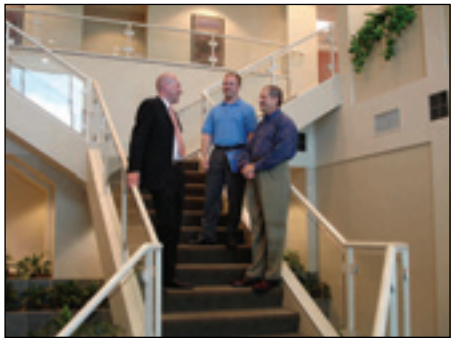
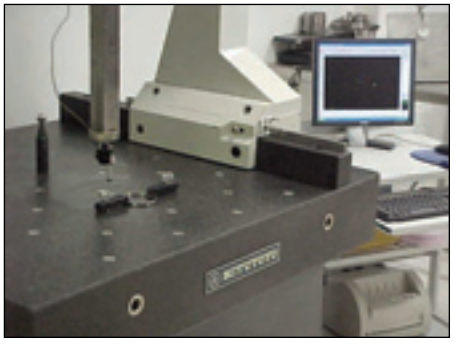
SILVERTHIN™

Precision Thin Section Bearings

MECHATRONICS®

SILVER THIN BEARINGS
Precision Thin Section Bearings
MECHATRONICS





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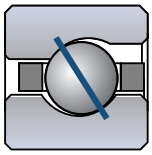


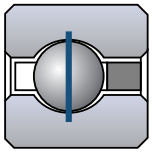
A-TYPE
Angular Contact Bearings

In applications with axial loads in one direction the A-Type, angular contact ball bearing should be used. This bearing also works well in radial or combined radial-thrust applications. The A-Type bearing should never be used alone to support moment loads or reversing axial loading.

Two A-Type bearings are often used as a duplex pair. Different configurations for duplex bearings are shown in the Engineering section of this catalog.

Please contact Silverthin for application of these bearings.

LOAD CONDITION				
RADIAL	AXIAL	MOMENT	REVERSING AXIAL	COMBINED RADIAL-THRUST
Good	Excellent	Use In Pairs Excellent	Use In Pairs Excellent	Good

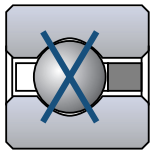


C-TYPE
Radial Contact Bearings

The C-Type, radial contact ball bearing is designed with deep ball grooves to withstand high loads. Although this bearing is used primarily in applications with radial loads, it can withstand moderate axial loads, reversing axial loads, and moment loads.

Please contact Silverthin for radial bearing use with combined radial loads with axial or moment loading and for limiting speeds and separator selection.

LOAD CONDITION				
RADIAL	AXIAL	MOMENT	REVERSING AXIAL	COMBINED RADIAL-THRUST
Excellent	Good	Good Light to Moderate Loads	Good Light to Moderate Loads	Good



X-TYPE
4-Point Contact Bearings

The X-Type, or 4-point contact, ball bearing is ideal for moment loading. X-Type bearings are designed with gothic arch raceways creating 4 contact points between the balls and the raceways. This design is excellent for moment loading and reversing axial loading. The X-Type bearing can be used for other light loading conditions, but is not recommended in place of the C- or A-Type bearing for pure radial loads.

When specifying this type of bearing for use with axial or moment loads combined with radial loads application speed (rpm) is a real concern. Please contact Silverthin for information on combined load and limiting speeds.

LOAD CONDITION				
RADIAL	AXIAL	MOMENT	REVERSING AXIAL	COMBINED RADIAL-THRUST
Poor	Good	Excellent	Excellent	Poor

Note: These are not to be used in pairs

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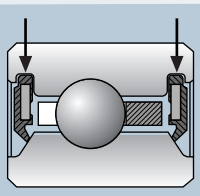
Example Part Number: [ ][ ]S[ ]A[ ]025XP0[ ]



J = Seals
Buna N Rubber Metal Backed
(Type C or X only - width dim. may change)
Available in "A", "B", & "U" versions

A = Thin dense chrome plated
NTDC= Nodular Thin Dense Chrome plate - Tolerances, housing & shaft fits will change - Consult Silverthin Bearing
See Engineering Section of this Catalog for more information

SILVERTHIN (S)

No Code = AISI 52100 Steel
S = 440C Stainless Steel
** Other metals available upon request*

Series Section Code
(width x section)

AA 3/16" x 3/16" (.187 x .187)

A 1/4" x 1/4" (.250 x .250)
Available in sealed version

B 5/16" x 5/16" (.3125 x .3125)
Available in sealed version

C 3/8" x 3/8" (.375 x .375)

U 1/2" x 3/8" (.50 x .375)

D 1/2" x 1/2" (.50 x .50)

F 3/4" x 3/4" (.75 x .75)

G 1" x 1" (1.0 x 1.0)

BORE SIZE IN INCHES X 10
Example:
2.50 X 10 = 025
7.00 X 10 = 070

TYPE

- **A** Angular Contact
- **B** Duplexed Back to Back
- **C** Radial Contact
- **F** Duplexed Face to Face
- **X** 4 Point Contact
- **T** Duplexed Tandem

INTERNAL FIT
Type C & X (unmounted)

- **A** .0000 to .0005 clearance
- **B** .0000 to .0010 clearance
- **C** .0005 to .0010 clearance
- **D** .0005 to .0015 clearance
- **E** .0010 to .0020 clearance
- **F** .0015 to .0025 clearance
- **G** .0020 to .0030 clearance
- **H** .0030 to .0040 clearance
- **I** .0040 to .0050 clearance
- **J** .0050 to .0060 clearance
- **K** .0000 to .0005 preload
- **L** .0000 to .0010 preload
- **M** .0005 to .0010 preload
- **N** .0005 to .0015 preload
- **P** .0010 to .0020 preload
- **Z** special

- Diametral Preload or Clearance for Type X or C
- Axial Preload or Clearance for Duplexed Type A

Note: Above internal bearing fits apply to unmounted bearings only.

Please contact the factory for installation fits on the above custom clearances and preloads

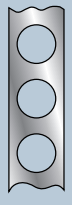
PRECISION CLASS

- **0** = Class 1 *(see pgs 15 & 16)*
- **3** = Class 3 *(see pg 17)*
- **5** = Class 5 *(see pg 18)*

For Other Classes Contact Silverthin

SEPARATOR

- **N** Nylon, segmented "Snapover" C & X
- **P** Brass, "Snapover" C & X
- **L** Nylon, one piece, "Snapover" C & X
- **D** Phenolic, one piece "Snapover" C & X
- **T** Stainless steel, one piece "Snapover" C & X



- **R** Brass, one piece, circular pocket A
- **G** Nylon, circular pocket A
- **H** Phenolic, one piece, circular pocket A
- **U** Stainless steel, one piece, circular pocket A
- **F** Full complement, no retainer, filling slot required for C & X style
- **X** Special

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SILVERTHIN™ Part No. (Industry Part No.)	Section Dimensions (Inch)	Type	Bore Diameter (inches)																												
			1	1½	1¾	2	2½	3	3½	4	4¼	4½	4¾	5	5½	6	6½	7	7½	8	9	10	11	12	14	16	18	20	25	30	35
SAA (KAA)*	3/16" x 3/16" (.187 x .187)	A	●	●	●																										
( ) industry standard series number available with industry standard separators*		C	●	●	●																										
		X	●	●	●																										
JSA (JA)*	1/4" x 1/4" (.250 x .250)	C				●	●	●	●	●	●	●	●	●	●	●	●														
		X				●	●	●	●	●	●	●	●	●	●	●	●														
SA (KA)*	1/4" x 1/4" (.250 x .250)	A				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							
		C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							
		X				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							
JSB (JB)*	5/16" x 5/16" (.3125 x .3125)	C				●	●	●	●	●	●	●	●	●	●	●	●														
		X				●	●	●	●	●	●	●	●	●	●	●	●														
SB (KB)*	5/16" x 5/16" (.3125 x .3125)	A				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
		C				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
		X				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
SC (KC)*	3/8" x 3/8" (.375 x .375)	A								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		X								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
JSU (JU)*	1/2" x 1/2" (.50 x .50)	C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							
		X								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●							
SD (KD)*	1/2" x 1/2" (.50 x .50)	A								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		X								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
SF (KF)*	3/4" x 3/4" (.75 x .75)	A								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		X								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SG (KG)*	1" x 1" (1.0 x 1.0)	A								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		C								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		X								●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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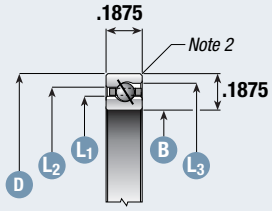
Type A Angular Contact

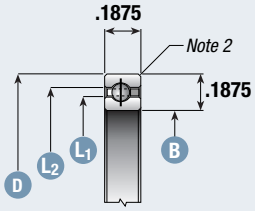
Nylon Circular pocket separator standard
3/32″ balls



Std.Part No.: **SAA__AGO**

Type C Radial Contact

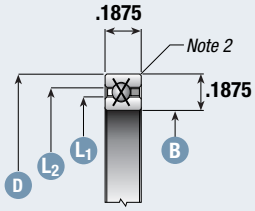
Nylon Snapover separator standard
3/32″ balls



Std.Part No.: **SAA__CLO**

Type X Four-Point Contact

Nylon Snapover separator standard
3/32″ balls



Std.Part No.: **SAA__XLO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SAA10	1.000	1.375	1.140	1.235	1.274	353	156	979	454	302	158	736	379	177	93	.026
SAA15	1.500	1.875	1.640	1.735	1.774	494	206	1,402	576	413	188	1,055	468	347	151	.039
SAA17	1.750	2.125	1.890	1.985	1.990	559	228	1,551	607	476	213	1,156	517	452	198	.045

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .015.

Note 3. Race Width Tolerance— +.000 –.005 Single Type C, X, A Bearings

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.
KAA10AGO	**SAA10AGO**
KAA15AGO	**SAA15AGO**
KAA17AGO	**SAA17AGO**

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.
KAA10CLO	**SAA10CLO**
KAA15CLO	**SAA15CLO**
KAA17CLO	**SAA17CLO**

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.
KAA10XLO	**SAA10XLO**
KAA15XLO	**SAA15XLO**
KAA17XLO	**SAA17XLO**

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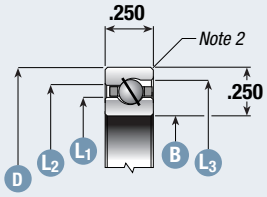
Type A Angular Contact

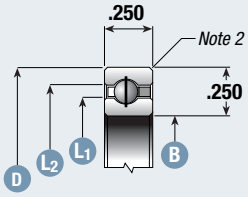
Brass Circular pocket separator standard
1/8″ balls



Std.Part No.: **SA___ARO**

Type C Radial Contact

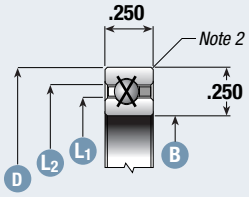
Brass Snapover separator standard
1/8″ balls



Std.Part No.: **SA___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
1/8″ balls



Std.Part No.: **SA___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SA020	2.000	2.500	2.186	2.314	2.369	792	334	2,281	967	682	323	1,711	794	772	367	0.10
SA025	2.500	3.000	2.686	2.814	2.869	968	387	2,785	1,106	830	363	2,097	912	1,154	506	0.13
SA030	3.000	3.500	3.186	3.314	3.367	1,149	438	3,295	1,236	994	413	2,475	1,014	1,603	667	0.15
SA035	3.500	4.000	3.686	3.814	3.867	1,312	471	3,798	1,359	1,144	453	2,856	1,118	2,139	846	0.18
SA040	4.000	4.500	4.186	4.314	4.367	1,497	514	4,309	1,476	1,293	486	3,227	1,213	2,748	1,035	0.19
SA042	4.250	4.750	4.436	4.564	4.615	1,585	530	4,552	1,538	1,374	505	3,414	1,268	3,073	1,130	0.20
SA045	4.500	5.000	4.686	4.814	4.865	1,660	552	4,810	1,584	1,447	521	3,608	1,313	3,425	1,242	0.22
SA047	4.750	5.250	4.936	5.064	5.115	1,753	577	5,062	1,640	1,524	548	3,792	1,355	3,790	1,357	0.23
SA050	5.000	5.500	5.186	5.314	5.365	1,841	596	5,313	1,693	1,597	569	3,988	1,403	4,186	1,462	0.24
SA055	5.500	6.000	5.686	5.814	5.863	2,026	620	5,824	1,801	1,750	593	4,369	1,484	5,021	1,700	0.25
SA060	6.000	6.500	6.186	6.314	6.363	2,195	662	6,328	1,905	1,906	634	4,740	1,572	5,936	1,968	0.28
SA065	6.500	7.000	6.686	6.814	6.861	2,370	699	6,837	2,004	2,052	660	5,122	1,653	6,915	2,232	0.30
SA070	7.000	7.500	7.186	7.314	7.361	2,543	736	7,344	2,105	2,204	693	5,507	1,735	7,988	2,515	0.31
SA075	7.500	8.000	7.686	7.814	7.861	2,721	763	7,849	2,195	2,353	728	5,880	1,812	9,122	2,801	0.34
SA080	8.000	8.500	8.186	8.314	8.359	2,892	796	8,355	2,280	2,502	751	6,264	1,895	10,333	3,111	0.38
SA090	9.000	9.500	9.186	9.314	9.357	3,240	853	9,364	2,472	2,817	810	7,026	2,045	12,997	3,774	0.44
SA100	10.000	10.500	10.186	10.314	10.355	3,595	914	10,376	2,644	3,118	878	7,789	2,183	15,948	4,472	0.50
SA110	11.000	11.500	11.186	11.314	11.353	3,943	975	11,386	2,810	3,412	935	8,544	2,324	19,210	5,223	0.52
SA120	12.000	12.500	12.186	12.314	12.349	4,294	1,037	12,395	2,978	3,726	986	9,304	2,450	22,777	6,014	0.56

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .025.

Note 3. Race Width Tolerance— +.000 –.005 Single Type C, X, A Bearings

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KA020ARO	**SA020ARO**	KA060ARO	**SA060ARO**
KA025ARO	**SA025ARO**	KA065ARO	**SA065ARO**
KA030ARO	**SA030ARO**	KA070ARO	**SA070ARO**
KA035ARO	**SA035ARO**	KA075ARO	**SA075ARO**
KA040ARO	**SA040ARO**	KA080ARO	**SA080ARO**
KA042ARO	**SA042ARO**	KA090ARO	**SA090ARO**
KA045ARO	**SA045ARO**	KA100ARO	**SA100ARO**
KA047ARO	**SA047ARO**	KA110ARO	**SA110ARO**
KA050ARO	**SA050ARO**	KA120ARO	**SA120ARO**
KA055ARO	**SA055ARO**		

Type C Interchange

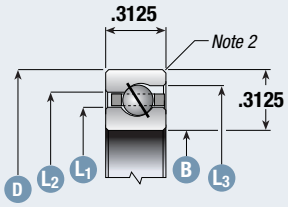
KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KA020CPO	**SA020CPO**	KA060CPO	**SA060CPO**
KA025CPO	**SA025CPO**	KA065CPO	**SA065CPO**
KA030CPO	**SA030CPO**	KA070CPO	**SA070CPO**
KA035CPO	**SA035CPO**	KA075CPO	**SA075CPO**
KA040CPO	**SA040CPO**	KA080CPO	**SA080CPO**
KA042CPO	**SA042CPO**	KA090CPO	**SA090CPO**
KA045CPO	**SA045CPO**	KA100CPO	**SA100CPO**
KA047CPO	**SA047CPO**	KA110CPO	**SA110CPO**
KA050CPO	**SA050CPO**	KA120CPO	**SA120CPO**
KA055CPO	**SA055CPO**		

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KA020XPO	**SA020XPO**	KA060XPO	**SA060XPO**
KA025XPO	**SA025XPO**	KA065XPO	**SA065XPO**
KA030XPO	**SA030XPO**	KA070XPO	**SA070XPO**
KA035XPO	**SA035XPO**	KA075XPO	**SA075XPO**
KA040XPO	**SA040XPO**	KA080XPO	**SA080XPO**
KA042XPO	**SA042XPO**	KA090XPO	**SA090XPO**
KA045XPO	**SA045XPO**	KA100XPO	**SA100XPO**
KA047XPO	**SA045XPO**	KA110XPO	**SA110XPO**
KA050XPO	**SA050XPO**	KA120XPO	**SA120XPO**
KA055XPO	**SA055XPO**		

Type A Angular Contact

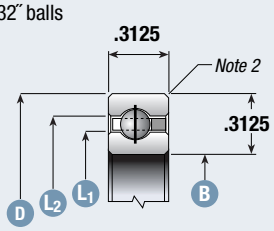
Brass Circular pocket separator standard
5/32″ balls



Std.Part No.: **SB___ARO**

Type C Radial Contact

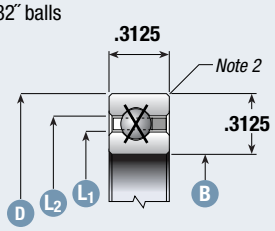
Brass Snapover separator standard
5/32″ balls



Std.Part No.: **SB___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
5/32″ balls



Std.Part No.: **SB___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SB020	2.000	2.625	2.231	2.393	2.464	1,092	481	3,156	1,382	930	458	2,344	1,135	1,083	521	0.16
SB025	2.500	3.125	2.731	2.893	2.964	1,345	557	3,861	1,593	1,149	521	2,840	1,297	1,603	730	0.19
SB030	3.000	3.625	3.231	3.393	3.462	1,553	610	4,472	1,754	1,343	589	3,355	1,442	2,221	963	0.24
SB035	3.500	4.125	3.731	3.893	3.962	1,791	673	5,182	1,933	1,546	634	3,862	1,598	2,946	1,217	0.29
SB040	4.000	4.625	4.231	4.393	4.460	2,044	732	5,897	2,105	1,751	690	4,379	1,721	3,770	1,495	0.30
SB042	4.250	4.875	4.481	4.643	4.710	2,150	753	6,206	2,178	1,833	715	4,572	1,780	4,176	1,622	0.31
SB045	4.500	5.125	4.731	4.893	4.960	2,255	787	6,503	2,247	1,959	741	4,880	1,854	4,693	1,780	0.33
SB047	4.750	5.375	4.981	5.143	5.210	2,390	810	6,918	2,341	2,033	760	5,089	1,906	5,141	1,932	0.34
SB050	5.000	5.625	5.231	5.393	5.460	2,500	835	7,217	2,413	2,158	794	5,386	1,981	5,729	2,103	0.38
SB055	5.500	6.125	5.731	5.893	5.958	2,741	892	7,926	2,563	3,360	841	5,892	2,109	6,855	2,442	0.41
SB060	6.000	6.625	6.231	6.393	6.458	2,997	946	8,633	2,711	2,567	899	6,404	2,220	8,082	2,804	0.44
SB065	6.500	7.125	6.731	6.893	6.958	3,202	981	9,245	2,842	2,762	930	6,918	2,345	9,417	3,186	0.47
SB070	7.000	7.625	7.231	7.393	7.456	3,457	1,033	9,960	2,984	2,979	983	7,425	2,459	10,858	3,586	0.50
SB075	7.500	8.125	7.731	7.893	7.955	3,703	1,089	10,679	3,127	3,174	1,022	7,922	2,567	12,381	4,000	0.53
SB080	8.000	8.625	8.231	8.393	8.453	3,943	1,130	11,387	3,263	3,370	1,071	8,434	2,670	14,025	4,441	0.57
SB090	9.000	9.625	9.231	9.393	9.451	4,408	1,223	12,704	3,510	3,782	1,157	9,453	2,886	17,608	5,361	0.66
SB100	10.000	10.625	10.231	10.393	10.449	4,891	1,303	14,120	3,768	4,192	1,235	10,462	3,089	21,584	6,362	0.73
SB110	11.000	11.625	11.231	11.393	11.447	5,354	1,384	15,448	4,005	4,594	1,317	11,482	3,281	25,975	7,420	0.75
SB120	12.000	12.625	12.231	12.393	12.445	5,842	1,470	16,862	4,248	5,003	1,397	12,503	3,476	30,773	8,558	0.83
SB140	14.000	14.625	14.231	14.393	14.439	6,762	1,621	19,503	4,671	5,812	1,533	14,532	3,844	41,582	10,983	1.05
SB160	16.000	16.625	16.231	16.393	16.433	7,712	1,773	22,254	5,102	6,622	1,671	16,562	4,193	54,023	13,663	1.20
SB180	18.000	18.625	18.231	18.393	18.425	8,661	1,913	24,993	5,514	7,443	1,814	18,591	4,521	68,094	16,561	1.35
SB200	20.000	20.625	20.231	20.393	20.416	9,613	2,052	27,731	5,903	8,251	1,942	20,623	4,852	83,782	19,692	1.50

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .040.

Note 3. Race Width Tolerance—
Single Type C, X, A Bearings:
Up thru 12" Bearing Bore +.000 –.005
Over 12" Bearing Bore +.000 –.010

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KB020ARO	**SB020ARO**	KB070ARO	**SB070ARO**
KB025ARO	**SB025ARO**	KB075ARO	**SB075ARO**
KB030ARO	**SB030ARO**	KB080ARO	**SB080ARO**
KB035ARO	**SB035ARO**	KB090ARO	**SB090ARO**
KB040ARO	**SB040ARO**	KB100ARO	**SB100ARO**
KB042ARO	**SB042ARO**	KB110ARO	**SB110ARO**
KB045ARO	**SB045ARO**	KB120ARO	**SB120ARO**
KB047ARO	**SB047ARO**	KB140ARO	**SB140ARO**
KB050ARO	**SB050ARO**	KB160ARO	**SB160ARO**
KB055ARO	**SB055ARO**	KB180ARO	**SB180ARO**
KB060ARO	**SB060ARO**	KB200ARO	**SB200ARO**
KB065ARO	**SB065ARO**		

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KB020CPO	**SB020CPO**	KB070CPO	**SB070CPO**
KB025CPO	**SB025CPO**	KB075CPO	**SB075CPO**
KB030CPO	**SB030CPO**	KB080CPO	**SB080CPO**
KB035CPO	**SB035CPO**	KB090CPO	**SB090CPO**
KB040CPO	**SB040CPO**	KB100CPO	**SB100CPO**
KB042CPO	**SB042CPO**	KB110CPO	**SB110CPO**
KB045CPO	**SB045CPO**	KB120CPO	**SB120CPO**
KB047CPO	**SB047CPO**	KB140CPO	**SB140CPO**
KB050CPO	**SB050CPO**	KB160CPO	**SB160CPO**
KB055CPO	**SB055CPO**	KB180CPO	**SB180CPO**
KB060CPO	**SB060CPO**	KB200CPO	**SB200CPO**
KB065CPO	**SB065CPO**		

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KB020XPO	**SB020XPO**	KB070XPO	**SB070XPO**
KB025XPO	**SB025XPO**	KB075XPO	**SB075XPO**
KB030XPO	**SB030XPO**	KB080XPO	**SB080XPO**
KB035XPO	**SB035XPO**	KB090XPO	**SB090XPO**
KB040XPO	**SB040XPO**	KB100XPO	**SB100XPO**
KB042XPO	**SB042XPO**	KB110XPO	**SB110XPO**
KB045XPO	**SB045XPO**	KB120XPO	**SB120XPO**
KB047XPO	**SB047XPO**	KB140XPO	**SB140XPO**
KB050XPO	**SB050XPO**	KB160XPO	**SB160XPO**
KB055XPO	**SB055XPO**	KB180XPO	**SB180XPO**
KB060XPO	**SB060XPO**	KB200XPO	**SB200XPO**
KB065XPO	**SB065XPO**		

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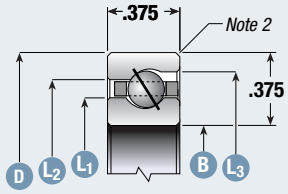
Type A Angular Contact

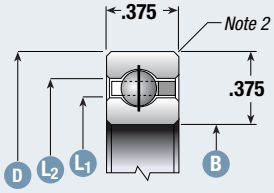
Brass Circular pocket separator standard
5/32″ balls



Std.Part No.: **SC___ARO**

Type C Radial Contact

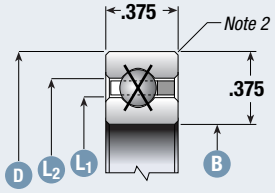
Brass Snapover separator standard
5/32″ balls



Std.Part No.: **SC___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
5/32″ balls



Std.Part No.: **SC___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SC040	4.000	4.750	4.277	4.473	4.554	2,552	960	7,364	2,773	2,105	882	5,261	2,213	4,602	1,935	0.45
SC042	4.250	5.000	4.527	4.723	4.804	2,711	1,008	7,825	2,884	2,228	922	5,560	2,294	5,143	2,128	0.47
SC045	4.500	5.250	4.777	4.973	5.052	2,863	1,044	8,279	2,997	2,340	951	5,863	2,385	5,713	2,326	0.48
SC047	4.750	5.500	5.027	5.223	5.302	3,025	1,072	8,723	3,106	2,467	980	6,167	2,462	6,322	2,520	0.50
SC050	5.000	5.750	5.277	5.473	5.552	3,180	1,113	9,172	3,200	2,591	1,015	6,464	2,547	6,953	2,731	0.58
SC055	5.500	6.250	5.777	5.973	6.052	3,442	1,1777	9,926	3,373	2,835	1,082	7,069	2,697	8,302	3,165	0.59
SC060	6.000	6.750	6.277	6.473	6.550	3,753	1,245	10,827	3,586	3,073	1,140	7,667	2,849	9,776	3,620	0.63
SC065	6.500	7.250	6.777	6.973	7.050	4,067	1,312	11,726	3,774	3,311	1,203	8,276	2,993	11,374	4,112	0.68
SC070	7.000	7.750	7.277	7.473	7.550	4,322	1,365	12,472	3,933	3,550	1,253	8,878	3,134	13,089	4,621	0.73
SC075	7.500	8.250	7.777	7.973	8.048	4,631	1,432	13,383	4,122	3,796	1,312	9,470	3,276	14,913	5,158	0.78
SC080	8.000	8.750	8.277	8.473	8.548	4,952	1,498	14,285	4,307	4,034	1,365	10,072	3,419	16,874	5,717	0.84
SC090	9.000	9.750	9.277	9.473	9.546	5,528	1,603	15,932	4,635	4,517	1,475	11,276	3,671	21,132	6,890	0.94
SC100	10.000	10.750	10.277	10.473	10.544	6,145	1,720	17,737	4,974	4,990	1,571	12,473	3,932	25,882	8,163	1.06
SC110	11.000	11.750	11.277	11.473	11.542	6,721	1,833	19,393	5,287	5,473	1,670	13,687	4,188	31,114	9,515	1.16
SC120	12.000	12.750	12.277	12.473	12.540	7,290	1,932	21,047	5,570	5,956	1,773	14,888	4,426	36,832	10,942	1.25
SC140	14.000	14.750	14.277	14.473	14.535	8,493	2,142	24,504	6,172	6,912	1,952	17,281	4,892	49,693	14,051	1.52
SC160	16.000	16.750	16.277	16.473	16.529	9,683	2,331	27,951	6,731	7,881	2,132	19,692	5,332	64,481	17,451	1.73
SC180	18.000	18.750	18.277	18.473	18.523	10,882	2,523	31,412	7,281	8,842	2,303	22,093	5,762	81,192	21,152	1.94
SC200	20.000	20.750	20.277	20.473	20.517	12,031	2,693	34,722	7,783	9,802	2,471	24,504	6,171	99,832	25,123	2.16
SC250	25.000	25.750	25.277	25.473	25.500	14,904	3,122	43,283	9,012	12,204	2,851	30,512	7,142	154,803	36,223	2.69
SC300	30.000	30.750	30.277	30.473	30.484	17,962	3,523	51,851	10,161	14,612	3,222	36,521	8,051	221,902	48,882	3.21

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .040.

Note 3. Race Width Tolerance—
Single Type C, X, A Bearings:
Up thru 12" Bearing Bore +.000 –.005
Over 12" Bearing Bore +.000 –.010

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KC040ARO	**SC040ARO**	KC090ARO	**SC090ARO**
KC042ARO	**SC042ARO**	KC100ARO	**SC100ARO**
KC045ARO	**SC045ARO**	KC110ARO	**SC110ARO**
KC047ARO	**SC047ARO**	KC120ARO	**SC120ARO**
KC050ARO	**SC050ARO**	KC140ARO	**SC140ARO**
KC055ARO	**SC055ARO**	KC160ARO	**SC160ARO**
KC060ARO	**SC060ARO**	KC180ARO	**SC180ARO**
KC065ARO	**SC065ARO**	KC200ARO	**SC200ARO**
KC070ARO	**SC070ARO**	KC250ARO	**SC250ARO**
KC075ARO	**SC075ARO**	KC300ARO	**SC300ARO**
KC080ARO	**SC080ARO**		

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KC040CPO	**SC040CPO**	KC090CPO	**SC090CPO**
KC042CPO	**SC042CPO**	KC100CPO	**SC100CPO**
KC045CPO	**SC045CPO**	KC110CPO	**SC110CPO**
KC047CPO	**SC047CPO**	KC120CPO	**SC120CPO**
KC050CPO	**SC050CPO**	KC140CPO	**SC140CPO**
KC055CPO	**SC055CPO**	KC160CPO	**SC160CPO**
KC060CPO	**SC060CPO**	KC180CPO	**SC180CPO**
KC065CPO	**SC065CPO**	KC200CPO	**SC200CPO**
KC070CPO	**SC070CPO**	KC250CPO	**SC250CPO**
KC075CPO	**SC075CPO**	KC300CPO	**SC300CPO**
KC080CPO	**SC080CPO**		

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KC040XPO	**SC040XPO**	KC090XPO	**SC090XPO**
KC042XPO	**SC042XPO**	KC100XPO	**SC100XPO**
KC045XPO	**SC045XPO**	KC110XPO	**SC110XPO**
KC047XPO	**SC047XPO**	KC120XPO	**SC120XPO**
KC050XPO	**SC050XPO**	KC140XPO	**SC140XPO**
KC055XPO	**SC055XPO**	KC160XPO	**SC160XPO**
KC060XPO	**SC060XPO**	KC180XPO	**SC180XPO**
KC065XPO	**SC065XPO**	KC200XPO	**SC200XPO**
KC070XPO	**SC070XPO**	KC250XPO	**SC250XPO**
KC075XPO	**SC075XPO**	KC300XPO	**SC300XPO**
KC080XPO	**SC080XPO**		

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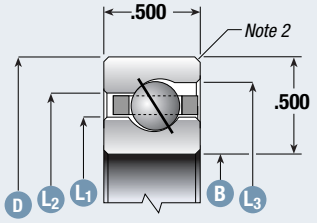
Type A Angular Contact

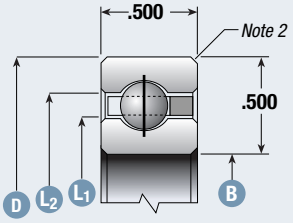
Brass Circular pocket separator standard
1/4" balls



Std.Part No.: **SD___ARO**

Type C Radial Contact

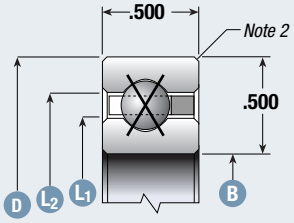
Brass Snapover separator standard
1/4" balls



Std.Part No.: **SD___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
1/4" balls



Std.Part No.: **SD___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SD040	4.000	5.000	4.370	4.630	4.741	3,558	1,481	10,263	4,262	3,086	1,418	7,702	3,526	6,935	3,171	.78
SD042	4.250	5.250	4.620	4.880	4.991	3,757	1,534	10,830	4,421	3,193	1,442	7,989	3,607	7,582	3,420	.83
SD045	4.500	5.500	4.870	5.130	5.241	3,952	1,580	11,402	4,576	3,423	1,512	8,552	3,773	8,555	3,774	.88
SD047	4.750	5.750	5.120	5.380	5.490	4,158	1,646	11,973	4,727	3,534	1,548	8,842	3,860	9,287	4,053	.94
SD050	5.000	6.000	5.370	5.630	5.740	4,342	1,698	12,544	4,873	3,764	1,611	9,415	4,020	10,354	4,422	1.00
SD055	5.500	6.500	5.870	6.130	6.238	4,741	1,790	13,688	5,165	4,109	1,703	10,265	4,265	12,316	5,112	1.06
SD060	6.000	7.000	6.370	6.630	6.738	5,130	1,893	14,827	5,443	4,450	1,803	11,127	4,494	14,452	5,840	1.16
SD065	6.500	7.500	6.870	7.130	7.236	5,531	1,980	15,967	5,722	4,796	1,899	11,974	4,724	16,760	6,613	1.22
SD070	7.000	8.000	7.370	7.630	7.736	5,929	2,077	17,104	5,996	5,131	1,980	12,832	4,946	19,249	7,421	1.31
SD075	7.500	8.500	7.870	8.130	8.236	6,320	2,172	18,240	6,253	5,474	2,063	13,688	5,168	21,895	8,264	1.41
SD080	8.000	9.000	8.370	8.630	8.734	6,717	2,261	19,380	6,517	5,814	2,150	14,543	5,372	24,714	9,145	1.53
SD090	9.000	10.000	9.370	9.630	9.732	7,504	2,432	21,663	7,018	6,504	2,328	16,255	5,793	30,870	11,001	1.72
SD100	10.000	11.000	10.370	10.630	10.732	8,299	2,603	23,947	7,500	7,183	2,478	17,963	6,196	37,710	12,995	1.88
SD110	11.000	12.000	11.370	11.630	11.730	9,087	2,768	26,227	7,961	7,872	2,630	19,674	6,572	45,235	15,120	2.06
SD120	12.000	13.000	12.370	12.630	12.728	9,871	2,920	28,503	8,427	8,559	2,783	21,380	6,953	53,443	17,375	2.25
SD140	14.000	15.000	14.370	14.630	14.724	11,452	3,221	33,063	9,291	9,922	3,071	24,802	7,672	71,912	22,251	2.73
SD160	16.000	17.000	16.370	16.630	16.718	13,031	3,512	37,621	10,132	11,293	3,353	28,221	8,364	93,112	27,602	3.10
SD180	18.000	19.000	18.370	18.630	18.712	14,612	3,792	42,181	10,934	12,653	3,612	31,642	9,031	117,003	33,401	3.48
SD200	20.000	21.000	20.370	20.630	20.705	16,191	4,063	46,743	11,712	14,021	3,871	35,061	9,672	143,703	39,634	3.85
SD250	25.000	26.000	25.370	25.630	25.688	20,143	4,692	58,144	13,543	17,442	4,472	43,612	11,181	222,401	57,013	4.79
SD300	30.000	31.000	30.370	30.630	30.672	24,092	5,292	69,543	15,261	20,862	5,043	52,162	12,604	318,102	76,842	5.73

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .060.

Note 3. Race Width Tolerance—
Single Type C, X, A Bearings:
Up thru 12" Bearing Bore +.000 –.005
Over 12" Bearing Bore +.000 –.010

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KD040CPO	**SD040CPO**	KD090ARO	**SD090ARO**
KD042ARO	**SD042ARO**	KD100ARO	**SD100ARO**
KD045ARO	**SD045ARO**	KD110ARO	**SD110ARO**
KD047ARO	**SD047ARO**	KD120ARO	**SD120ARO**
KD050ARO	**SD050ARO**	KD140ARO	**SD140ARO**
KD055ARO	**SD055ARO**	KD160ARO	**SD160ARO**
KD060ARO	**SD060ARO**	KD180ARO	**SD180ARO**
KD065ARO	**SD065ARO**	KD200ARO	**SD200ARO**
KD070ARO	**SD070ARO**	KD250ARO	**SD250ARO**
KD075ARO	**SD075ARO**	KD300ARO	**SD300ARO**
KD080ARO	**SD080ARO**		

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KD040CPO	**SD040CPO**	KD090CPO	**SD090CPO**
KD042CPO	**SD042CPO**	KD100CPO	**SD100CPO**
KD045CPO	**SD045CPO**	KD110CPO	**SD110CPO**
KD047CPO	**SD047CPO**	KD120CPO	**SD120CPO**
KD050CPO	**SD050CPO**	KD140CPO	**SD140CPO**
KD055CPO	**SD055CPO**	KD160CPO	**SD160CPO**
KD060CPO	**SD060CPO**	KD180CPO	**SD180CPO**
KD065CPO	**SD065CPO**	KD200CPO	**SD200CPO**
KD070CPO	**SD070CPO**	KD250CPO	**SD250CPO**
KD075CPO	**SD075CPO**	KD300CPO	**SD300CPO**
KD080CPO	**SD080CPO**		

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KD040XPO	**SD040XPO**	KD090XPO	**SD090XPO**
KD042XPO	**SD042XPO**	KD100XPO	**SD100XPO**
KD045XPO	**SD045XPO**	KD110XPO	**SD110XPO**
KD047XPO	**SD047XPO**	KD120XPO	**SD120XPO**
KD050XPO	**SD050XPO**	KD140XPO	**SD140XPO**
KD055XPO	**SD055XPO**	KD160XPO	**SD160XPO**
KD060XPO	**SD060XPO**	KD180XPO	**SD180XPO**
KD065XPO	**SD065XPO**	KD200XPO	**SD200XPO**
KD070XPO	**SD070XPO**	KD250XPO	**SD250XPO**
KD075XPO	**SD075XPO**	KD300XPO	**SD300XPO**
KD080XPO	**SD080XPO**		

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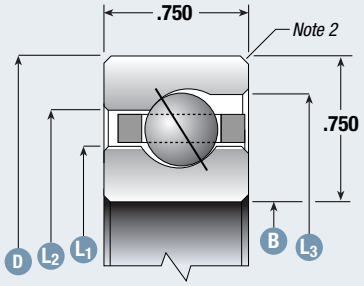
Type A Angular Contact

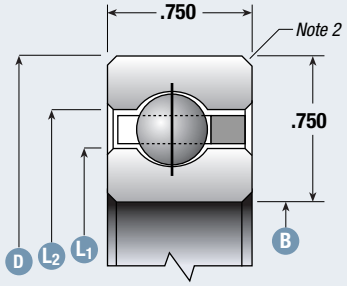
Brass Circular pocket separator standard
3/8″ balls



Std.Part No.: **SF___ARO**

Type C Radial Contact

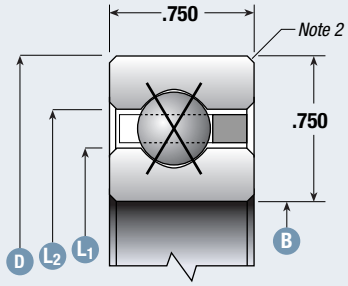
Brass Snapover separator standard
3/8″ balls



Std.Part No.: **SF___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
3/8″ balls



Std.Part No.: **SF___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SF040	4.000	5.500	4.555	4.945	5.115	6,353	2,921	18,340	8,422	5,363	2,733	13,407	6,835	12,730	6,493	1.9
SF042	4.250	5.750	4.805	5.195	5.365	6,600	2,998	19,054	8,633	5,645	2,830	14,111	7,073	14,119	7,076	2.0
SF045	4.500	6.000	5.060	5.445	5.615	7,095	3,143	20,462	9,050	5,937	2,925	14,814	7,302	15,550	7,660	2.1
SF047	4.750	6.250	5.305	5.695	5.865	7,333	3,218	21,166	9,264	6,215	3,013	15,521	7,533	17,077	8,284	2.2
SF050	5.000	6.500	5.555	5.945	6.115	7,570	3,280	21,871	9,461	6,492	3,104	16,220	7,768	18,666	8,923	2.3
SF055	5.500	7.000	6.055	6.445	6.613	8,312	3,499	23,989	10,066	7,053	3,283	17,634	8,207	22,040	10,251	2.5
SF060	6.000	7.500	6.555	6.945	7.113	9,041	3,693	26,101	10,652	7,625	3,450	19,058	8,633	25,716	11,653	2.7
SF065	6.500	8.000	7.055	7.445	7.613	9,773	3,897	28,226	11,220	8,182	3,621	20,463	9,051	29,667	13,135	2.9
SF070	7.000	8.500	7.555	7.945	8.113	10,512	4,083	30,330	11,774	8,750	3,794	21,873	9,466	33,892	14,672	3.2
SF075	7.500	9.000	8.055	8.445	8.610	11,005	4,200	31,743	12,138	9,319	3,958	23,288	9,874	38,413	16,286	3.4
SF080	8.000	9.500	8.555	8.945	9.110	11,733	4,394	33,865	12,670	9,886	4,101	24,694	10,261	43,200	17,967	3.5
SF090	9.000	10.500	9.555	9.945	10.108	13,190	4,752	38,091	13,700	11,004	4,410	27,513	11,032	53,648	21,511	3.9
SF100	10.000	11.500	10.555	10.945	11.106	14,421	5,030	41,621	14,532	12,138	4,715	30,339	11,778	65,217	25,314	4.3
SF110	11.000	12.500	11.555	11.945	12.106	15,883	5,374	45,852	15,506	13,260	5,007	33,159	12,499	77,912	29,357	4.8
SF120	12.000	13.500	12.555	12.945	13.104	17,100	5,641	49,382	16,293	14,390	5,286	35,975	13,193	91,735	33,634	5.2
SF140	14.000	15.500	14.555	14.945	15.102	19,792	6,221	57,142	17,951	16,651	5,812	41,621	14,531	122,802	42,881	6.0
SF160	16.000	17.500	16.555	16.945	17.098	22,483	6,772	64,891	19,543	18,902	6,333	47,264	15,823	158,302	53,002	7.1
SF180	18.000	19.500	18.555	18.945	19.096	25,412	7,351	73,363	21,212	21,163	6,822	52,902	17,062	198,403	63,963	7.9
SF200	20.000	21.500	20.555	20.945	21.092	28,102	7,863	81,123	22,683	23,421	7,303	58,551	18,253	243,002	75,731	8.9
SF250	25.000	26.500	25.555	25.945	26.085	34,703	9,043	100,204	26,102	29,063	8,434	72,653	21,072	374,201	108,502	10.9
SF300	30.000	31.500	30.555	30.945	31.075	41,541	10,191	119,902	29,433	34,702	9,491	86,763	23,723	533,604	145,904	13.0
SF350	35.000	36.500	35.555	35.945	36.064	48,383	11,291	139,702	32,581	40,353	10,492	100,902	26,221	721,203	187,502	15.1

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .080.

Note 3. Race Width Tolerance—
Single Type C, X, A Bearings:
Up thru 12" Bearing Bore +.000 –.005
Over 12" Bearing Bore +.000 –.010

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KF040ARO	**SF040ARO**	KF090ARO	**SF090ARO**
KF042ARO	**SF042ARO**	KF100ARO	**SF100ARO**
KF045ARO	**SF045ARO**	KF110ARO	**SF110ARO**
KF047ARO	**SF047ARO**	KF120ARO	**SF120ARO**
KF050ARO	**SF050ARO**	KF140ARO	**SF140ARO**
KF055ARO	**SF055ARO**	KF160ARO	**SF160ARO**
KF060ARO	**SF060ARO**	KF180ARO	**SF180ARO**
KF065ARO	**SF065ARO**	KF200ARO	**SF200ARO**
KF070ARO	**SF070ARO**	KF250ARO	**SF250ARO**
KF075ARO	**SF075ARO**	KF300ARO	**SF300ARO**
KF080ARO	**SF080ARO**	KF350ARO	**SF350ARO**

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KF040CPO	**SF040CPO**	KF090CPO	**SF090CPO**
KF042CPO	**SF042CPO**	KF100CPO	**SF100CPO**
KF045CPO	**SF045CPO**	KF110CPO	**SF110CPO**
KF047CPO	**SF047CPO**	KF120CPO	**SF120CPO**
KF050CPO	**SF050CPO**	KF140CPO	**SF140CPO**
KF055CPO	**SF055CPO**	KF160CPO	**SF160CPO**
KF060CPO	**SF060CPO**	KF180CPO	**SF180CPO**
KF065CPO	**SF065CPO**	KF200CPO	**SF200CPO**
KF070CPO	**SF070CPO**	KF250CPO	**SF250CPO**
KF075CPO	**SF075CPO**	KF300CPO	**SF300CPO**
KF080CPO	**SF080CPO**	KF350CPO	**SF350CPO**

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KF040XPO	**SF040XPO**	KF090XPO	**SF090XPO**
KF042XPO	**SF042XPO**	KF100XPO	**SF100XPO**
KF045XPO	**SF045XPO**	KF110XPO	**SF110XPO**
KF047XPO	**SF047XPO**	KF120XPO	**SF120XPO**
KF050XPO	**SF050XPO**	KF140XPO	**SF140XPO**
KF055XPO	**SF055XPO**	KF160XPO	**SF160XPO**
KF060XPO	**SF060XPO**	KF180XPO	**SF180XPO**
KF065XPO	**SF065XPO**	KF200XPO	**SF200XPO**
KF070XPO	**SF070XPO**	KF250XPO	**SF250XPO**
KF075XPO	**SF075XPO**	KF300XPO	**SF300XPO**
KF080XPO	**SF080XPO**	KF350XPO	**SF350XPO**

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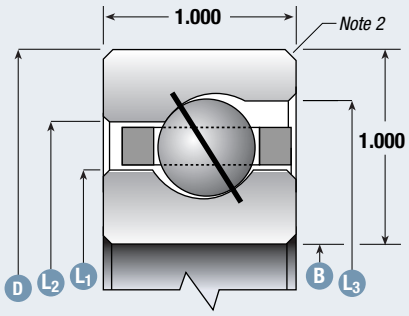
Type A Angular Contact

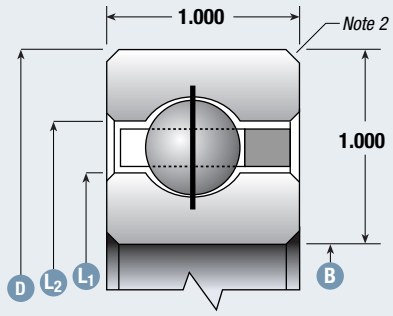
Brass circular pocket separator standard
1/2″ balls



Std.Part No.: **SG___ARO**

Type C Radial Contact

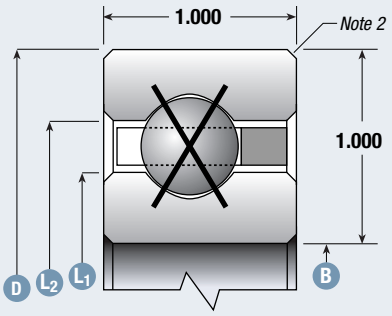
Brass snapover separator standard
1/2″ balls



Std.Part No.: **SG___CPO**

Type X Four-Point Contact

Brass snapover separator standard
1/2″ balls



Std.Part No.: **SG___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES					CAPACITIES IN POUNDS										APPROX WEIGHT POUNDS
						TYPE A				TYPE C & X		TYPE X				
						RADIAL		THRUST		RADIAL		THRUST		MOMENT (Lbs-in)		
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	C'BORE DIA L_3	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	STATIC	DYN	
SG040	4.000	6.000	4.742	5.258	5.491	9,480	4,722	27,363	13,634	8,210	4,508	20,524	11,262	20,53	11,261	3.6
SG042	4.250	6.250	4.992	5.508	5.741	9,955	4,880	28,733	14,097	8,212	4,508	20,520	11,264	21,552	11,821	3.8
SG045	4.500	6.500	5.242	5.758	5.989	10,430	5,032	30,104	14,539	8,764	4,702	21,892	11,753	24,087	12,923	4.0
SG047	4.750	6.750	5.492	6.008	6.239	10,902	5,189	31,467	14,973	9,306	4,898	23,263	12,234	26,745	14,074	4.1
SG050	5.000	7.000	5.742	6.258	6.489	11,374	5,332	32,830	15,402	9,853	5,081	24,621	12,714	29,557	15,255	4.3
SG055	5.500	7.500	6.242	6.758	6.989	12,327	5,635	35,578	16,243	10,402	5,270	25,992	13,183	33,796	17,133	4.7
SG060	6.000	8.000	6.742	7.258	7.489	13,272	5,912	38,304	17,062	11,493	5,632	28,733	14,099	40,221	19,720	5.1
SG065	6.500	8.500	7.242	7.758	7.987	14,225	6,196	41,045	17,878	12,040	5,812	30,107	14,533	45,145	21,795	5.4
SG070	7.000	9.000	7.742	8.258	8.487	15,161	6,461	43,782	18,653	13,132	6,168	32,837	15,401	52,534	24,635	5.8
SG075	7.500	9.500	8.242	8.758	8.987	16,116	6,735	46,518	19,420	13,681	6,330	34,204	15,826	58,148	26,902	6.1
SG080	8.000	10.000	8.742	9.258	9.485	17,069	6,996	49,250	20,181	14,773	6,664	36,943	16,656	66,483	29,987	6.5
SG090	9.000	11.000	9.742	10.258	10.485	18,963	7,509	54,727	21,648	16,422	7,150	41,044	17,879	82,083	35,736	7.2
SG100	10.000	12.000	10.742	11.258	11.483	20,855	7,990	60,192	23,064	18,068	7,627	45,148	19,043	99,326	41,880	7.9
SG110	11.000	13.000	11.742	12.258	12.481	22,753	8,473	65,664	24,445	19,704	8,078	49,255	20,180	118,202	48,423	8.6
SG120	12.000	14.000	12.742	13.258	13.481	24,640	8,933	71,147	25,788	21,347	8,513	53,355	21,283	138,706	55,334	9.3
SG140	14.000	16.000	14.742	15.258	15.478	28,431	9,822	82,083	28,362	24,623	9,363	61,561	23,412	184,702	70,231	10.8
SG160	16.000	18.000	16.742	17.258	17.474	32,222	10,683	93,022	30,833	27,912	10,181	69,773	25,452	237,203	86,533	12.3
SG180	18.000	20.000	18.742	19.258	19.472	36,021	11,502	104,003	33,202	31,193	10,963	77,981	27,412	296,302	104,101	13.7
SG200	20.000	22.000	20.742	21.258	21.468	39,812	12,302	114,902	35,491	34,471	11,722	86,183	29,303	362,002	123,103	15.8
SG250	25.000	27.000	25.742	26.258	26.461	49,282	14,181	142,302	40,921	42,683	13,512	106,702	33,781	554,904	175,702	19.5
SG300	30.000	32.000	30.742	31.258	31.451	58,763	15,941	169,603	46,023	50,891	15,194	127,204	37,981	788,803	235,503	23.3
SG350	35.000	37.000	35.742	36.258	36.440	68,242	17,613	197,002	50,844	59,102	16,793	147,703	41,9711	,064,002	302,202	27.1

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .080.

Note 3. Race Width Tolerance—
Single Type C, X, A Bearings:
Up thru 12" Bearing Bore +.000 –.005
Over 12" Bearing Bore +.000 –.010

Type A Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KG040ARO	**SG040ARO**	KG090ARO	**SG090ARO**
KG042ARO	**SG042ARO**	KG100ARO	**SG100ARO**
KG045ARO	**SG045ARO**	KG110ARO	**SG110ARO**
KG047ARO	**SG047ARO**	KG120ARO	**SG120ARO**
KG050ARO	**SG050ARO**	KG140ARO	**SG140ARO**
KG055ARO	**SG055ARO**	KG160ARO	**SG160ARO**
KG060ARO	**SG060ARO**	KG180ARO	**SG180ARO**
KG065ARO	**SG065ARO**	KG200ARO	**SG200ARO**
KG070ARO	**SG070ARO**	KG250ARO	**SG250ARO**
KG075ARO	**SG075ARO**	KG300ARO	**SG300ARO**
KG080ARO	**SG080ARO**	KG350ARO	**SG350ARO**

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KG040CPO	**SG040CPO**	KG090CPO	**SG090CPO**
KG042CPO	**SG042CPO**	KG100CPO	**SG100CPO**
KG045CPO	**SG045CPO**	KG110CPO	**SG110CPO**
KG047CPO	**SG047CPO**	KG120CPO	**SG120CPO**
KG050CPO	**SG050CPO**	KG140CPO	**SG140CPO**
KG055CPO	**SG055CPO**	KG160CPO	**SG160CPO**
KG060CPO	**SG060CPO**	KG180CPO	**SG180CPO**
KG065CPO	**SG065CPO**	KG200CPO	**SG200CPO**
KG070CPO	**SG070CPO**	KG250CPO	**SG250CPO**
KG075CPO	**SG075CPO**	KG300CPO	**SG300CPO**
KG080CPO	**SG080CPO**	KG350CPO	**SG350CPO**

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
KG040XPO	**SG040XPO**	KG090XPO	**SG090XPO**
KG042XPO	**SG042XPO**	KG100XPO	**SG100XPO**
KG045XPO	**SG045XPO**	KG110XPO	**SG110XPO**
KG047XPO	**SG047XPO**	KG120XPO	**SG120XPO**
KG050XPO	**SG050XPO**	KG140XPO	**SG140XPO**
KG055XPO	**SG055XPO**	KG160XPO	**SG160XPO**
KG060XPO	**SG060XPO**	KG180XPO	**SG180XPO**
KG065XPO	**SG065XPO**	KG200XPO	**SG200XPO**
KG070XPO	**SG070XPO**	KG250XPO	**SG250XPO**
KG075XPO	**SG075XPO**	KG300XPO	**SG300XPO**
KG080XPO	**SG080XPO**	KG350XPO	**SG350XPO**

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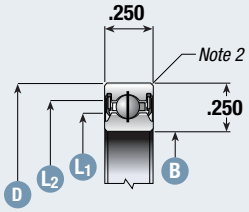
Type C Radial Contact

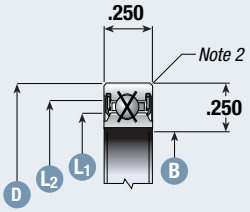
Brass Snapover separator standard
3/8" balls



Std.Part No.: **JSA___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
3/8" balls



Std.Part No.: **JSA___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES				CAPACITIES IN POUNDS						TYPE C	TYPE X	TORQUE MAX NO LOAD (Oz-In)	APPROX WEIGHT POUNDS
					TYPE C & X		TYPE X							
					RADIAL		THRUST		MOMENT (Lbs-in)					
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	STATIC	DYN	STATIC	DYN	STATIC	DYN	LIMITING SPEEDS (RPM)	LIMITING SPEEDS (RPM)		
JSA020	2.000	2.500	2.148	2.356	684	326	1,712	793	770	361			6	.10
JSA025	2.500	3.000	2.648	2.856	832	360	2,095	912	1,158	509	CONSULT	CONSULT	8	.12
JSA030	3.000	3.500	3.148	3.356	992	413	2,475	1,010	1,604	662	FACTORY	FACTORY	12	.14
JSA035	3.500	4.000	3.648	3.856	1,141	456	2,857	1,112	2,138	842			16	.17
JAS040	4.000	4.500	4.148	4.356	1,292	481	3,223	1,214	2,740	1,031			20	.19
JAS042	4.250	4.750	4.398	4.606	1,374	500	3,412	1,264	3,072	1,133			24	.20
JSA045	4.500	5.000	4.648	4.856	1,446	524	3,602	1,312	3,423	1,244			28	.21
JSA047	4.750	5.250	4.898	5.106	1,520	541	3,795	1,356	3,798	1,350			32	.22
JSA050	5.000	5.500	5.148	5.356	1,591	562	3,982	1,405	4,182	1,464			36	.23
JSA055	5.500	6.000	5.648	5.856	1,752	599	4,367	1,488	5,022	1,703			44	.25
JSA060	6.000	6.500	6.148	6.356	1,903	636	4,747	1,578	5,931	1,964			52	.28
JSA065	6.500	7.000	6.648	6.856	2,051	664	5,122	1,652	6,910	2,236			61	.30

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .025.

Note 3. Race Width Tolerance— +.000 –.005 Single Type C, X, A Bearings

The arrow on the OD of the bearing should be used to verify correct bearing orientation in relation to the retainer. When the bearing is installed horizontally, up to 45° of the vertical axis, the arrow should be pointing "UP". This is recommended for proper retainer function.

- *Standard seals are Buna N rubber-metal reinforced*
- *Standard lubricant is 20–30% fill of MIL-G-81322 grease*

Type C Interchange

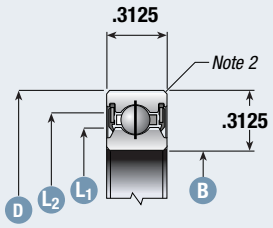
KAYDON Part No.	SILVERTHIN Part No.
JA040CPO	**JSA020CPO**
JA025CPO	**JSA025CPO**
JA030CPO	**JSA030CPO**
JA035CPO	**JSA035CPO**
JA040CPO	**JSA040CPO**
JA042CPO	**JSA042CPO**
JA045CPO	**JSA045CPO**
JA047CPO	**JSA047CPO**
JA050CPO	**JSA050CPO**
JA055CPO	**JSA055CPO**
JA060CPO	**JSA060CPO**
JA065CPO	**JSA065CPO**

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.
JA040XPO	**JSA020XPO**
JA025XPO	**JSA025XPO**
JA030XPO	**JSA030XPO**
JA035XPO	**JSA035XPO**
JA040XPO	**JSA040XPO**
JA045XPO	**JSA045XPO**
JA042XPO	**JSB042XPO**
JA047XPO	**JSA047XPO**
JA050XPO	**JSA050XPO**
JA055XPO	**JSA055XPO**
JA060XPO	**JSA060XPO**
JA065XPO	**JSA065XPO**

Type C Radial Contact

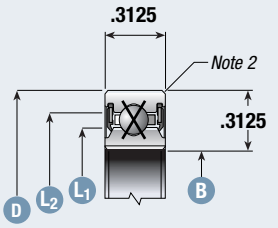
Brass Snapover separator standard
3/8″ balls



Std.Part No.: **JSB___CP0**

Type X Four-Point Contact

Brass Snapover separator standard
3/8″ balls



Std.Part No.: **JSB___XP0**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES				CAPACITIES IN POUNDS						TYPE C	TYPE X	TORQUE MAX NO LOAD (Oz-In)	APPROX WEIGHT POUNDS
					TYPE C & X		TYPE X							
					RADIAL		THRUST		MOMENT (Lbs-in)					
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	STATIC	DYN	STATIC	DYN	STATIC	DYN	LIMITING SPEEDS (RPM)	LIMITING SPEEDS (RPM)		
JSB020	2.000	2.625	2.136	2.362	933	451	2,348	1,132	1,080	523	CONSULT	CONSULT	6	.15
JSB025	2.500	3.125	2.636	2.862	1,141	522	2,847	1,293	1,602	736	FACTORY	FACTORY	8	.19
JSB030	3.000	3.625	3.136	3.362	1,345	588	3,355	1,443	2,222	968			12	.22
JSB035	3.500	4.125	3.636	3.862	1,540	634	3,866	1,597	2,941	1,215			16	.27
JSB040	4.000	4.625	4.136	4.362	1,751	696	4,379	1,721	3,773	1,493			20	.30
JSB042	4.250	4.875	4.386	4.662	1,832	713	4,573	1,785	4,175	1,627			24	.31
JSB045	4.500	5.125	4.636	4.862	1,957	748	4,883	1,855	4,690	1,789			28	.34
JSB047	4.750	5.375	4.886	5.162	2,033	760	5,084	1,900	5,141	1,934			32	.35
JSB050	5.000	5.625	5.136	5.362	2,158	791	5,386	1,982	5,722	2,105			36	.37
JSB055	5.500	6.125	5.636	5.862	2,364	849	5,896	2,103	6,852	2,441			44	.40
JSB060	6.000	6.625	6.136	6.362	2,562	898	6,403	2,223	8,086	2,800			52	.44
JSB065	6.500	7.125	6.636	6.862	2,761	932	6,913	2,347	9,414	3,186			61	.47

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .040.

Note 3. Race Width Tolerance— +.000 –.005 Single Type C, X, A Bearings

The arrow on the OD of the bearing should be used to verify correct bearing orientation in relation to the retainer. When the bearing is installed horizontally, up to 45° of the vertical axis, the arrow should be pointing "UP". This is recommended for proper retainer function.

- *Standard seals are Buna N rubber-metal reinforced*
- *Standard lubricant is 20–30% fill of MIL-G-81322 grease*

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.
JB040CP0	**JSB020CP0**
JB025CP0	**JSB025CP0**
JB030CP0	**JSB030CP0**
JB035CP0	**JSB035CP0**
JB040CP0	**JSB040CP0**
JB042CP0	**JSB042CP0**
JB045CP0	**JSB045CP0**
JB047CP0	**JSB047CP0**
JB050CP0	**JSB050CP0**
JB055CP0	**JSB055CP0**
JB060CP0	**JSB060CP0**
JB065CP0	**JSB065CP0**

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.
JB040XP0	**JSB020XP0**
JB025XP0	**JSB025XP0**
JB030XP0	**JSB030XP0**
JB035XP0	**JSB035XP0**
JB040XP0	**JSB040XP0**
JB042XP0	**JSB042XP0**
JB045XP0	**JSB045XP0**
JB047XP0	**JSB047XP0**
JB050XP0	**JSB050XP0**
JB055XP0	**JSB055XP0**
JB060XP0	**JSB060XP0**
JB065XP0	**JSB065XP0**

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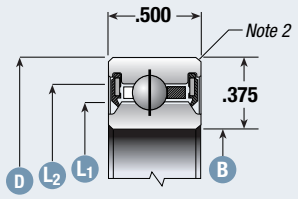
Type C Radial Contact

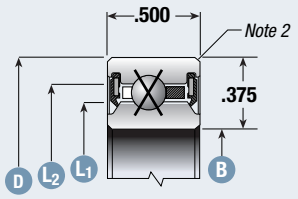
Brass Snapover separator standard
3/8" balls



Std.Part No.: **JSU___CPO**

Type X Four-Point Contact

Brass Snapover separator standard
3/8" balls



Std.Part No.: **JSU___XPO**

SILVERTHIN PART NUMBER	DIMENSIONS IN INCHES				CAPACITIES IN POUNDS						TYPE C	TYPE X	LUB AMT (cc)	TORQUE MAX NO LOAD (Lbs-In)	APPROX WEIGHT POUNDS
					TYPE C & X		TYPE X								
					RADIAL		THRUST		MOMENT (Lbs-in)						
	BORE B	OUTSIDE DIA D	LAND DIA L_1	LAND DIA L_2	STATIC	DYN	STATIC	DYN	STATIC	DYN	LIMITING SPEEDS (RPM)	LIMITING SPEEDS (RPM)			
JSU040	4.000	4.750	4.150	4.547	2,103	881	5,262	2,216	4,608	1,932	CONSULT	CONSULT	2.5	2.9	.55
JSU042	4.250	5.000	4.400	4.797	2,220	923	5,562	2,295	5,145	2,124	FACTORY	FACTORY	2.5	3.2	.58
JSU045	4.500	5.250	4.650	5.047	2,342	957	5,864	2,386	5,718	2,322			3.0	3.5	.61
JSU047	4.750	5.500	4.900	5.295	2,467	986	6,162	2,461	6,320	2,523			3.0	3.9	.65
JSU050	5.000	5.750	5.150	5.545	2,595	1,015	6,467	2,549	6,953	2,732			3.5	4.3	.68
JSU055	5.500	6.250	5.650	6.042	2,832	1,088	7,066	2,691	8,301	3,162			3.5	5.1	.74
JSU060	6.000	6.750	6.150	6.542	3,071	1,144	7,668	2,843	9,772	3,622			3.5	6.1	.81
JSU065	6.500	7.250	6.650	7.037	3,319	1,209	8,273	2,997	11,374	4,111			4.0	7.0	.87
JSU070	7.000	7.750	7.150	7.537	3,558	1,252	8,870	3,138	13,089	4,627			4.5	8.1	.93
JSU075	7.500	8.250	7.650	8.037	3,796	1,317	9,472	3,271	14,912	5,150			4.5	9.2	.99
JSU080	8.000	8.750	8.150	8.537	4,033	1,368	10,076	3,417	16,878	5,713			5.0	10.4	1.06
JSU090	9.000	9.750	9.150	9.535	4,510	1,471	11,272	3,675	21,132	6,891			5.5	13.0	1.18
JSU100	10.000	10.750	10.150	10.535	4,991	1,576	12,479	3,933	25,888	8,162			6.0	16.0	1.31
JSU110	11.000	11.750	11.150	11.535	5,474	1,671	13,683	4,181	31,110	9,511			6.5	19.2	1.43
JSU120	12.000	12.750	12.150	12.535	5,952	1,776	14,884	4,428	36,832	10,944			7.0	22.8	1.56

Note 1. Load capacities shown in this catalog are not additive

Note 2. The maximum shaft or housing fillet radius that the bearing corners will clear for this series is .015.

Note 3. Race Width Tolerance— +.000 –.005 Single Type C, X, A Bearings

The arrow on the OD of the bearing should be used to verify correct bearing orientation in relation to the retainer. When the bearing is installed horizontally, up to 45° of the vertical axis, the arrow should be pointing "UP". This is recommended for proper retainer function.

- *Standard seals are Buna N rubber-metal reinforced*
- *Standard lubricant is 20–30% fill of MIL-G-81322 grease*

Type C Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
JU040CPO	**JSU040CPO**	JU070CPO	**JSU070CPO**
JU042CPO	**JSU042CPO**	JU075CPO	**JSU075CPO**
JU045CPO	**JSU045CPO**	JU080CPO	**JSU080CPO**
JU047CPO	**JSU047CPO**	JU090CPO	**JSU090CPO**
JU050CPO	**JSU050CPO**	JU100CPO	**JSU100CPO**
JU055CPO	**JSU055CPO**	JU110CPO	**JSU110CPO**
JU060CPO	**JSU060CPO**	JU120CPO	**JSU120CPO**
JU065CPO	**JSU065CPO**		

Type X Interchange

KAYDON Part No.	SILVERTHIN Part No.	KAYDON Part No.	SILVERTHIN Part No.
JU040XPO	**JSU040XPO**	JU070XPO	**JSU070XPO**
JU042XPO	**JSU042XPO**	JU075XPO	**JSU075XPO**
JU045XPO	**JSU045XPO**	JU080XPO	**JSU080XPO**
JU047XPO	**JSU047XPO**	JU090XPO	**JSU090XPO**
JU050XPO	**JSU050XPO**	JU100XPO	**JSU100XPO**
JU055XPO	**JSU055XPO**	JU110XPO	**JSU110XPO**
JU060XPO	**JSU060XPO**	JU120XPO	**JSU120XPO**
JU065XPO	**JSU065XPO**		

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Type C
Precision Class 1 (Ref. ABEC 1F)

For standard clearance bearings only

Bearing Size (All Sizes)	Bearing Diameters		Radial & Axial Runout		Rotating Shaft or Duplex F Mounting		Stationary Shaft or Duplex B Mounting				Standard Bearing Diametral Clearance*	
	Bearing Bore	Bearing O.D.	Inner Race Radial & Axial	Outer Race Radial & Axial	Shaft Diameter	Housing Bore	Shaft Diameter		Housing Bore			
	Nominal +.0000	Nominal +.0000			Nominal +.0000	Nominal +.0000	Nominal		Nominal		Before Installation	
10	–.0004	–.0005	.0005	.0008	+.0004	+.0005	–.0004	–.0008	–.0005	–.0010	.0010	.0016
15	–.0005	–.0005	.0006	.0008	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0012	.0018
17	–.0006	–.0005	.0008	.0010	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0024
020	–.0006	–.0005	.0008	.0010	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0024
025	–.0006	–.0005	.0008	.0010	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0024
030	–.0006	–.0006	.0008	.0010	+.0006	+.0006	–.0006	–.0012	–.0006	–.0012	.0012	.0024
035	–.0008	–.0006	.0010	.0012	+.0008	+.0006	–.0008	–.0016	–.0006	–.0012	.0016	.0028
040	–.0008	–.0006	.0010	.0012	+.0008	+.0006	–.0008	–.0016	–.0006	–.0012	.0016	.0028
042	–.0008	–.0008	.0010	.0014	+.0008	+.0008	–.0008	–.0016	–.0008	–.0016	.0016	.0028
045	–.0008	–.0008	.0010	.0014	+.0008	+.0008	–.0008	–.0016	–.0008	–.0016	.0016	.0028
047	–.0010	–.0008	.0008	.0014	+.0010	+.0008	–.0010	–.0020	–.0008	–.0016	.0020	.0034
050	–.0010	–.0008	.0012	.0014	+.0010	+.0008	–.0010	–.0020	–.0008	–.0016	.0020	.0034
055	–.0010	–.0010	.0012	.0016	+.0010	+.0010	–.0010	–.0020	–.0010	–.0020	.0020	.0034
060	–.0010	–.0010	.0012	.0016	+.0010	+.0010	–.0010	–.0020	–.0010	–.0020	.0020	.0034
065	–.0010	–.0010	.0012	.0016	+.0010	+.0010	–.0010	–.0020	–.0010	–.0020	.0020	.0034
070	–.0010	–.0012	.0012	.0016	+.0010	+.0012	–.0010	–.0020	–.0012	–.0024	.0020	.0034
075	–.0012	–.0012	.0016	.0018	+.0012	+.0012	–.0012	–.0024	–.0012	–.0024	.0024	.0042
080	–.0012	–.0012	.0016	.0018	+.0012	+.0012	–.0012	–.0024	–.0012	–.0024	.0024	.0042
090	–.0012	–.0012	.0016	.0018	+.0012	+.0012	–.0012	–.0024	–.0012	–.0024	.0024	.0042
100	–.0014	–.0014	.0018	.0020	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0048
110	–.0014	–.0014	.0018	.0020	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0048
120	–.0014	–.0014	.0018	.0020	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0048
140	–.0016	–.0016	.0018	.0020	+.0016	+.0016	–.0016	–.0032	–.0016	–.0032	.0032	.0052
160	–.0018	–.0018	.0018	.0020	+.0018	+.0018	–.0018	–.0036	–.0018	–.0036	.0036	.0056
180	–.0018	–.0018	.0020	.0020	+.0018	+.0018	–.0018	–.0036	–.0018	–.0036	.0036	.0056
200	–.0020	–.0020	.0020	.0020	+.0020	+.0020	–.0020	–.0040	–.0020	–.0040	.0040	.0060
250	–.0030	–.0030	.0020	.0020	+.0030	+.0030	–.0030	–.0060	–.0030	–.0060	.0060	.0080
300	–.0030	–.0030	.0020	.0020	+.0030	+.0030	–.0030	–.0060	–.0030	–.0060	.0060	.0080
350	–.0040	–.0040	.0020	.0020	+.0040	+.0040	–.0040	–.0080	–.0040	–.0080	.0080	.0100

- Tolerances for shaft and housing are for steel material under normal ambient conditions
- Diametral clearance after installation could vary significantly if bearing, housing, and shaft tolerances are at either end of their range.
- Race Width Tolerance Single Type C, X, A Bearings:
  Up thru 12″ Bearing Bore +.000 –.005
  Over 12″ Bearing Bore +.000 –.010

Type A & X
Precision Class 1 (Ref. ABEC 1F)

For standard clearance bearings only

Bearing Size (All Sizes)	Bearing Diameters		Radial & Axial Runout		Rotating Shaft or Duplex F Mounting		Stationary Shaft or Duplex B Mounting				Standard Bearing Diametral Clearance* Type X Only	
	Bearing Bore	Bearing O.D.	Inner Race Radial & Axial	Outer Race Radial & Axial	Shaft Diameter	Housing Bore	Shaft Diameter		Housing Bore			
	Nominal +.0000	Nominal +.0000			Nominal +.0000	Nominal +.0000	Nominal		Nominal		Before Installation	
10	–.0004	–.0005	.0003	.0004	+.0004	+.0005	–.0004	–.0008	–.0005	–.0010	.0010	.0015
15	–.0005	–.0005	.0004	.0004	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0012	.0017
17	–.0006	–.0005	.0005	.0005	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0022
020	–.0006	–.0005	.0005	.0005	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0022
025	–.0006	–.0005	.0005	.0005	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0022
030	–.0006	–.0006	.0006	.0006	+.0006	+.0006	–.0006	–.0012	–.0006	–.0012	.0012	.0022
035	–.0008	–.0006	.0006	.0006	+.0008	+.0006	–.0008	–.0016	–.0006	–.0012	.0016	.0026
040	–.0008	–.0006	.0006	.0006	+.0008	+.0006	–.0008	–.0016	–.0006	–.0012	.0016	.0026
042	–.0008	–.0008	.0008	.0008	+.0008	+.0008	–.0008	–.0016	–.0008	–.0016	.0016	.0026
045	–.0008	–.0008	.0008	.0008	+.0008	+.0008	–.0008	–.0016	–.0008	–.0016	.0016	.0026
047	–.0010	–.0008	.0008	.0008	+.0010	+.0008	–.0010	–.0020	–.0008	–.0016	.0020	.0030
050	–.0010	–.0008	.0008	.0008	+.0010	+.0008	–.0010	–.0020	–.0008	–.0016	.0020	.0030
055	–.0010	–.0010	.0010	.0010	+.0010	+.0010	–.0010	–.0020	–.0010	–.0020	.0020	.0030
060	–.0010	–.0010	.0010	.0010	+.0010	+.0010	–.0010	–.0020	–.0010	–.0020	.0020	.0030
065	–.0010	–.0010	.0010	.0010	+.0010	+.0010	–.0010	–.0020	–.0010	–.0020	.0020	.0030
070	–.0010	–.0012	.0010	.0010	+.0010	+.0012	–.0010	–.0020	–.0012	–.0024	.0020	.0030
075	–.0012	–.0012	.0012	.0012	+.0012	+.0012	–.0012	–.0024	–.0012	–.0024	.0024	.0034
080	–.0012	–.0012	.0012	.0012	+.0012	+.0012	–.0012	–.0024	–.0012	–.0024	.0024	.0034
090	–.0012	–.0012	.0012	.0012	+.0012	+.0012	–.0012	–.0024	–.0012	–.0024	.0024	.0034
100	–.0014	–.0014	.0014	.0014	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0038
110	–.0014	–.0014	.0014	.0014	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0038
120	–.0014	–.0014	.0014	.0014	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0038
140	–.0014	–.0014	.0014	.0014	+.0014	+.0014	–.0014	–.0028	–.0014	–.0028	.0028	.0038
160	–.0016	–.0016	.0016	.0016	+.0016	+.0016	–.0016	–.0032	–.0016	–.0032	.0032	.0042
180	–.0016	–.0016	.0016	.0016	+.0016	+.0016	–.0016	–.0032	–.0016	–.0032	.0032	.0042
200	–.0018	–.0018	.0018	.0018	+.0018	+.0018	–.0018	–.0036	–.0018	–.0036	.0036	.0046
220	–.0018	–.0018	.0018	.0018	+.0018	+.0018	–.0018	–.0036	–.0018	–.0036	.0036	.0046
250	–.0018	–.0018	.0018	.0018	+.0018	+.0018	–.0018	–.0036	–.0018	–.0036	.0036	.0046
300	–.0018	–.0018	.0018	.0018	+.0018	+.0018	–.0018	–.0036	–.0018	–.0036	.0036	.0046
350	–.0020	–.0020	.0020	.0020	+.0020	+.0020	–.0020	–.0040	–.0020	–.0040	.0040	.0050

- Tolerances for shaft and housing are for steel material under normal ambient conditions
- Diametral clearance after installation could vary significantly if bearing, housing, and shaft tolerances are at either end of their range.
- Total Width Tolerance Duplexed Type A Bearings:
  - Up thru 2″ Bearing Bore +.000 –.020
  - Over 2″ thru 5″ Bore +.000 –.030
  - Over 5″ thru 14″ Bore +.000 –.040
  - Over 14″ Bore +.000 –.050
- Race Width Tolerance Single Type C, X, A Bearings:
  - Up thru 12″ Bearing Bore +.000 –.005
  - Over 12″ Bearing Bore +.000 –.010

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Type A,C & X
Precision Class 3 (Ref. ABEC 3F)

For standard clearance bearings only

Bearing Size (All Sizes)	Bearing Diameters		Radial & Axial Runout		Rotating Shaft or Duplex F Mounting		Stationary Shaft or Duplex B Mounting				Standard Bearing Diametral Clearance* Type X & C Only	
	Bearing Bore	Bearing O.D.	Inner Race Radial & Axial	Outer Race Radial & Axial	Shaft Diameter	Housing Bore	Shaft Diameter		Housing Bore			
	Nominal +.0000	Nominal +.0000			Nominal +.0000	Nominal +.0000	Nominal		Nominal		Before Installation	
10	–.0002	–.0003	.0003	.0004	+.0002	+.0003	–.0002	–.0004	–.0003	–.0006	.0007	.0011
15	–.0003	–.0003	.0004	.0004	+.0003	+.0003	–.0003	–.0006	–.0003	–.0006	.0008	.0012
17	–.0004	–.0004	.0004	.0005	+.0004	+.0004	–.0004	–.0008	–.0004	–.0008	.0008	.0018
020	–.0004	–.0004	.0004	.0005	+.0004	+.0004	–.0004	–.0008	–.0004	–.0008	.0008	.0018
025	–.0004	–.0004	.0004	.0005	+.0004	+.0004	–.0004	–.0008	–.0004	–.0008	.0008	.0018
030	–.0004	–.0004	.0004	.0006	+.0004	+.0004	–.0004	–.0008	–.0004	–.0008	.0008	.0018
035	–.0005	–.0004	.0005	.0006	+.0005	+.0004	–.0005	–.0010	–.0004	–.0008	.0010	.0020
040	–.0005	–.0004	.0005	.0006	+.0005	+.0004	–.0005	–.0010	–.0004	–.0008	.0010	.0020
042	–.0005	–.0005	.0005	.0008	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0020
045	–.0005	–.0005	.0005	.0008	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0020
047	–.0006	–.0005	.0006	.0008	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0022
050	–.0006	–.0005	.0006	.0008	+.0006	+.0005	–.0006	–.0012	–.0005	–.0010	.0012	.0022
055	–.0006	–.0006	.0006	.0009	+.0006	+.0006	–.0006	–.0012	–.0006	–.0012	.0012	.0022
060	–.0006	–.0006	.0006	.0009	+.0006	+.0006	–.0006	–.0012	–.0006	–.0012	.0012	.0022
065	–.0006	–.0006	.0006	.0009	+.0006	+.0006	–.0006	–.0012	–.0006	–.0012	.0012	.0022
070	–.0006	–.0007	.0006	.0010	+.0006	+.0007	–.0006	–.0012	–.0007	–.0014	.0014	.0024
075	–.0007	–.0007	.0008	.0010	+.0007	+.0007	–.0007	–.0014	–.0007	–.0014	.0014	.0024
080	–.0007	–.0007	.0008	.0010	+.0007	+.0007	–.0007	–.0014	–.0007	–.0014	.0014	.0024
090	–.0007	–.0007	.0008	.0010	+.0007	+.0007	–.0007	–.0014	–.0007	–.0014	.0014	.0024
100	–.0008	–.0008	.0010	.0012	+.0008	+.0008	–.0008	–.0016	–.0008	–.0016	.0016	.0026
110	–.0008	–.0008	.0010	.0012	+.0008	+.0008	–.0008	–.0016	–.0008	–.0016	.0016	.0026
120	–.0008	–.0009	.0010	.0014	+.0008	+.0009	–.0008	–.0016	–.0009	–.0018	.0018	.0028
140	–.0008	–.0009	.0012	.0014	+.0008	+.0009	–.0008	–.0016	–.0009	–.0018	.0018	.0028
160	–.0009	–.0010	.0014	.0016	+.0009	+.0010	–.0009	–.0018	–.0010	–.0020	.0020	.0030
180	–.0009	–.0010	.0014	.0016	+.0009	+.0010	–.0009	–.0018	–.0010	–.0020	.0020	.0030
200	–.0010	–.0012	.0016	.0018	+.0010	+.0012	–.0010	–.0020	–.0012	–.0024	.0024	.0034

- Tolerances for shaft and housing are for steel material under normal ambient conditions
- Diametral clearance after installation could vary significantly if bearing, housing, and shaft tolerances are at either end of their range.
- Total Width Tolerance—Duplexed Type A Bearings:
  - Up thru 2″ Bearing Bore +.000 –.020
  - Over 2″ thru 5″ Bore +.000 –.030
  - Over 5″ thru 14″ Bore +.000 –.040
  - Over 14″ Bore +.000 –.050
- Race Width Tolerance Single Type C, X, A Bearings:
  - Up thru 12″ Bearing Bore +.000 –.005
  - Over 12″ Bearing Bore +.000 –.010

Type A,C & X
Precision Class 5 (Ref. ABEC 5F)

For standard clearance bearings only

Bearing Size (All Sizes)	Bearing Diameters		Radial & Axial Runout				Rotating Shaft or Duplex F Mounting		Stationary Shaft or Duplex B Mounting				Standard Bearing Diametral Clearance* Type X & C Only	
	Bearing Bore Nominal +.0000	Bearing O.D. Nominal +.0000	Inner Race		Outer Race		Shaft Diameter Nominal +.0000	Housing Bore Nominal +.0000	Shaft Diameter Nominal		Housing Bore Nominal		Before Installation	
			Radial	Axial	Radial	Axial								
10	–.0002	–.0002	.0002,	.0003	.0002,	.0003	+.0002	+.0002	–.0002	–.0004	–.0002	–.0004	.0005	.0009
15	–.0002	–.0002	.0002,	.0003	.0002,	.0003	+.0002	+.0002	–.0002	–.0004	–.0002	–.0004	.0005	.0009
17	–.0003	–.0003	.0002,	.0003	.0003,	.0004	+.0003	+.0003	–.0003	–.0006	–.0003	–.0006	.0006	.0012
020	–.0003	–.0003	.0002,	.0003	.0003,	.0004	+.0003	+.0003	–.0003	–.0006	–.0003	–.0006	.0006	.0012
025	–.0003	–.0003	.0002,	.0003	.0003,	.0004	+.0003	+.0003	–.0003	–.0006	–.0003	–.0006	.0006	.0012
030	–.0003	–.0003	.0002,	.0003	.0004,	.0005	+.0003	+.0003	–.0003	–.0006	–.0003	–.0006	.0006	.0012
035	–.0003	–.0003	.0003,	.0004	.0004,	.0005	+.0003	+.0003	–.0003	–.0006	–.0003	–.0006	.0006	.0012
040	–.0003	–.0003	.0003,	.0004	.0004,	.0005	+.0003	+.0003	–.0003	–.0016	–.0003	–.0006	.0006	.0012
042	–.0003	–.0004	.0003,	.0004	.0004,	.0005	+.0003	+.0004	–.0003	–.0006	–.0004	–.0008	.0008	.0014
045	–.0003	–.0004	.0003,	.0004	.0004,	.0005	+.0003	+.0004	–.0003	–.0006	–.0004	–.0008	.0008	.0014
047	–.0004	–.0004	.0003,	.0004	.0004,	.0005	+.0004	+.0004	–.0004	–.0008	–.0004	–.0008	.0008	.0014
050	–.0004	–.0004	.0003,	.0004	.0004,	.0005	+.0004	+.0004	–.0004	–.0008	–.0004	–.0008	.0008	.0014
055	–.0004	–.0005	.0003,	.0004	.0005,	.0006	+.0004	+.0005	–.0004	–.0008	–.0005	–.0010	.0010	.0016
060	–.0004	–.0005	.0003,	.0004	.0005,	.0006	+.0004	+.0005	–.0004	–.0008	–.0005	–.0010	.0010	.0016
065	–.0004	–.0005	.0003,	.0004	.0005,	.0006	+.0004	+.0005	–.0004	–.0008	–.0005	–.0010	.0010	.0016
070	–.0004	–.0005	.0003,	.0004	.0005,	.0006	+.0004	+.0005	–.0004	–.0008	–.0005	–.0010	.0010	.0016
075	–.0005	–.0005	.0004,	.0005	.0005,	.0006	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0016
080	–.0005	–.0005	.0004,	.0005	.0005,	.0006	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0016
090	–.0005	–.0005	.0004,	.0005	.0005,	.0006	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0016
100	–.0005	–.0005	.0005,	.0006	.0006,	.0007	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0016
110	–.0005	–.0005	.0005,	.0006	.0006,	.0007	+.0005	+.0005	–.0005	–.0010	–.0005	–.0010	.0010	.0016
120	–.0005	–.0006	.0005,	.0006	.0007,	.0008	+.0005	+.0006	–.0005	–.0010	–.0006	–.0012	.0012	.0018
140	–.0006	–.0006	.0005,	.0007	.0007,	.0008	+.0006	+.0006	–.0006	–.0012	–.0006	–.0012	.0012	.0018
160	–.0006	–.0007	.0007,	.0008	.0008,	.0009	+.0006	+.0007	–.0006	–.0012	–.0007	–.0014	.0014	.0020
180	–.0006	–.0007	.0007,	.0008	.0008,	.0009	+.0006	+.0007	–.0006	–.0012	–.0007	–.0014	.0014	.0020
200	–.0007	–.0008	.0008,	.0009	.0009,	.0010	+.0007	+.0008	–.0006	–.0014	–.0007	–.0016	.0014	.0022

- Tolerances for shaft and housing are for steel material under normal ambient conditions
- Diametral clearance after installation could vary significantly if bearing, housing, and shaft tolerances are at either end of their range.
- Total Width Tolerance—Duplexed Type A Bearings:
  - Up thru 2″ Bearing Bore +.000 –.020
  - Over 2″ thru 5″ Bore +.000 –.030
  - Over 5″ thru 14″ Bore +.000 –.040
  - Over 14″ Bore +.000 –.050
- Race Width Tolerance Single Type C, X, A Bearings:
  - Up thru 12″ Bearing Bore +.000 –.005
  - Over 12″ Bearing Bore +.000 –.010

Precision Thin Section Bearings Are Special

The Silverthin™ Series are manufactured to industry standard sizes. The bearing widths and sections (distance from bore to outside diameter) in each series remains constant regardless of the change in bore diameter.

Inspection

Due to the large diameters and thin sections of these bearing products, it is necessary to address measurement and inspection techniques. To accurately measure the bore and outside diameters of thin section bearings, a specific procedure must be followed.

Appropriate measuring equipment must be used which will allow the inspector to take 3 to 5 readings around the circumference which are then averaged to determine the true measurement of the bearing in the free state (unmounted). This procedure allows for the inherent out-of-roundness these bearings will exhibit.

When measuring these bearings, special care must be exercised to ensure neither the bearing weight or pressure from the measuring equipment affects the measurements.

Installation

If thin section bearings are being installed into a housing, pressure should be applied only on the outer ring. Bearings to be installed on a shaft should be pushed on the inner ring. Since the majority of Silverthin bearings are open (without seals), a clean, contaminant-free installation area is advised.

Lubrication

Rolling element anti-friction bearings rely on ball and raceway surface lubrication. A thin film of oil or grease should be used. Be sure not to contaminate the lubricant used in the bearings. Our standard open (unsealed) bearings are shipped with only a light oil as a corrosion inhibitor. You must lubricate these bearings with the appropriate grease or oil for your application. Sealed bearings are shipped as standard practice with 20% - 30% fill of Mil-G-81322 grease.

Load Ratings

Information listed in this catalog such as load ratings and bearing dimensional data has been compiled from industry standard data as well as ABMA and ANSI information and formulas. Technical information and ratings have been modified from empirical data and test data from Silverthin.™ Load capacities show in the catalog are not additive. For combined radial and axial loading an equivalent radial loading must be calculated.

Housing & Shaft Fits

Thin section bearings are affected by the tolerance, roundness, and expansion & contraction rates of the housing & shafts used to mount these bearings. The "Precision tolerances & Recommended Fits" shown in this catalog are for bearings with standard diametral clearance and steel shafts & housings. Bearings with special clearances or preloads and those which are mounted in, or have shafts in, materials other than steel, will need special internal clearance consideration to account for different expansion & contraction rates of dissimilar materials.

Silverthin™ Specifications

Races (rings)	AISI 52100 vacuum degassed bearing steel
Heat treatment	Through hardened and stabilized for use at -65 degrees F to +250 degrees F. Please check with factory for operating temperatures for sealed bearings
Balls	AISI 52100, 440C or ceramic (Silicone Nitride)
Seals	Buna-N rubber-metal reinforced
Separators	"A" type - circular pocket G, H, R, U, & F "C" & "X" type - snapover type D, N, P, L, T & F
Diametral Clearance	ABMA standard 26.2
Preloads	ABMA standard 26.2
Internal geometry	ABMA standard 26.2
Identification	All Silverthin™ bearings are marked with part number, lot code and "Silver" on the outside diameter
Cleaning	Immersion and agitation with preservative oil applied.
Packaging	Sealed in plastic and boxed up to 12" bore. Boxing or special packaging as required.
Quality	Operating Groups of Mechatronics Inc. including Silverthin Bearing Group, are registered to the ISO 9001:2000 quality standard. A copy of the registration certificate is available upon request.
Lubrication	Sealed bearings 20% - 30% fill of Mil-G-81322 grease Open bearings are dipped in light oil as a corrosion inhibitor (not intended to be a bearing lubricant)

Thin Dense Chrome Plating

NTDC nodular thin dense chrome plated bearing rings of 52100 steel are designated with an "A" in the Silverthin™ part numbering system. This electro-deposited chrome plating process will not chip, crack or peel under severe stress experienced in bearing raceways. This process increases bearing corrosion resistance, improves surface hardness to the Rc70-Rc78 range which in turn reduces bearing friction and helps retain lubrication.

We apply this plating to our standard 52100 steel inner and outer rings so allowances must be made to standard housing and shaft fits to allow for the plating build up on the exposed surfaces, especially the bore and outside diameter. The plating build up per surface can generally be from .000040 inch to .00015 inch. Contact Silverthin™ Bearing for bore and shaft fits.

Life - Load and Speed (rpm) Formulas

To calculate the theoretical L_{10} life in hours while including application dynamic loading, application speeds (rpm) and defined catalog load capacities (C) use the following industry standard formula.

$$L_{10} = \frac{16{,}667}{S} * \left(\frac{C}{P}\right)^3$$

Using the catalog load capacities where:

C = *dynamic rating in catalog*

P = *application applied load*

S = *application speed in RPM*

L_{10} = *theoretical bearing L_{10} life in hours*

ABMA – Industry Radial Capacity formula

Dynamic load ratings in catalog (C_r) are derived using the following Industry standard ABMA listed formula.

$$C_r = fcm\,(i * \cos\alpha)^{.7} * Z^{2/3} * Dw^{1.8}$$

Where:

C_r = *basic radial dynamic load rating*

fcm = *factor for material, geometry, tolerance, quality, and race finish*

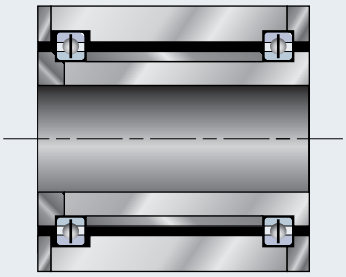
Dw = *ball diameter in inches*

Z = *number of balls per row*

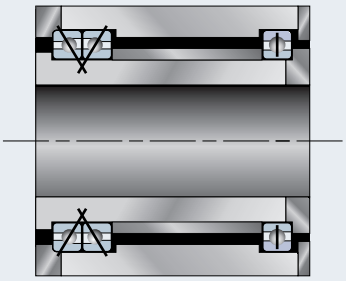
i = *number of rows of balls*

α = *nominal contact angle of the bearing in degrees*

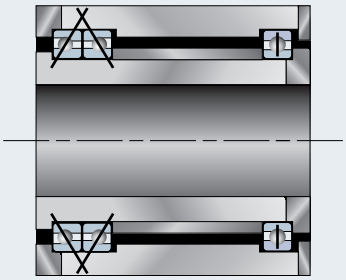
Mounting - Shaft And Housing Interfaces



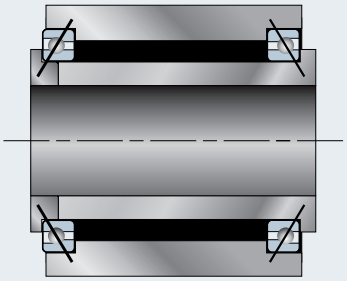
"C" type radial loading with one floating bearing



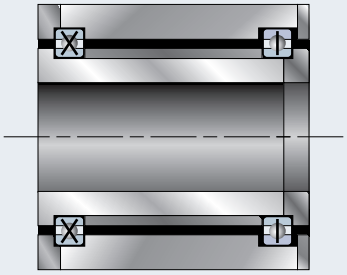
"A" type "F" pair & floating "C" type mounting



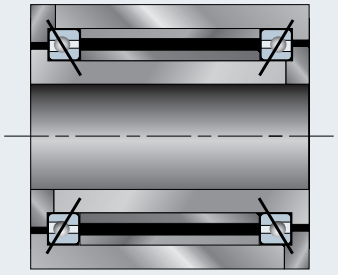
"A" type "B" pair "C" type radial thrust floating



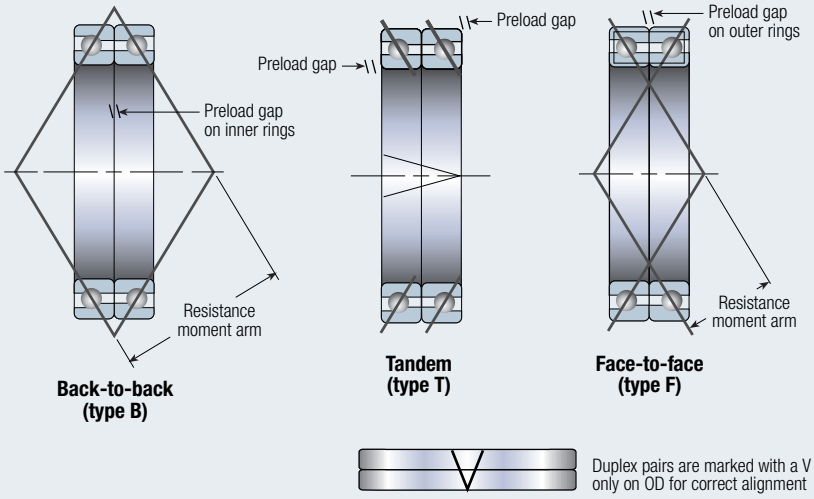
Back-to-back mounting



"X" type & floating "C" type mounting
reversing thrust load & radial loads



Face-to-face mounting



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Mechatronics Inc. is a leading sales, distribution, manufacturing, and contract manufacturing corporation with a number of operating groups. Mechatronics ISO 9001:2000 registered operating groups are respected by customers and vendors around the world. Our corporate diversification has enabled us to achieve consistent growth in all markets for over 28 years.

National Precision Bearing Group is a leading national supplier of precision miniature ball bearings, aircraft bearings and industrial bearings to a worldwide market. This group operates a class 1000 clean room and relubrication facility to support the needs of their aerospace, medical, dental, computer and industrial customer requirements.

Mechatronics Fan Group is a leading source of AC and DC axial cooling fans, fan assemblies, fan guards, blowers and motorized impellers to the telecommunications, network equipment, office automation, medical and industrial markets.

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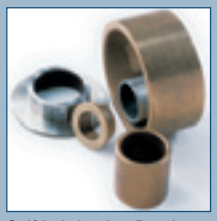
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