motion Tech Products



KOLLMORGEN



Precision in the Extreme



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