



OUR "STORY"



For nearly 20 years, Diamond Case has been changing the rules in linear shafting. We've taken a no-nonsense approach - no fancy packaging or marketing. We've focused on what matters: high-quality product and fast turnaround on request for quotations and on order shipments. Today, distributors everywhere rely on Diamond Case to help cut lead times, increase market share and improve profit margins. They know that we respond to quotes faster than competitors and we deliver high-performance product with the same speed.

Speed doesn't matter if the product quality isn't there. Every Diamond Case shaft meets or exceeds the industry's highest standards. For going on 20 years, Diamond Case customers have relied on our product for superior case hardness, roundness, cylindricity, straightness and consistency of finish. Induction hardened and precision ground, our shafting is produced to the demanding tolerances required by the linear motion industry.



Now we have brought that same focus on product quality and speed of delivery to an entire Diamond Case line of linear products, including; standard precision steel linear bearings, self aligning linear bearings, pillow blocks and shaft end supports. These new linear bearing products are world class in quality and will be available in both the open and closed options. We look forward to changing the rules again - this time in the linear motion products market.

The key to buying from Diamond Case is service. We're not in the business of supplying precision linear motion products. We serve people. Every Diamond Case customer service representative is well versed in your requirements and always strives to meet or exceed your expectations. And the way we look at it, a premium service and product shouldn't cost a premium price. We deliver it all for a price that is suprisingly competitive. Buy from Diamond Case and sacrifice nothing. Fax us. E-mail us. We'll respond. Quickly. Now. Because we're Diamond Case. We deliver the high quality linear motion products you need twice as fast.



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CASE HARDENED LINEAR SHAFTING

Carbon (1060) English Sizes

NOMINAL DIAMETER	TOLERANCE				WEIGHT PER INCH	SURFACE HARDNESS	DEPTH OF HARDNESS	BAR LENGTHS
	GRADE 1 (L)	GRADE 2 (S)	GRADE 3 (N)	GRADE 4 (D)				
1/4	.2495 / .2490	.2490 / .2485			.014	60/65 R.C.	.040	144"
3/8	.3745 / .3740	.3740 / .3735			.031	60/65 R.C.	.040	144"
1/2	.4995 / .4990	.4990 / .4985	.5000 / .4998		.055	60/65 R.C.	.060	184"
5/8	.6245 / .6240	.6240 / .6235	.6250 / .6248		.070	60/65 R.C.	.060	184"
3/4	.7495 / .7490	.7490 / .7485	.7500 / .7498		.125	60/65 R.C.	.060	184"
7/8	.8745 / .8740				.170	60/65 R.C.	.060	208"
1	.9995 / .9990	.9990 / .9985	1.0000 / .9998		.222	60/65 R.C.	.080	208"
1-1/8	1.1245 / 1.1240				.282	60/65 R.C.	.080	208"
1-1/4	1.2495 / 1.2490	1.2490 / 1.2485	1.2500 / 1.2498		.348	60/65 R.C.	.080	208"
1-3/8	1.3745 / 1.3740				.421	60/65 R.C.	.080	208"
1-1/2	1.4994 / 1.4989	1.4989 / 1.4984	1.5000 / 1.4997		.500	60/65 R.C.	.080	208"
1-3/4	1.7495 / 1.7490				.681	60/65 R.C.	.100	208"
2	1.9994 / 1.9987	1.9987 / 1.9980	2.0000 / 1.9997	2.0000 / 2.0003	.890	60/65 R.C.	.100	208"
2-1/4	2.2493 / 2.2486				1.127	60/65 R.C.	.100	208"
2-1/2	2.4993 / 2.4985	2.4985 / 2.4977			1.392	60/65 R.C.	.100	208"
3	2.9992 / 2.9983	2.9983 / 2.9974	3.0000 / 2.9996		2.004	60/65 R.C.	.100	208"
3-1/2	3.4990 / 3.4980				2.728	60/65 R.C.	.100	208"
4	3.9988 / 3.9976	3.9976 / 3.9964			3.565	60/65 R.C.	.100	208"

Carbon (1060) Metric Sizes

METRIC DIAMETER	GRADE M	TOLERANCE	WEIGHT PER INCH	SURFACE HARDNESS	HARDNESS	BAR LENGTHS
8	.3150 / .3146		.022	60/65 R.C.	.040	144"
10	.3937 / .3933		.035	60/65 R.C.	.040	144"
12	.4724 / .4720		.050	60/65 R.C.	.060	184"
14	.5512 / .5508		.069	60/65 R.C.	.060	184"
16	.6299 / .6295		.088	60/65 R.C.	.060	184"
18	.7087 / .7083		.112	60/65 R.C.	.060	184"
20	.7874 / .7869		.138	60/65 R.C.	.060	184"
25	.9843 / .9838		.216	60/65 R.C.	.080	208"
30	1.1811 / 1.1806		.311	60/65 R.C.	.080	208"
32	1.2598 / 1.2593		.349	60/65 R.C.	.081	208"
35	1.3780 / 1.3775		.417	60/65 R.C.	.082	208"
40	1.5748 / 1.5743		.553	60/65 R.C.	.080	208"
45	1.7717 / 1.7710		.698	60/65 R.C.	.080	208"
50	1.9685 / 1.9679		.864	60/65 R.C.	.100	208"
60	2.3622 / 2.3615		1.240	60/65 R.C.	.100	208"
63	2.4803 / 2.4799		1.343	60/65 R.C.	.100	208"
80	3.1496 / 3.1489		2.210	60/65 R.C.	.100	208"
100	3.9370 / 3.9363		3.397	60/65 R.C.	.100	208"

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CASE HARDENED LINEAR SHAFTING

Stainless (440C) English Sizes

NOMINAL DIAMETER	TOLERANCE		WEIGHT PER/INCH	SURFACE HARDNESS	DEPTH OF HARDNESS	BAR LENGTHS
	S.S. GR-1(L)	S.S. GR-2 (S)				
1/2	.4995 / .4990	.4990 / .4985	.055	50/550R.C	.060	184"
5/8	.6245 / .6240	.6240 / .6235	.086	50/550R.C	.060	184"
3/4	.7495 / .7490	.7490 / .7485	.125	50/550R.C	.060	184"
1	.9995 / .9990	.9990 / .9985	.222	50/550R.C	.080	208"
1-1/4	1.2495 / 1.2490	1.2490 / 1.2485	.348	50/550R.C	.080	208"
1-1/2	1.4994 / 1.4989	1.4989 / 1.4984	.500	50/550R.C	.080	208"
2	1.9994 / 1.9987	1.9987 / 1.9980	.890	50/550R.C	.100	208"

Diamond Case Linear Shafting Specifications:

- ◆ **Material-** 1060 or 440C stainless.
- ◆ **Dimensional Tolerance-** See previous page.
- ◆ **Roundness-** Superior.
- ◆ **Cylindricity-** High.
- ◆ **Straightness-** .001/.002 TIR cumulative.
- ◆ **Surface Finish-** 8 RMS or better.
- ◆ **Case Hardness-** See previous page.
- ◆ **Depth of Hardness-** See previous page.

Diamond Case Linear Shafting Deliverables:

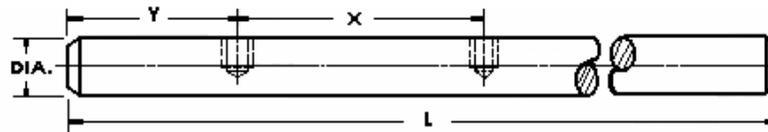
- ◆ World class quality.
- ◆ Delivery performance second to none.
- ◆ Virtually all orders shipped same or next day.
- ◆ Customer service requests answered immediately.
- ◆ No need to wait for your answers.
- ◆ ISO 9001:2000

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Stainless(440C) & Carbon(1060) PreDrilled English Sizes

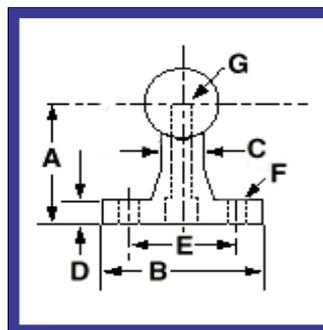
NOMINAL DIAMETER	TOLERANCE GRADE 1 (L)	Y-SPACING WITHIN 1/32	X-SPACING WITHIN 1/64	WEIGHT PER INCH	SURFACE HARDNESS		DEPTH OF HARDNESS	BAR LENGTHS
					CARBON	STAINLESS		
1/2	.4995 / .4990	2	4	.055	60/65 R.C.	50/55 R.C.	.060	184"
5/8	.6245 / .6240	2	4	.070	60/65 R.C.	50/55 R.C.	.060	184"
3/4	.7495 / .7490	3	6	.125	60/65 R.C.	50/55 R.C.	.060	184"
1	.9995 / .9990	3	6	.222	60/65 R.C.	50/55 R.C.	.080	208"
1-1/4	1.2495 / 1.2490	3	6	.348	60/65 R.C.	50/55 R.C.	.080	208"
1-1/2	1.4994 / 1.4989	4	8	.500	60/65 R.C.	50/55 R.C.	.080	208"
2	1.9994 / 1.9987	4	8	.890	60/65 R.C.	50/55 R.C.	.100	208"



Standard Aluminum PreDrilled English Support Rails-SR

NOMINAL DIAMETER	PART NUMBER	A +/- .002	B	C	D	E +/- .005	F BOLT	F HOLE
1/2	SSPD0824	1.125	1 1/2	1/4	3/16	1.000	6	.169
5/8	SSPD1024	1.125	1 5/8	5/16	1/4	1.125	8	.193
3/4	SSPD1224	1.500	1 3/4	3/8	1/4	1.250	10	.221
1	SSPD1624	1.750	2 1/8	1/2	1/4	1.500	1/4	.281
1-1/4	SSPD2024	2.125	2 1/2	9/16	5/16	1.875	5/16	.343
1-1/2	SSPD2424	2.500	3	11/16	3/8	2.250	5/16	.342
2	SSPD3224	3.250	3 3/4	7/8	1/2	2.750	3/8	.406

NOMINAL DIAMETER	PART NUMBER	STANDARD LENGTH	G SCREW SIZE	G HOLE	Y	X	WEIGHT PER FOOT
1/2	SSPD0824	24	6-32 X 7/8	.169	2	4	.6
5/8	SSPD1024	24	8-32 X 7/8	.193	2	4	.8
3/4	SSPD1224	24	10-32 X 1-1/4	.221	3	6	1.0
1	SSPD1624	24	1/4-20 X 1-1/2	.281	3	6	1.4
1-1/4	SSPD2024	24	5/16-18 X 1-3/4	.343	3	6	2.1
1-1/2	SSPD2424	24	3/8-16 X 2	.406	4	8	2.6
2	SSPD3224	24	1/2-13 X 2-1/2	.531	4	8	4.2



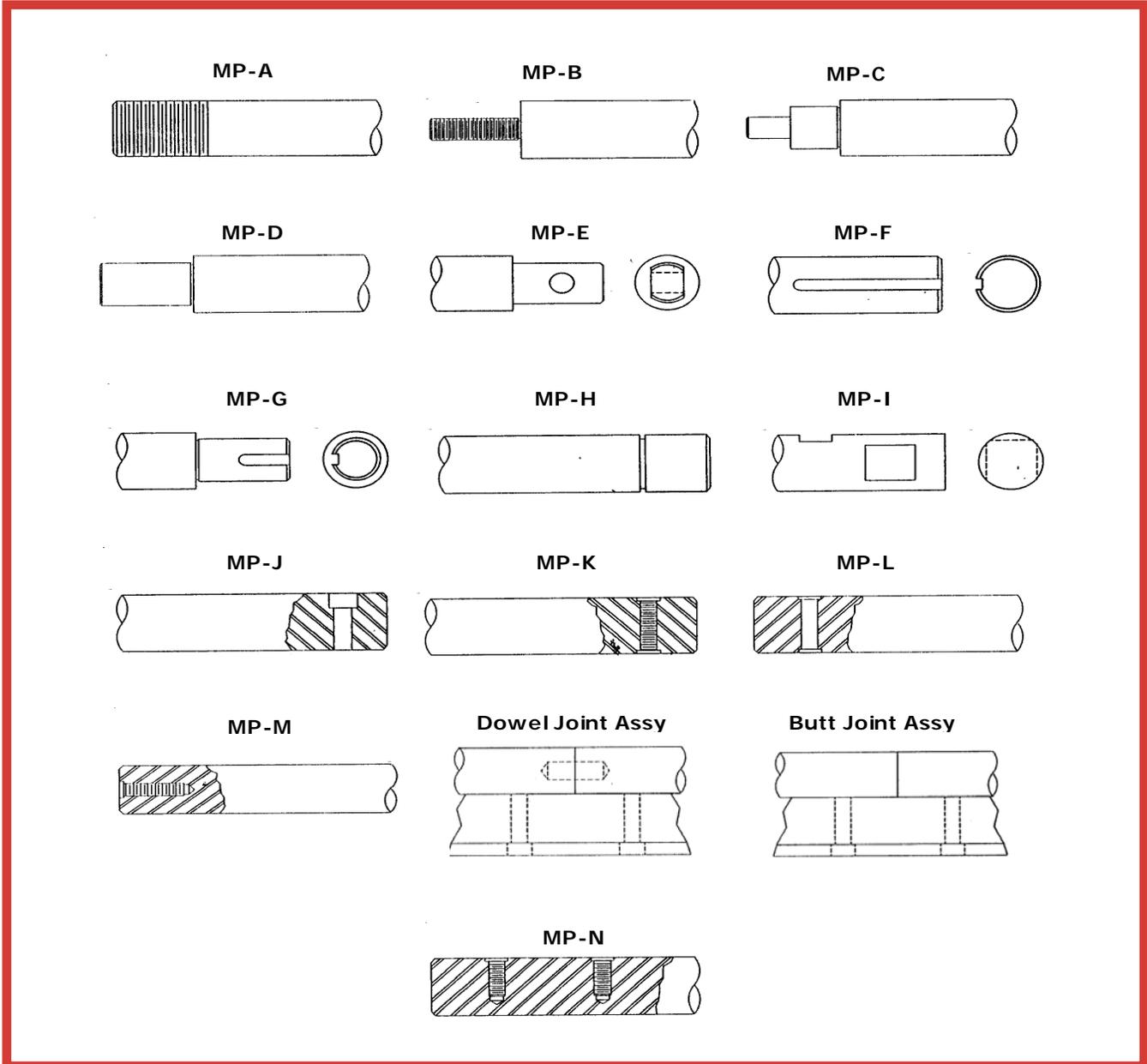
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**C.N.C. MACHINING
CAPABILITIES**

Regardless of the type of machining required, Diamond Case is prepared to offer a quality product, in a timely manner, at competitive prices. Our in-house machining capacity gives us an edge over our competitors who typically outsource their machining requirements.

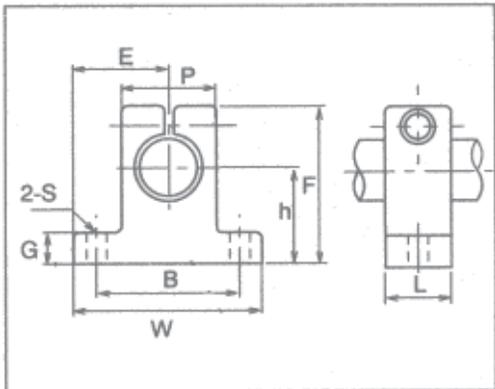
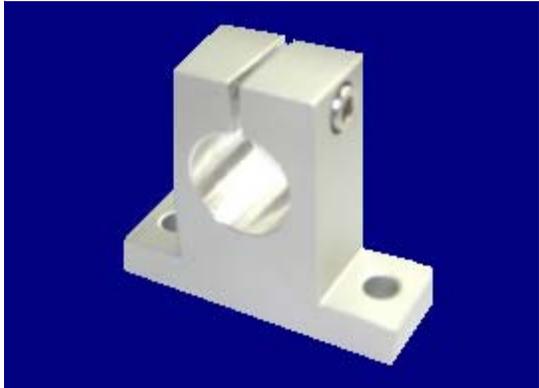
Please refer to the MP (Machined Parts) letter below. To ensure the accuracy of the parts we ship to your customers, we request a print or drawing prior to machining.



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**LINEAR BEARING
SHAFT SUPPORT BLOCK**



Part Number	Nominal Shaft Diameter (inch)	Dimensions (inches)								Mounting Holes		Wt. (Lbs)
		h (+/- .001)	E (+/- .0005)	W	L	F	G	P	B (+/- .01)	S	BOLT #	
ASB8	.500	1.0000	1.0000	2.000	.625	1.625	.250	.875	1.500	.188	#8	.075
ASB12	.750	1.2500	1.2500	2.500	.750	2.063	.313	1.250	2.000	.218	#10	.156
ASB16	1.000	1.5000	1.5315	3.063	1.000	2.500	.375	1.500	2.500	.281	1/4	.294
ASB20	1.250	1.7500	1.8750	3.750	1.125	3.000	.438	2.000	3.000	.346	5/16	.531
ASB24	1.500	2.0000	2.1875	4.375	1.250	3.437	.500	2.250	3.500	.346	5/16	.725
ASB32	2.000	2.5000	2.7500	5.500	1.500	4.375	.625	3.000	4.500	.406	3/8	1.400

Material - Aluminum

Diamond Case Linear Bearing Shaft Support Blocks Provide:

- ◆ **Low profile design.**
- ◆ **Light weight, high strength construction.**
- ◆ **Simple installation with pre-drilled mounting holes.**

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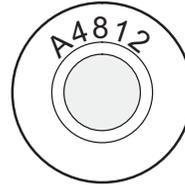
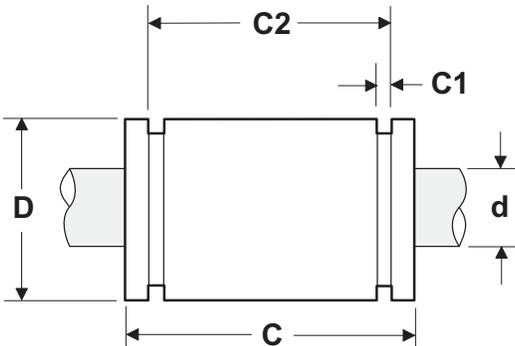
Diamond Case Linear Ball Bearings Provide You With The Following:

- ◆ Conformance to industry standards.
- ◆ A coefficient of friction as low as 0.001.
- ◆ Integral seals that retain lubrication and keep contamination out.
- ◆ A broached steel sleeve design for maximum rigidity, precision and smoothness.
- ◆ The unparalleled customer service and delivery that our linear shafting products have delivered for nearly 20 years.

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**Closed
Type**

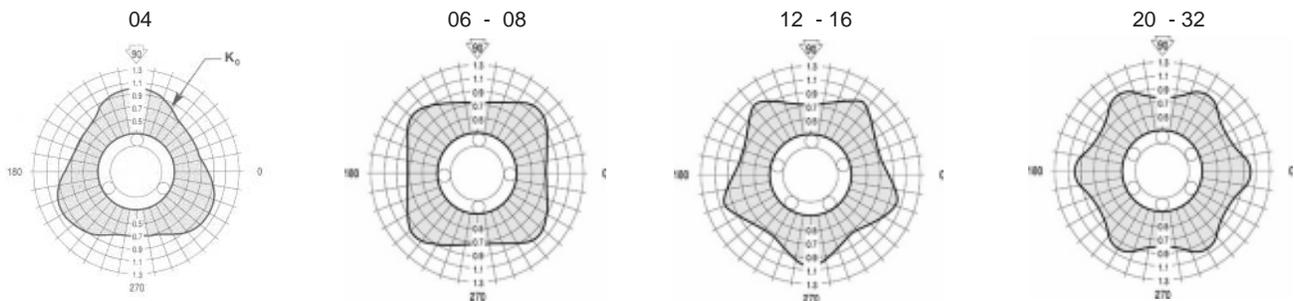


Dimensions (Inches)

Part Number		Shaft Dia. d	Outside Dia. D	Length C	Retaining Ring Groove Width C1	Distance Between Retaining Ring Grooves C2	Bearing Mass (lb)	Housing Bore Diameter Norm. fit	Maximum Dynamic Load Capacity (lb) (1)
Without Wipers	With Wipers								
A4812	A4812DD	.2490/.2485	.5000/.4996	.750	.039	.515/.499	.02	.5005/.5000	19
A61014	A61014DD	.3740/.3735	.6250/.6246	.875	.039	.640/.624	.06	.6255/.6250	36
A81420	A81420DD	.4990/.4985	.8750/.8746	1.250	.046	.967/.951	.08	.8755/.8750	85
A122026	A122026DD	.7490/.7485	1.2500/1.2496	1.625	.056	1.170/1.154	.21	1.2505/1.2500	200
A162536	A162536DD	.9990/.9985	1.5625/1.5621	2.250	.068	1.759/1.741	.38	1.5630/1.5625	350
A203242	A203242DD	1.2490/1.2485	2.0000/1.9995	2.625	.068	2.009/1.991	1.10	2.0010/2.0000	520
A243848	A243848DD	1.4989/1.4984	2.3750/2.3745	3.000	.086	2.415/2.397	1.43	2.3760/2.3750	770
A324864	A324864DD	1.9987/1.9980	3.0000/2.9994	4.000	.103	3.195/3.177	2.75	3.0010/3.0000	1100

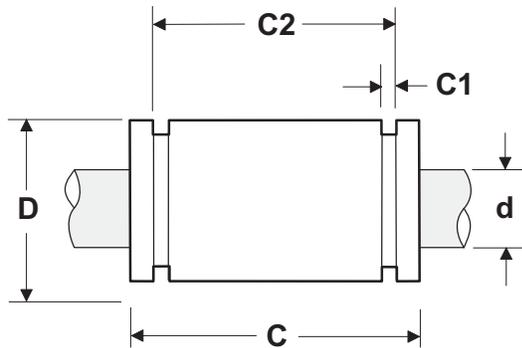
1. Load ratings are based upon 2 million inches of travel and a shaft hardness of HRC60 or more. The actual load rating is dependant upon the direction of the applied load relative to the bearing's ball track locations. See the polar charts below for appropriate derating factors.

A4812, A61014 and ALL bearings with wipers (DD) have polymer ball retainers



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**Open
Type**

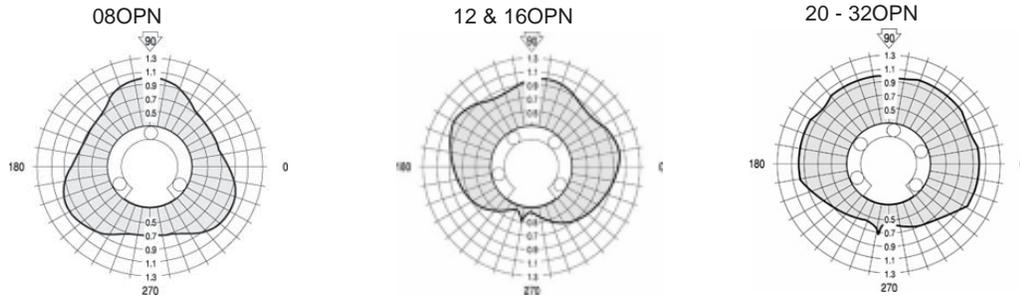


Dimensions (Inches)

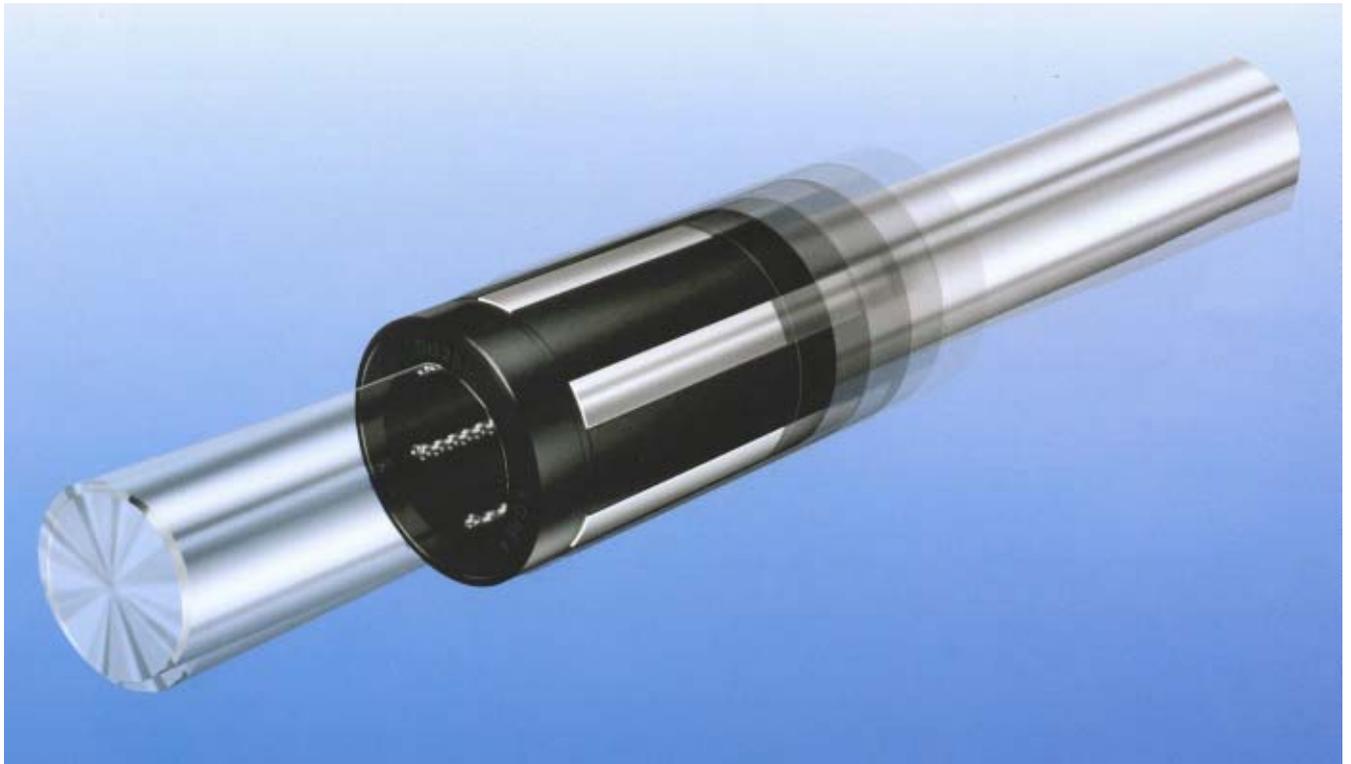
Part Number		Shaft Dia. d	Outside Dia. D	Length C	Retaining Ring Groove Width C1	Distance Between Retaining Ring Grooves C2	Bearing Mass (lb)	Housing Bore Diameter Norm. fit	Maximum Dynamic Load Capacity (lb) (1)
Without Wipers	With Wipers								
OPN81420	OPN81420DD	.4995/.4990	.8750/.8746	1.250	.046	.967/.951	.07	.8760/.8740	60
OPN122026	OPN122026DD	.7495/.7490	1.2500/1.2496	1.625	.056	1.170/1.154	.17	1.2510/1.2490	140
OPN162536	OPN162536DD	.9995/.9990	1.5625/1.5621	2.250	.068	1.759/1.741	.32	1.5635/1.5615	240
OPN203242	OPN203242DD	1.2495/1.2490	2.0000/1.9995	2.625	.068	2.009/1.991	.90	2.0010/1.9990	400
OPN243848	OPN243848DD	1.4994/1.4989	2.3750/2.3745	3.000	.086	2.415/2.397	1.12	2.3760/2.3740	600
OPN324864	OPN324864DD	1.9940/1.9987	3.0000/2.9994	4.000	.103	3.195/3.177	2.16	3.0010/2.9990	800

1. Load ratings are based upon 2 million inches of travel and a shaft hardness of HRC60 or more. The actual load rating is dependant upon the direction of the applied load relative to the bearing's ball track locations. See the polar charts below for appropriate derating factors.

ALL Open-type bearings have polymer ball retainers



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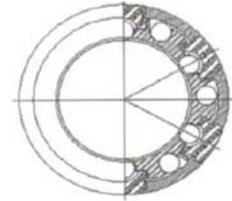
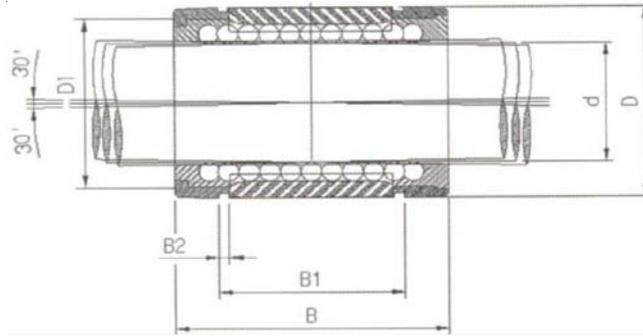
**Diamond Case High Load Capacity, Self-Aligning Series
Linear Ball Bearings provide you with the following:**

- ◆ **Conformance to industry standards.**
- ◆ **3 times more load capacity than conventional linear bearings-Allows for smaller, less expensive bearings to carry the required load.**
- ◆ **Integral seals-Reduces space requirements while keeping lubrication in and contamination out of the bearing.**
- ◆ **Independently self-aligning outer bearing races-Ensures smooth running bearings by absorbing misalignment up to 1/2 degree.**

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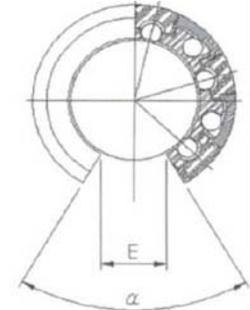
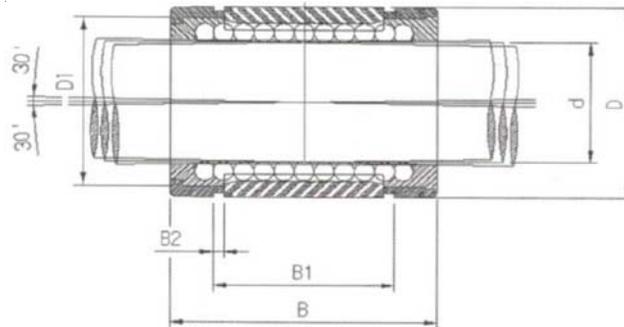


**Closed
Type**



Part Number w/o Seal	Part Number with Seal	Nominal Shaft Diameter	Number Ball Circuits	Housing Bore Diameter D	D1	B	B1	B2	Max. Load Capacity (Lbf)
SU6	SU6DD	.375	4	0.6255/0.6250	0.5880	0.875/0.860	0.699/0.689	0.039	105
SU8	SU8DD	.500	4	0.8755/0.8750	0.8209	1.250/1.230	1.032/1.012	0.050	265
SU10	SU10DD	.625	5	1.1255/1.1250	1.0700	1.500/1.480	1.105/1.095	0.056	420
SU12	SU12DD	.750	6	1.2505/1.2500	1.1760	1.625/1.605	1.270/1.250	0.056	640
SU16	SU16DD	1.000	6	1.5630/1.5625	1.4900	2.250/2.230	1.884/1.864	0.068	1045
SU20	SU20DD	1.250	6	2.0008/2.0000	1.8890	2.625/2.600	2.004/1.984	0.068	1585
SU24	SU24DD	1.500	6	2.3760/2.3750	2.2389	3.000/2.970	2.410/2.390	0.086	1930

**Open
Type**



Part Number w/o Seal	Part Number with Seal	Nominal Shaft Diameter	No. Ball Circuits	Housing Bore Diameter D	D1	B	B1	B2	E	α (deg)	Max Load Rating (Lbf)
SU8OPN	SU8OPNDD	.500	3	0.8755/0.8750	0.8209	1.250/1.230	1.032/1.012	0.050	0.32	30	265
SU10OPN	SU10OPNDD	.625	4	1.1255/1.1250	1.0700	1.500/1.480	1.105/1.095	0.056	0.38	30	420
SU12OPN	SU12OPNDD	.750	5	1.2505/1.2500	1.1760	1.625/1.605	1.270/1.250	0.056	0.43	30	640
SU16OPN	SU16OPNDD	1.000	5	1.5630/1.5625	1.4900	2.250/2.230	1.884/1.864	0.068	0.56	30	1045
SU20OPN	SU20OPNDD	1.250	5	2.0008/2.0000	1.8890	2.625/2.600	2.004/1.984	0.068	0.63	30	1585
SU24OPN	SU24OPNDD	1.500	5	2.3760/2.3750	2.2389	3.000/2.970	2.410/2.390	0.086	0.75	30	1930

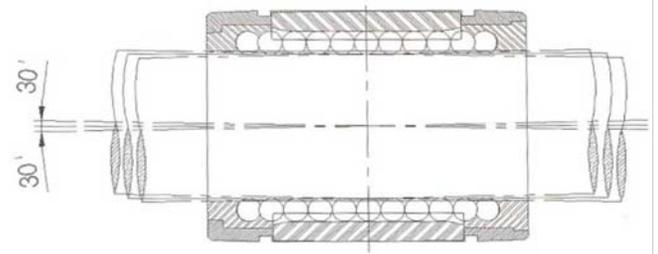
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Self-Alignment

Diamond Case's high load capacity linear bearings are designed with a crowned surface on its outer race that can rock against the housing bore surface. This rocking motion allows the bearing to absorb miss-alignment that can be caused by the machining of nonparallel bearing housing bores, mounting surfaces that are not flat and parallel, and deflection under load.

This feature insures the smooth transition of the bearing's balls into and out of the load zone, which in turn insures that you have a smooth running bearing.

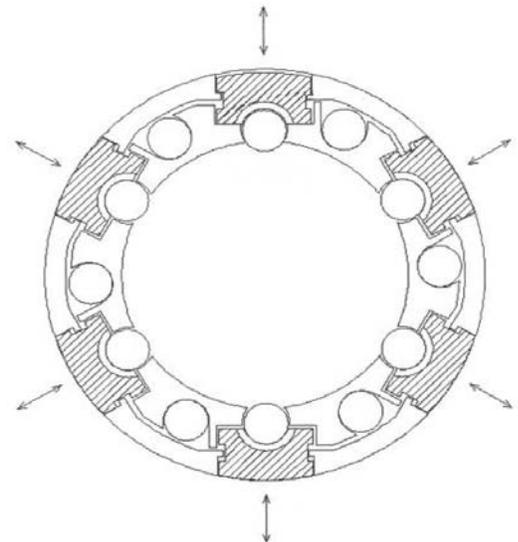


Adjustable Bearing Bore

Diamond Case's high load capacity linear bearings are designed with floating outer races. These floating races are free to move radially which allows you to adjust the bore of the bearing when it is installed in an adjustable housing. This feature provides you with the capability to eliminate any clearance between the bearing and shaft for those applications where precision is of the primary concern.

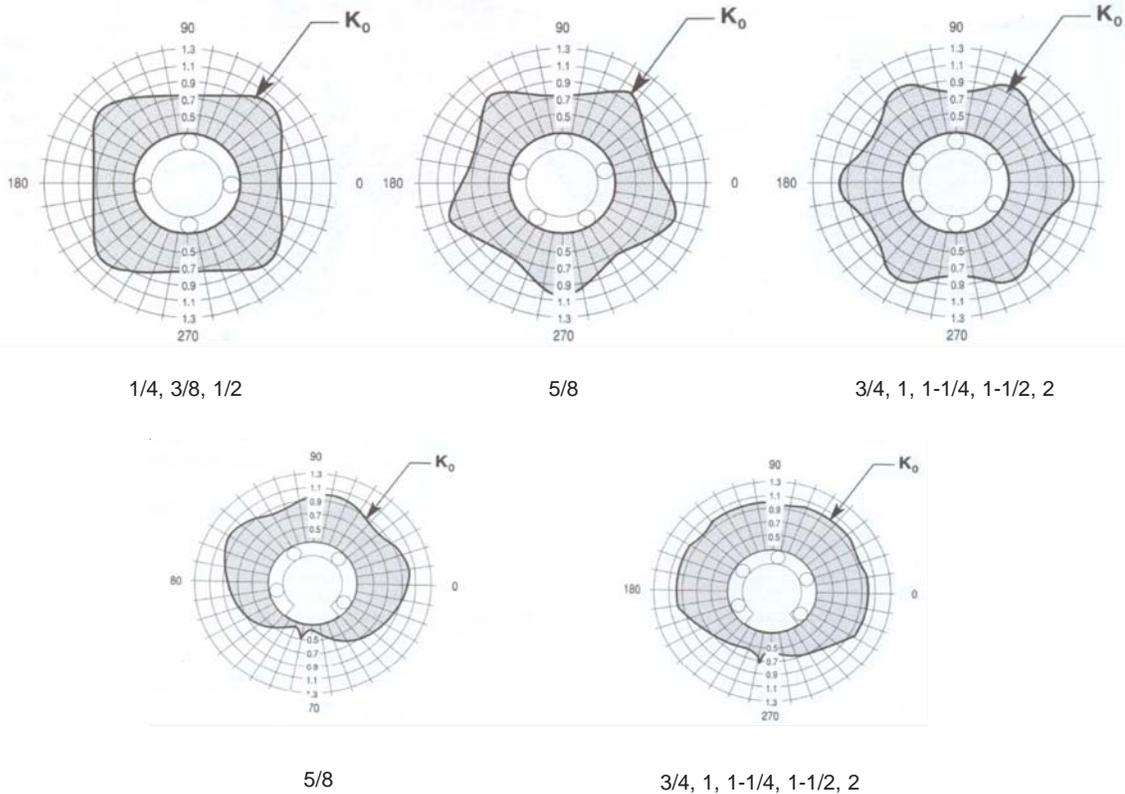
When adjusting a housing bore to achieve zero clearance between the bearing and shaft, follow the following procedure.

Install your bearings into the housing. Select a plug gauge that measures the same as the shaft that the bearings will run on. Insert the plug gauge into the bearing bore and spin the gauge. Continue spinning the gauge while you adjust the housing to make the bore smaller. When you feel a resistance to spinning the gauge begin to occur, STOP. This is the point where there will be no clearance between the bearing and the shaft. Continuation beyond this point will preload the bearing and cause a reduction in bearing life and smoothness of operation.



Polar Charts

Polar charts are used to determine load capacity adjustment factors that are based upon the orientation of the bearings ball tracks relative to the direction that the applied load is coming from. These factors will be used in the formula to calculate bearing life.



Static Load Rating C_0

The basic static load rating is that load which exerts a force that causes a permanent deformation of the rolling element (ball) that is equal to 0.0001 times the diameter of the ball. Careful attention should be paid to this value as exceeding this value will cause bearings to permanently run rough afterwards and prematurely fail.

Reduced Load Capacity in Short Stroke Applications

Recirculating ball linear bearings are designed to maximize the life of the bearing or outer race. However, there does come a point at which the inner race or shaft becomes a limiting factor, and that is when the stroke of the bearing becomes less than two times the length of the bearing. In these cases, contact the factory for application assistance as the life of your shaft may be only 30 to 50% of the calculated life of the bearing.

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Bearing Life (distance)

A recirculating ball linear bearing is said to have failed once one of its load bearing members begins to spall (metal begins to flake off of its surface). A measure of this life can be estimated by the following formula.

$$\text{Life (L)} = (C/P \times f_H \times f_T \times K_o)^3 \times 2 \times 10^6(\text{in})$$

Where L = Life in km

C = The dynamic load rating of the bearing (Lbf)

P = The applied load (Lbf)

f_H = The shaft hardness factor

f_T = The temperature factor

K_o = The load direction factor from the polar charts

Bearing Life (time)

A recirculating ball linear bearing is said to have failed once one of its load bearing members begins to spall (metal begins to flake off of its surface). A measure of this life can be estimated by the following formula.

$$\text{Life (L}_H) = (L)/(2 \times l_s \times n \times 60)$$

Where L_H = Life in hours

L = The life in inches

l_s = The stroke length in inches.

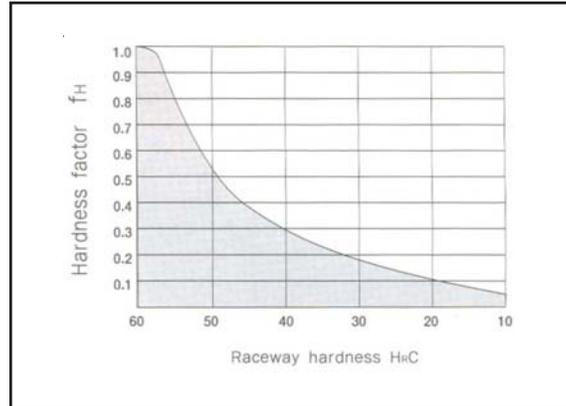
n = The number of strokes per minute.

Basic Dynamic Load Rating (C)

The Basic Dynamic Load Rating is a value that is calculated by empirical data and verified in the laboratory. It represents a load rating at which the bearing can run and achieve a travel life of 2 x 10⁶ inches 90% of the time without failure of the bearing as result of spalling.

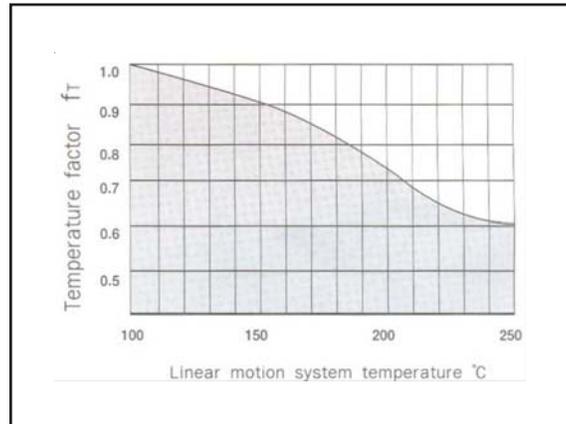
Shaft Hardness Factor f_H

The hardness of the shaft that the linear bearing rides on has a direct effect on the life of the bearing system. Shafts that are less than Rc 58 will result in a decrease in life of the bearing system.



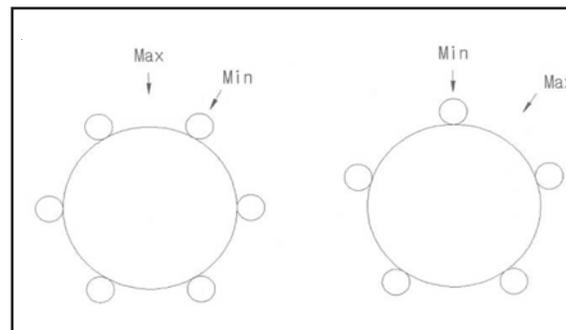
Temperature Factor f_T

If the temperature of the bearing system exceeds 212°F, the life of the system will be decreased as shown by the attached chart.



Load Direction Factor K_o

The stated load capacities of Diamond Case's high load capacity linear bearings are valid when the applied load is acting in the min position as shown. For all other directions, refer to our polar charts.

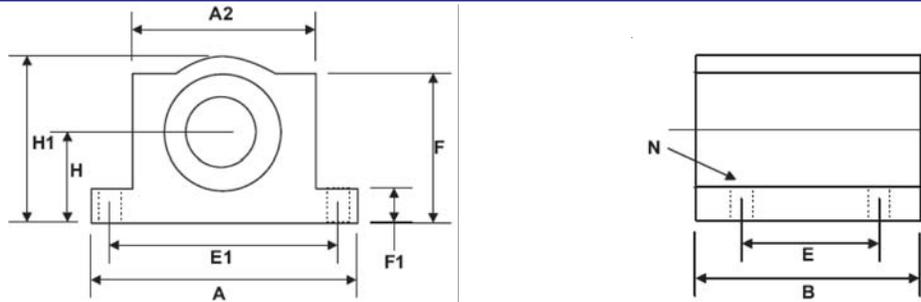


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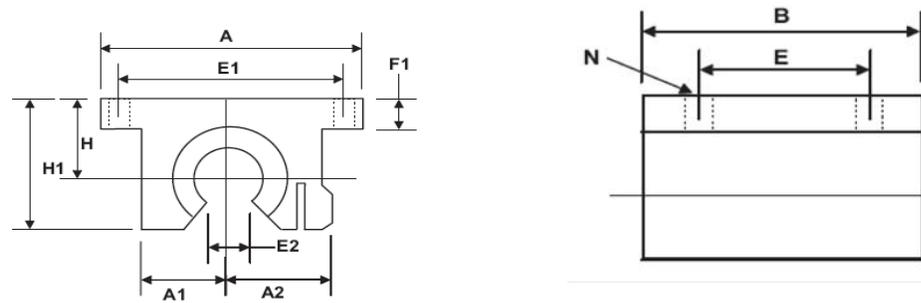
PILLOW BLOCKS

Closed Type



Part Number	Shaft Dia.	H +/- .003	H1	A	A2	B	E +/- .010	E1 +/- .010	F	F1	N Hole	N Bolt	Mass (lb)	Load Rating (lbf)
SPB8	1/2	.687	1.25	2.00	1.38	1.69	1.000	1.688	1.13	.25	.16	#6	.2	255
SPB10	5/8	.875	1.63	2.50	1.75	1.94	1.125	2.125	1.44	.28	.19	#8	.5	450
SPB12	3/4	.937	1.75	2.75	1.86	2.06	1.250	2.375	1.56	.31	.19	#8	.6	600
SPB16	1	1.187	2.19	3.25	2.38	2.81	1.750	2.875	1.94	.38	.22	#10	1.2	1,050
SPB20	1-1/4	1.500	2.81	4.00	3.00	3.63	2.000	3.500	2.50	.44	.22	#10	2.5	1,500
SPB24	1-1/2	1.750	3.25	4.75	3.50	4.00	2.500	4.125	2.88	.50	.28	1/4	3.8	2,000

Open Type



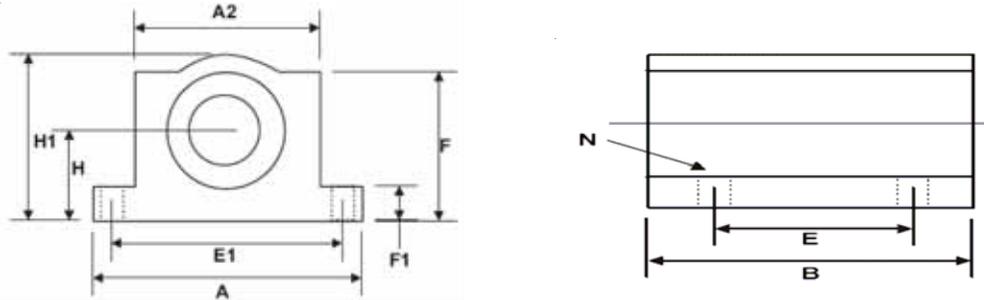
Part Number	Shaft Dia.	H +/- .003	H1	A	A1	A2	B	E +/- .010	E1 +/- .010	E2	F1	N Hole	N Bolt	Mass (lb)	Load Rating (lbf)
SPB8OPN	1/2	.687	1.13	2.00	.69	.75	1.50	1.000	1.688	.31	.25	.16	#6	.2	230
SPB10OPN	5/8	.875	1.44	2.50	.88	.94	1.75	1.125	2.125	.37	.28	.19	#8	.4	320
SPB12OPN	3/4	.937	1.56	2.75	.94	1.00	1.88	1.250	2.375	.43	.31	.19	#8	.5	470
SPB16OPN	1	1.187	2.00	3.25	1.19	1.25	2.63	1.750	2.875	.56	.38	.22	#10	1.0	780
SPB20OPN	1-1/4	1.500	2.56	4.00	1.50	1.63	3.38	2.000	3.500	.62	.44	.22	#10	2.1	1,170
SPB24OPN	1-1/2	1.750	2.94	4.75	1.75	1.88	3.75	2.500	4.125	.75	.50	.28	1/4	3.2	1,560

* Load ratings are based upon 2 million inches of travel and a shaft hardness of HRC 60 or more. The actual load rating is dependant upon the direction of the applied load relative to the bearing's ball track locations. See the polar charts in the Diamond Case self-aligning bearing catalog for appropriate derating factors. Open and closed pillow blocks include bearings with seals on both ends.

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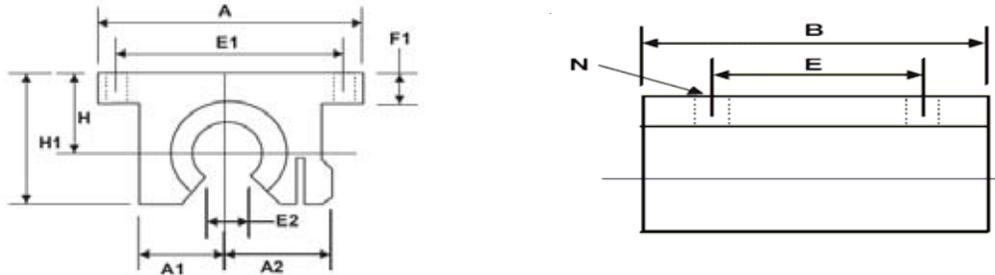


**Closed
Type**



Part Number	Shaft Dia.	H +/- .003	H1	A	A2	B	E +/- .010	E1 +/- .010	F	F1	N Hole	N Bolt	Mass (lb)	Load Rating (lbf)
TWN8	1/2	.687	1.25	2.00	1.38	3.50	2.50	1.688	1.13	.25	.16	#6	.4	510
TWN10	5/8	.875	1.63	2.50	1.75	4.00	3.00	2.125	1.44	.28	.19	#8	1.0	900
TWN12	3/4	.937	1.75	2.75	1.86	4.50	3.50	2.375	1.56	.31	.19	#8	1.2	1200
TWN16	1	1.187	2.19	3.25	2.38	6.00	4.50	2.875	1.94	.38	.22	#10	2.4	2100
TWN20	1-1/4	1.500	2.81	4.00	3.00	7.50	5.50	3.500	2.50	.44	.22	#10	5.00	3000
TWN24	1-1/2	1.750	3.25	4.75	3.50	9.00	6.50	4.125	2.88	.50	.28	1/4	7.80	4000

**Open
Type**



Part Number	Shaft Dia.	H +/- .003	H1	A	A1	A2	B	E +/- .010	E1 +/- .010	E2	F1	N Hole	N Bolt	Mass (lb)	Load Rating (lbf)
TWN8OPN	1/2	.687	1.13	2.00	.69	.75	3.50	2.50	1.688	.31	.25	.16	#6	.4	460
TWN10OPN	5/8	.875	1.44	2.50	.88	.94	4.00	3.00	2.125	.37	.28	.19	#8	.8	60
TWN12OPN	3/4	.937	1.56	2.75	.94	1.00	4.50	3.50	2.375	.43	.31	.19	#8	1.0	940
TWN16OPN	1	1.187	2.00	3.25	1.19	1.25	6.00	4.50	2.875	.56	.38	.22	#10	2.0	1560
TWN20OPN	1-1/4	1.500	2.56	4.00	1.50	1.63	7.50	5.50	3.500	.62	.44	.22	#10	4.2	2340
TWN24OPN	1-1/2	1.750	2.94	4.75	1.75	1.88	9.00	6.50	4.125	.75	.50	.28	1/4	6.7	3120

* Load ratings are based upon 2 million inches of travel and a shaft hardness of HRC 60 or more. The actual load rating is dependant upon the direction of the applied load relative to the bearing's ball track locations. See the polar charts in the Diamond Case self-aligning bearing catalog for appropriate derating factors. Open and closed pillow blocks include bearings with seals on both ends.

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