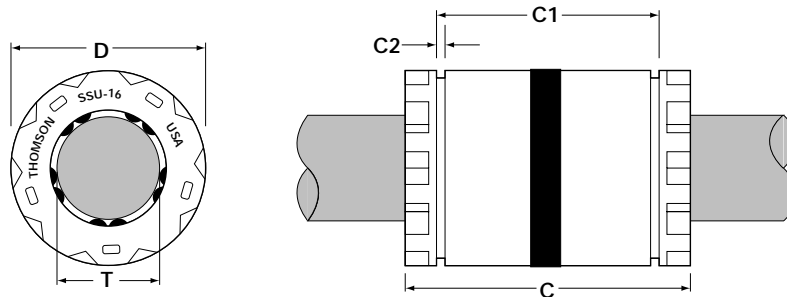


# Super Smart Ball Bushing™ Bearings

(Closed Type) for End-Supported Applications



Super Smart Ball Bushing™ (Closed Type) with Two Integral Wipers								
(Dimensions in inches)								
Catalog Number	Nominal Diameter	Working Bore Diameter T	Length C	C1	C2 Min.	Number of Ball Circuits	Ball Bushing Bearing Mass lb	Dynamic Load Capacity lbf <sup>Δ</sup>
TSS6U-8-WW	.500	.5000/.4995	1.250/1.230	1.032/1.012	.050	10	.07	265
TSSU-10-WW	.625	.6250/.6245	1.500/1.480	1.125/1.095	.055		.12	620
TSSU-12-WW	.750	.7500/.7495	1.625/1.605	1.285/1.255	.055		.16	1130
TSSU-16-WW	1.000	1.0000/.9995	2.250/2.230	1.901/1.871	.068		.29	1900
TSSU-20-WW	1.250	1.2500/1.2494	2.625/2.600	2.031/1.991	.068		.52	2350
TSSU-24-WW	1.500	1.5000/1.4994	3.000/2.970	2.442/2.402	.086		.99	3880

Catalog Number	Recommended Housing Bore		Ball Bushing™ Bearing/60 Case™ LinearRace Fit Up	
	Fixed D	Adjustable D	Fixed Diameter Housing*	Adjustable Diameter Housing* (Before Adjustment)
TSS6U-8-WW	.8775/.8750	.8760/.8750	.0015C/.0000	.002C/.0000
TSSU-10-WW	1.1255/1.1250	1.1260/1.1250		
TSSU-12-WW	1.2505/1.2500	1.2510/1.2500		
TSSU-16-WW	1.5630/1.5625	1.5635/1.5625		
TSSU-20-WW	2.0008/2.0000	2.0010/2.0000	.0018C/.0001P	.002C/.0001P
TSSU-24-WW	2.3760/2.3750	2.3760/2.3750	.0021C/.0000	.0021C/.0000

\*P=Preload, C=Clearance

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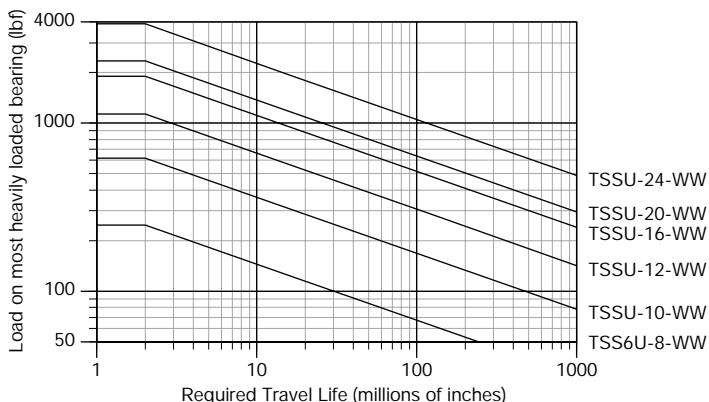
<sup>Δ</sup>See the chart on the bottom half of the next page.

**NOTE:** Catalog number is for a standard item.  
 For other options, add: **CR** Corrosion-Resistant, **NB** Nylon Balls, **CM** Ceramic Balls or **DP** Dry-Packed to end of catalog number.



# Super Smart Ball Bushing™ Bearings (Closed Type) for End-Supported Applications

Load/Life Graph (Lines indicate limiting load for given BALL BUSHING Bearing)



### Determining BALL BUSHING Bearing Size

To determine the proper BALL BUSHING bearing size, enter the chart with the maximum load of the most heavily loaded bearing and the required travel life. Mark where the two lines intersect. All BALL BUSHING bearing sizes that pass through or above and to the right of this point may be suitable for this application.

**Note: For the purpose of using this chart:**

$$\text{Load on Most Heavily Loaded Bearing} = \frac{\text{Maximum Applied Load}}{K_0}$$

where:

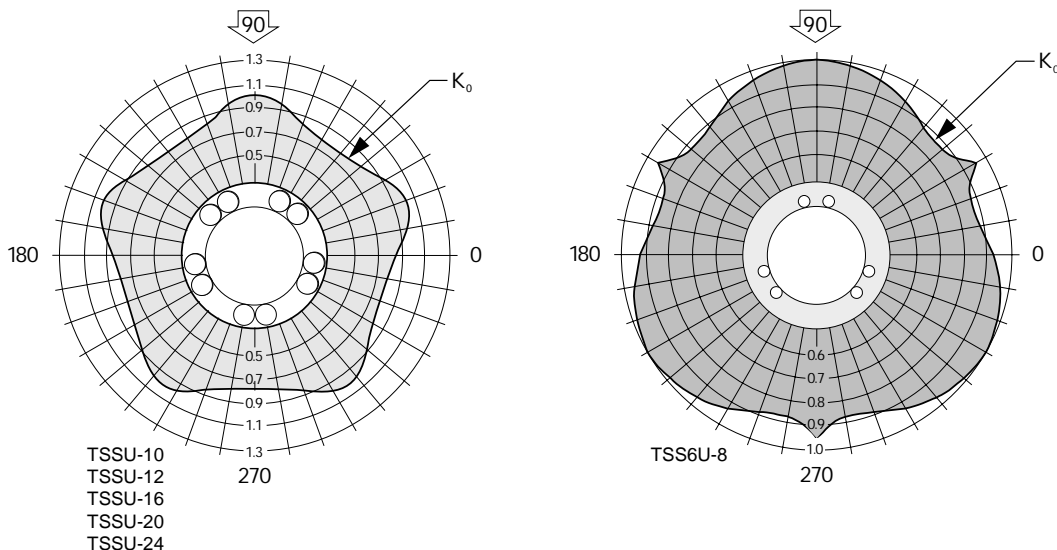
$K_0$  = the Load Correction Factor, which can be determined from the Polar Graph below.

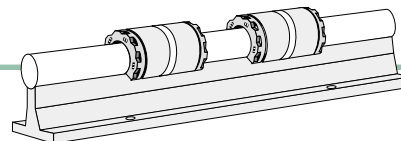
### Dynamic Load Capacity Correction Factor, $K_0$

The Dynamic Load Capacity is based on a rated travel life of 2 million inches. The actual Dynamic Load Capacity can be affected by the orientation of the bearing or the direction of the applied load. For dynamic load Correction Factors, see polar graphs below.

#### Polar Graphs

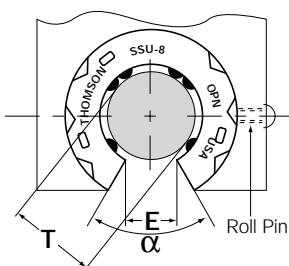
The actual Dynamic Load Capacity of a BALL BUSHING bearing is determined by the orientation of the bearing or direction of the applied load. The load Correction Factor  $K_0$  is found by knowing the direction of the applied load relative to the orientation of the bearing's ball tracks and referring to the polar graph. To determine the actual Dynamic Load Capacity, multiply the proper Correction Factor by the Dynamic Load Capacity listed in the product table on the previous page.



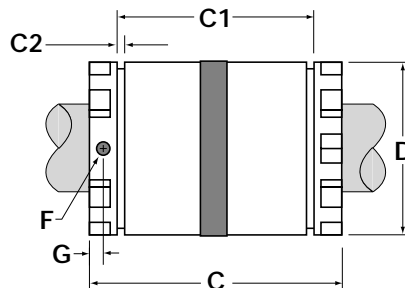
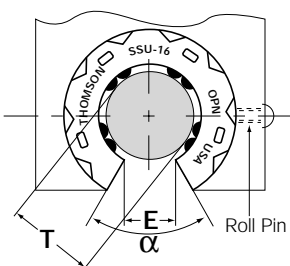


# Super Smart Ball Bushing™ Bearings (Open Type) for Continuously-Supported Applications

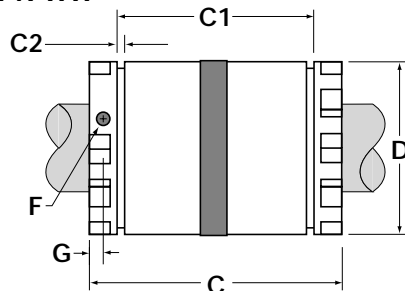
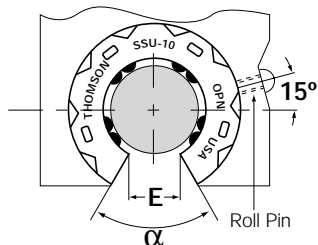
TSSU-8-OPN-WW



TSSU-12-OPN-WW thru  
TSSU-24-OPN-WW



TSSU-10-OPN-WW



Super Smart Ball Bushing™ Bearings (Open Type) with Two Integral Wipers  
(Dimensions in inches)

Catalog Number	Nominal Diameter	Length C	C1	C2 Min.	Min. Slot Width E	Retention Hole		Angle deg α	Number of Ball Circuits	Ball Bushing Bearing Mass lb
						Dia. F	Loc. G			
TSSU-8-OPN-WW	.500	1.250/1.230	1.032/1.012	.050	.31	.13	.62	40	6	.07
TSSU-10-OPN-WW	.625	1.500/1.480	1.125/1.095	.055	.34	.11	.13	30	8	.09
TSSU-12-OPN-WW	.750	1.625/1.605	1.285/1.255	.055	.41	.14	.13			.13
TSSU-16-OPN-WW	1.000	2.250/2.230	1.901/1.871	.068	.53	.14	.13			.24
TSSU-20-OPN-WW	1.250	2.625/2.600	2.031/1.991	.068	.62	.20	.19			.43
TSSU-24-OPN-WW	1.500	3.000/2.970	2.442/2.402	.086	.74	.20	.19			.80

Catalog Number	Working Bore Diameter T	Recommended Housing Bore Dia.		Ball Bushing™ Bearing/LinearRace™ Fit Up		Dynamic <sup>Δ</sup> Load Capacity lbf
		Fixed D	Adjustable D	Fixed Dia.* Housing	Adjustable Dia.* Housing (Before Adjustment)	
TSSU-8-OPN-WW	.5000/.4995	.8755/.8750	.8760/.8750	.0015C/.0000	.002C/.0000	360
TSSU-10-OPN-WW	.6250/.6245	1.1255/1.1250	1.1260/1.1250	.0015C/.0000	.002C/.0000	620
TSSU-12-OPN-WW	.7500/.7495	1.2505/1.2500	1.2510/1.2500	.0015C/.0000	.002C/.0000	1130
TSSU-16-OPN-WW	1.0000/.9995	1.5630/1.5625	1.5635/1.5625	.0015C/.0000	.002C/.0000	1900
TSSU-20-OPN-WW	1.2500/1.2494	2.0008/2.0000	2.0010/2.0000	.0018C/.0001P	.002C/.0001P	2350
TSSU-24-OPN-WW	1.5000/1.4994	2.3760/2.3750	2.3760/2.3750	.0021C/.0000	.0021C/.0000	3880

\*P=Preload, C=Clearance

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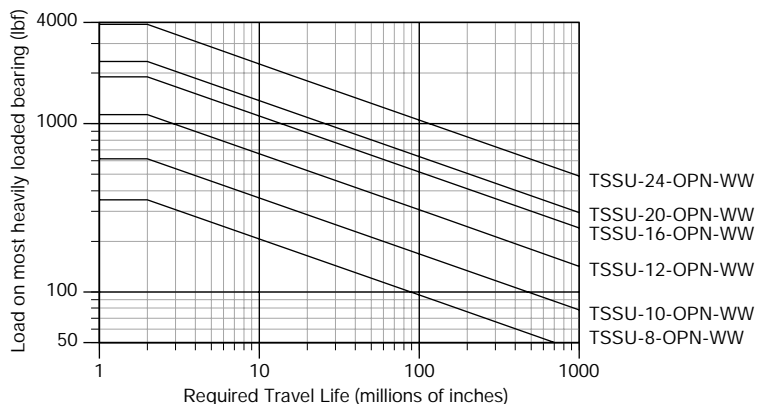
<sup>Δ</sup>See the chart on the bottom half of the next page.

**NOTE:** Catalog number is for a standard item.  
For other options, add: **CR** Corrosion-Resistant, **NB** Nylon Balls, or **CM** Ceramic Balls to end of catalog number.



# Super Smart Ball Bushing™ Bearings (Open Type) for Continuously-Supported Applications

**Load/Life Graph (Lines indicate limiting load for given BALL BUSHING Bearing)**



### Determining BALL BUSHING Bearing Size

To determine the proper BALL BUSHING bearing size, enter the chart with the maximum load of the most heavily loaded bearing and the required travel life. Mark where the two lines intersect. All BALL BUSHING bearing sizes that pass through or above and to the right of this point may be suitable for this application.

**Note: For the purpose of using this chart:**

$$\text{Load on Most Heavily Loaded Bearing} = \frac{\text{Maximum Applied Load}}{K_0}$$

where:

$K_0$  = the Load Correction Factor, which can be determined from the Polar Graph below.

### Dynamic Load Capacity Correction Factor, $K_0$

The Dynamic Load Capacity is based on a rated travel life of 2 million inches. The actual Dynamic Load Capacity can be affected by the orientation of the bearing or the direction of the applied load. For dynamic load Correction Factors, see polar graphs below.

#### Polar Graphs

The actual Dynamic Load Capacity of a BALL BUSHING bearing is determined by the orientation of the bearing or direction of the applied load. The load Correction Factor  $K_0$  is found by knowing the direction of the applied load relative to the orientation of the bearing's ball tracks and referring to the polar graph. To determine the actual Dynamic Load Capacity, multiply the proper Correction Factor by the Dynamic Load Capacity listed in the product table on the previous page.

