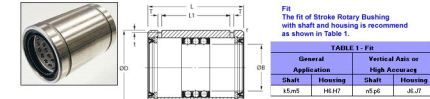




# MBA

## Bushings - Stroke Rotary - Sealed



Since this series may function in both rotary and linear directions at the same time, radial clearance should be held to minimum if shock load is applied or vibration is present during the operation. When this series is used in a vertical axis or very accurate movement is required, it is especially recommended to use zero or minimal preload. However, since excess preload shortens life, radial clearance smaller than the values shown in Table 2 should not be used.

Inscribed Circle Diameter $\phi$ - mm	Minimum Value of Radial Clearance
4	-2
5	-3
6	-4
8	-5
10	-6
15	-8
20	-10
30	-15
40	-20
50	-25
60	-30
80	-40
100	-50

Allowable Limit of Speed  
Stroke Rotary Bushing series can operate in both linear and rotary directions at the same time. The allowable limit of speed when linear motion and rotation occur at the same time can be obtained from the following formula.

$DN \leq 10^5 n^{-1.5}$  (SI), where:  
 $DN$  = Limit of Speed (ref. table 3)  
 $n$  = No. of revolutions per minute, Rpm.  
 $n1$  = No. of strokes per min., spm  
 $S$  = Stroke length, mm  
 $\phi d$  = Pitch circle dia. of balls, mm ( $\phi d = 1.15d1$ )  
 $d$  = inscribed circle dia., mm  
 This formula is only applicable when  $n1 \leq 8000$  and  $Sn1 \leq 30000$

Limiting Values in general are shown in Table 3.

Terms of Lubrication	DM
Oil	60000
Grease	30000

Stroke Rotary Bushing series can operate in both linear and rotary directions at the same time.

Material: Carbon Steel.

The fit of Stroke Rotary Bushing with shaft and housing is recommend as shown in Table 1 of the diagram.

Actual Stroke Length should be less than 80% of max. stroke.

Mating Shafts should be HRC58-64. Surface roughness 0.85 or better.

Oil holes provided for lubrication.

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Part Number	Shaft Diameter (B) mm	Max Stroke mm	OD (D) mm	Length (L) mm	Groove Distance (L1) mm	Groove Width / Depth (T / t) mm	Radius mm	Basic Dynamic Load Rating C kgf	Basic Static Load Rating Co kgf
	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>		
# ST8UU	8.000 <i>0.315</i>	14.000 <i>0.551</i>	15.000 <i>0.591</i>	24.00 <i>0.945</i>	12.30 <i>0.484</i>	1.5 / 0.5	0.50 <i>0.020</i>	32	21
# ST10UU	10.000 <i>0.394</i>	16.000 <i>0.630</i>	19.000 <i>0.748</i>	30.00 <i>1.181</i>	15.50 <i>0.610</i>	1.5 / 0.5	0.50 <i>0.020</i>	67	48
# ST12UU	12.000 <i>0.472</i>	17.000 <i>0.669</i>	23.000 <i>0.906</i>	32.00 <i>1.260</i>	17.10 <i>0.673</i>	1.5 / 0.5	0.50 <i>0.020</i>	110	84

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Part Number	Shaft Diameter (B) mm	Max Stroke mm	OD (D) mm	Length (L) mm	Groove Distance (L1) mm	Groove Width / Depth (T / t) mm	Radius mm	Basic Dynamic Load Rating C kgf	Basic Static Load Rating Co kgf
	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>		
# ST16UU	16.000 <i>0.630</i>	24.000 <i>0.945</i>	28.000 <i>1.102</i>	37.00 <i>1.457</i>	21.10 <i>0.831</i>	1.5 / 0.5	0.50 <i>0.020</i>	130	100
# ST20UU	20.000 <i>0.787</i>	32.000 <i>1.260</i>	32.000 <i>1.260</i>	45.00 <i>1.772</i>	26.80 <i>1.055</i>	2.0 / 0.5	0.50 <i>0.020</i>	140	130
# ST25UU	25.000 <i>0.984</i>	32.000 <i>1.260</i>	37.000 <i>1.457</i>	45.00 <i>1.772</i>	26.80 <i>1.055</i>	2.0 / 0.5	1.00 <i>0.039</i>	150	140
# ST30UUB	30.000 <i>1.181</i>	27.000 <i>1.063</i>	45.000 <i>1.772</i>	65.00 <i>2.559</i>	45.10 <i>1.776</i>	2.5 / 0.5	1.00 <i>0.039</i>	520	660
# ST30UU	30.000 <i>1.181</i>	65.000 <i>2.559</i>	45.000 <i>1.772</i>	65.00 <i>2.559</i>	45.10 <i>1.776</i>	2.5 / 0.5	1.00 <i>0.039</i>	320	320
# ST35UUB	35.000 <i>1.378</i>	37.000 <i>1.457</i>	52.000 <i>2.047</i>	70.00 <i>2.756</i>	50.10 <i>1.972</i>	2.5 / 0.7	1.50 <i>0.059</i>	540	730
# ST35UU	35.000 <i>1.378</i>	75.000 <i>2.953</i>	52.000 <i>2.047</i>	70.00 <i>2.756</i>	50.10 <i>1.972</i>	2.5 / 0.7	1.50 <i>0.059</i>	340	360
# ST40UUB	40.000 <i>1.575</i>	49.000 <i>1.929</i>	60.000 <i>2.362</i>	80.00 <i>3.150</i>	59.90 <i>2.358</i>	2.5 / 0.7	1.50 <i>0.059</i>	720	1000
# ST40UU	40.000 <i>1.575</i>	91.000 <i>3.583</i>	60.000 <i>2.362</i>	80.00 <i>3.150</i>	59.90 <i>2.358</i>	2.5 / 0.7	1.50 <i>0.059</i>	440	490
# ST45UUB	45.000 <i>1.772</i>	49.000 <i>1.929</i>	65.000 <i>2.559</i>	80.00 <i>3.150</i>	59.90 <i>2.358</i>	2.5 / 0.7	1.50 <i>0.059</i>	750	1110

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Part Number	Shaft Diameter (B) mm	Max Stroke mm	OD (D) mm	Length (L) mm	Groove Distance (L1) mm	Groove Width / Depth (T / t) mm	Radius mm	Basic Dynamic Load Rating C kgf	Basic Static Load Rating Co kgf
	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>		
# ST45UU	45.000 <i>1.772</i>	91.000 <i>3.583</i>	65.000 <i>2.559</i>	80.00 <i>3.150</i>	59.90 <i>2.358</i>	2.5 / 0.7	1.50 <i>0.059</i>	460	540
# ST50UUB	50.000 <i>1.969</i>	70.000 <i>2.756</i>	72.000 <i>2.835</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	1.50 <i>0.059</i>	960	1450
# ST50UU	50.000 <i>1.969</i>	120.000 <i>4.724</i>	72.000 <i>2.835</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	1.50 <i>0.059</i>	590	710
# ST55UUB	55.000 <i>2.165</i>	70.000 <i>2.756</i>	80.000 <i>3.150</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	2.00 <i>0.079</i>	1000	1580
# ST55UU	55.000 <i>2.165</i>	120.000 <i>4.724</i>	80.000 <i>3.150</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	2.00 <i>0.079</i>	620	780
# ST60UUB	60.000 <i>2.362</i>	70.000 <i>2.756</i>	85.000 <i>3.346</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	2.00 <i>0.079</i>	1040	1720
# ST60UU	60.000 <i>2.362</i>	120.000 <i>4.724</i>	85.000 <i>3.346</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	2.00 <i>0.079</i>	640	840
# ST70UUB	70.000 <i>2.756</i>	70.000 <i>2.756</i>	95.000 <i>3.740</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	2.00 <i>0.079</i>	1080	1940
# ST70UU	70.000 <i>2.756</i>	120.000 <i>4.724</i>	95.000 <i>3.740</i>	100.00 <i>3.937</i>	77.40 <i>3.047</i>	3.0 / 1.0	2.00 <i>0.079</i>	660	950
# ST80UUB	80.000 <i>3.150</i>	58.000 <i>2.283</i>	110.000 <i>4.331</i>	100.00 <i>3.937</i>	77.00 <i>3.031</i>	3.0 / 1.5	2.00 <i>0.079</i>	1360	2540

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Part Number	Shaft Diameter (B) mm	Max Stroke mm	OD (D) mm	Length (L) mm	Groove Distance (L1) mm	Groove Width / Depth (T / t) mm	Radius mm	Basic Dynamic Load Rating C kgf	Basic Static Load Rating Co kgf
	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>	<i>inches</i>		
# ST80UU	80.000 <i>3.150</i>	114.000 <i>4.488</i>	110.000 <i>4.331</i>	100.00 <i>3.937</i>	77.00 <i>3.031</i>	3.0 / 1.5	2.00 <i>0.079</i>	840	1250
# ST90UUB	90.000 <i>3.543</i>	58.000 <i>2.283</i>	120.000 <i>4.724</i>	100.00 <i>3.937</i>	77.00 <i>3.031</i>	3.0 / 1.5	2.00 <i>0.079</i>	1420	2810
# ST90UU	90.000 <i>3.543</i>	114.000 <i>4.488</i>	120.000 <i>4.724</i>	100.00 <i>3.937</i>	77.00 <i>3.031</i>	3.0 / 1.5	2.00 <i>0.079</i>	870	1370
# ST100UUB	100.000 <i>3.937</i>	58.000 <i>2.283</i>	130.000 <i>5.118</i>	100.00 <i>3.937</i>	77.00 <i>3.031</i>	3.0 / 1.5	2.00 <i>0.079</i>	1460	3060
# ST100UU	100.000 <i>3.937</i>	114.000 <i>4.488</i>	130.000 <i>5.118</i>	100.00 <i>3.937</i>	77.00 <i>3.031</i>	3.0 / 1.5	2.00 <i>0.079</i>	900	1510

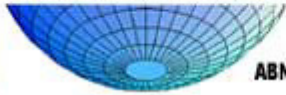
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