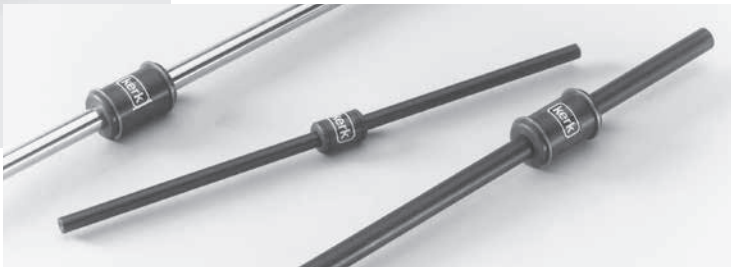
SS / SZ Series: Spline Shafts

GR Series: Linear Guide Rails and Bushings



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

SZ	A	T	04	1	K	–	08	–	XXX

Prefix

SS = Spline Shaft
SZ = Anti-Backlash Spline Shaft

GR = Guide Rail

Nut Style

A = Assembly
B = Bushing only
S = Shaft only

Mounting

T = Threaded *(for **Spline Shafts** only)*
G = Snap ring groove *(for **Guide Rails** only)*
P = Plain (no features)
S = Shaft only
X = Custom

Rail Diameter

02 = 1/8-in
04 = 1/4-in
06 = 3/8-in
08 = 1/2-in
12 = 3/4-in

Number of Bushings per Rail

0
1
2
3
4
5

Use "0" for Shaft only and "1" if Bushing only

Coating

S = Uncoated
K = Kerkote®
B = Black Ice™
N = Bushing only

Length in Inches *(Rounded up)*

Example:
06 = 6-in
08 = 8-in

00 = Bushing only

Unique Identifier

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.

GRBP041N-00-XXXX = Guide rail, plain bushing only, 1/4-in shaft, with no special features added.

SS Series Spline Shafts

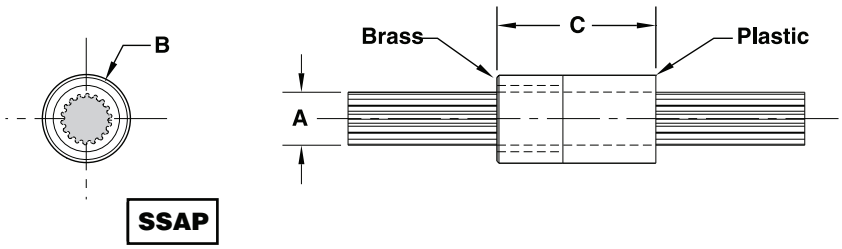
	Rail Diameter Code	Shaft A in ± .002 (mm ± 0.05)	Root Diameter in ± .002 (mm ± 0.05)	Tube I.D. in ± .002 (mm ± 0.05)	Bushing Diameter B in ± .001 (mm ± 0.025)	Bushing Length C in ± .01 (mm ± 0.25)	Thread M	Thread Length N in ± .002 (mm ± 0.05)	Equivalent Diameter** inch (mm)
SS/SZ	02	0.125 (3.18)	0.095 (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)

MaximumTwist:
3°/ft about Spline Shaft axis

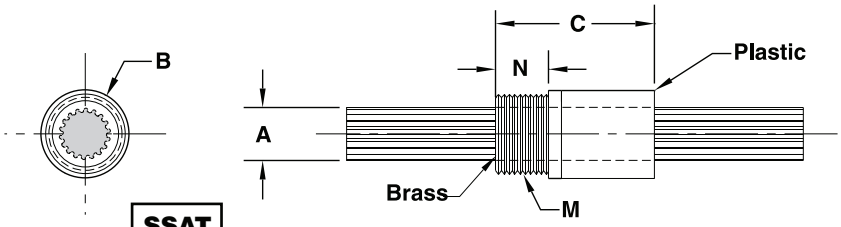
Torsional Clearance (SSA):
3° Bushing to Shaft

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

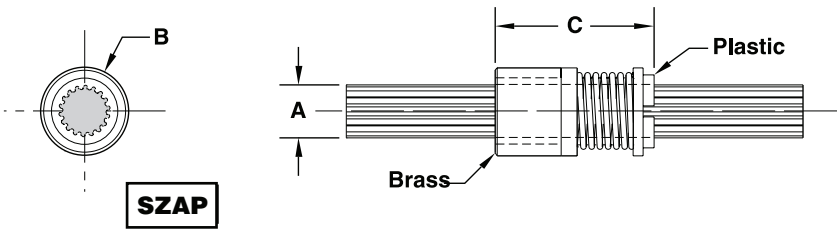
0.125-in rail size only available in SSAP and SSAT styles.



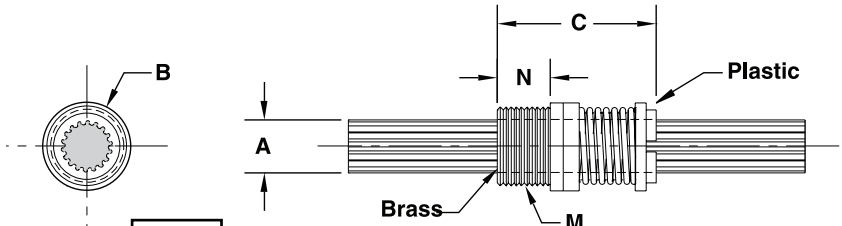
SSAP



SSAT



SZAP



SZAT