SLEEVE BEARINGS

HOW TO ORDER SLEEVE BEARINGS

There are two ways to specify DODGE Sleeve Bearings. Most of the product offering have part numbers with listings shown throughout this catalog. Use of part numbers ensures accurate order processing.

When part numbers are not shown, the product may be specified by description or part name. This method is used when ordering units that include modifications or options. To order by description, use the nomenclature key shown on page 5 and add any special instructions to the end of the description for options not covered by the nomenclature.

SOLIDLUBE

Statically self-aligning, non-galling, solid-film lubricating for temperature extremes.

- 700 Series: -40° to 700°F
- 1,000 Series: -200° to -40°F; 250°F to 1,000°F
- 800 Series: -40° to 800°F

Also suitable for submerged and limited movement applications.

BABBITTED

Grease lubricated for moderate speeds and loads,ambient temperature to 130°F, babbitt accurately bored to insure even load distribution for conveyor shafts, heavy gear, and chain drives use.

BRONZE–BUSHED

Grease lubricated for moderate speeds, ambient temperature to 300°F and heavy loads or shock loads make the advantage of a precision replaceable bronze bushing desirable. Other liner material is available on a special order basis, such as bronze with graphite plugs, or phenolic resin on nylon.

BRONZOIL

Economical, statically self-aligning, and self-lubricating pillow blocks and four-bolt flange units for fans, light machinery, and other general use.

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NOMENCLATURE

Sleeve Bearings

SLEEVE BEARING NOMENCLATURE

P2B - PSEZ - 108 - W

HOUSINGS:

P2B	PILLOW BLOCK, 2 BOLT BASE
P4B	PILLOW BLOCK, 4 BOLT BASE
F2B	FLANGE, 2 BOLT
F4B	FLANGE, 4 BOLT
HNG	HANGER BEARING
NSTU	NARROW SLOT TAKE-UP
SCHB	SCREW CONVEYOR HANGER BEARING
WSTU	WIDE SLOT TAKE-UP
TB	TAPE BASE
FB	FLANGE BRACKET

STYLE:

BO	BRONZOIL
BASO	BABBITTED SOLID
BASP	BABBITTED SPLIT
BAR	BABBITTED RIGID
BAA	BABBITTED ANGLE
BAP	BABBITTED PLATE
BZSP	BRONZE BUSHED SPLIT
BZR	BRONZE BUSHED RIGID
BZA	BRONZE BUSHED ANGLE
LT7	SOLIDLUBE LT700 SERIES
LT10	SOLIDLUBE LT1000 SERIES
LTB7	SOLIDLUBE LOWER BACKING HEIGHT ON PILLOW BLOCKS FOR LT700 SERIES
LTB10	SOLIDLUBE LOWER BACKING HEIGHT ON PILLOW BLOCKS FOR LT1000 SERIES
LT7NP	SOLIDLUBE LT700 SERIES NICKEL PLATE
MM7	SOLIDLUBE MM700 SERIES
MM10	SOLIDLUBE MM1000 SERIES
PSEZ	POLYMER SLEEVE E-Z KLEEN
PSBEZ	POLYMER SLEEVE E-Z KLEEN LOW BACKING HEIGHT
PSUEZ	POLYMER SLEEVE E-Z KLEEN HIGH BACKING HEIGHT
LM8	SOLIDLUBE LM800 SERIES

SHAFT SIZE:

115	FIRST DIGIT: NUMBER OF INCHES SECOND & THIRD DIGIT: SIXTEENTHS OF AN INCH 115 INDICATES 1 15/16
50M	FIRST TWO DIGITS: BORE IN MILLIMETERS M INDICATES METRIC

MODIFICATIONS/FEATURES:

P	WHITE POLYMER HOUSING

Sleeve Bearings—Babbitted And Bronze–Bushed

General Information

SCOPE—for Stock Babbitted and Bronze Bushed Bearings, Pillow Blocks and Take-Ups of the Rigid, Grease Lubricated Type.

Important—Referring to Tables 17 and 18 on the opposite page: Table 17 ratings apply to the following DODGE Babbitted Sleeve Bearings:

- Solid Journals
- Split Babbitted Journals
- Rigid Babbitted Pillow Blocks
- Angle Babbitted Pillow Blocks
- Plate Type Flange Bearings
- Type H Take-Ups
- Type A and B Take-Ups

Table 18 ratings apply to DODGE Bronze Bushed Pillow Blocks:

- Split Bronze Bushed Journals
- Rigid Bronze Bushed Pillow Blocks
- Angle Bronze Bushed Pillow Blocks

Note – Ratings do not apply to BRONZOIL, Polymer SLEEVOIL or SOLIDLUBE pillow blocks.

Reference – Flush type reducer bushings to be used with 405015 1/8 NPT grease fitting:

Part No.	Description
430081	1/2 x 1/8
430086	3/8 x 1/8
430087	1/4 x 1/8

Selection – Select a bearing from rating tables having a radial load equal to or greater than the Actual Radial Load, provided that operating conditions numbered 1 thru 7, at right, are met. If these conditions cannot be met, select a bearing for an Equivalent Radial Load to be obtained by multiplying the Actual Radial Load by a service factor depending on the specific application. Use a factor of up to 2.0 for areas in the rating table to the left of the zigzag line. Use a factor of up to 3.0 for areas to the right of the zigzag line.

Load ratings are based on industry standard ratings established by the Mechanical Power Transmission Association. (Standard No. 401)

Operating Conditions

1. Maintain adequate grease lubrication.
2. Maintain proper bearing alignment for uniform distribution of load under all operating conditions.
3. Normal running loads must not exceed ratings shown in the load tables. Starting and occasional peak loads should not exceed ratings by more than 100%.
4. Direction of load should not be closer than 30° to grease groove or closer than 30° to the joint between cap and base. If direction of load falls within this area which is not recommended, decrease maximum load by 50%.
5. The shaft journal surface finish must be equal to that of commercial steel shafting (about 32 micro inches) and the diameter within the tolerances of commercial steel shafting.
6. Ambient temperature should not exceed 130°F for babbitted and 300°F for bronze–bushed bearings. If the shaft transmits heat from a source such as an oven, the shaft temperature at the bearing should not exceed these ambient temperatures.
7. Bearings should be protected against adverse operating conditions.

Sleeve Bearings—Babbitted And Bronze–Bushed

Radial Load Ratings
(Refer to Instructions on opposite page)

Table 17—MPTA Radial Load Ratings for Babbitted Sleeve Bearings

Shaft Sizes	Radial Load Rating in Lbs. at Various Revolutions Per Minute															
	10	50	100	150	200	250	300	350	400	450	500	600	700	800	900	1000
1/2	100	100	100	95	95	95	95	95	90	90	90	85	85	85	80	80
5/8	150	150	145	145	140	140	135	135	135	130	130	125	120	115	110	110
3/4	180	175	175	170	170	165	160	160	155	155	150	145	140	130	125	120
7/8	260	255	250	245	240	235	230	225	220	215	210	200	190	180	150	...
15/16	280	275	265	260	255	250	245	240	235	225	220	210	200	185	105	...
1	295	290	285	280	270	265	260	250	245	240	230	220	205	...	...	...
1-1/8	415	410	400	390	380	370	355	345	335	325	315	295	245	...	...	...
1-3/16, 1-1/4	440	430	420	410	395	385	375	360	350	340	325	305	190	...	...	...
1-5/16, 1-3/8	585	570	555	535	520	505	485	470	455	435	420	345	...	...	...	...
1-7/16, 1-1/2	640	625	605	585	565	545	525	500	480	460	440	205	...	...	...	...
1-11/16, 1-3/4	875	850	820	785	755	720	690	655	625	590	340	...	...	...	...	...
1-15/16, 2	1150	1110	1060	1010	965	915	865	815	730	335	...	...	...	...	...	...
2-3/16, 2-1/4	1460	1400	1330	1260	1190	1120	1050	975	410	...	...	...	...	...	...	...
2-7/16, 2-1/2	1800	1730	1630	1530	1430	1340	1240	645	...	...	...	...	...	...	...	...
2-11/16, 2-3/4	2190	2080	1950	1820	1690	1560	1150	110	...	...	...	...	...	...	...	...
2-15/16, 3	2600	2470	2300	2130	1960	1790	675	...	...	...	...	...	...	...	...	...
3-7/16, 3-1/2	3550	3330	3060	2790	2520	1200	...	...	...	...	...	...	...	...	...	...
3-15/16, 4	4640	4310	3910	3500	2760	...	...	...	...	...	...	...	...	...	...	...
4-7/16, 4-1/2	5870	5410	4830	4250	1410	...	...	...	...	...	...	...	...	...	...	...
4-15/16, 5	7240	6600	5810	5010	...	...	...	...	...	...	...	...	...	...	...	...
5-7/16, 5-1/2	8750	7900	6840	4360												
5-15/16, 6	10410	9300	7910	2390												
6-7/16, 6-1/2	12200	10790	9020	...												
6-15/16, 7	14120	12360	10150	...												
7-7/16, 7-1/2	17270	14950	12050	...												
7-15/16, 8	18390	15750	10710	...												
9	20750	17360	4140													
10	22950	18760	...													
12	30700	23190	...													

For speeds lower than 10 rpm consult DODGE.

Table 18—MPTA Radial Load Ratings for Bronze Bushed Sleeve Bearings

Shaft Sizes	Radial Load Rating in Lbs. at Various Revolutions Per Minute															
	10	50	100	150	200	250	300	350	400	450	500	600	700	800	900	1000
1/2	170	170	165	165	165	165	165	160	160	160	160	155	155	150	150	145
5/8	250	250	245	245	245	240	240	235	235	235	230	225	220	220	215	210
3/4	300	300	295	295	290	285	285	280	280	275	270	265	260	255	250	240
7/8	435	430	425	420	415	410	405	400	395	390	385	375	365	355	325	245
15/16	465	460	455	450	445	435	430	425	420	415	410	395	385	375	295	200
1	495	490	485	480	470	465	460	450	445	440	430	420	405	360	255	150
1-1/8	700	690	680	670	660	650	640	630	620	605	595	575	525	360	195	...
1-3/16, 1-1/4	735	730	715	705	695	680	670	660	645	635	625	600	485	300	115	...
1-5/16, 1-3/8	980	965	950	930	915	895	880	865	845	830	815	735	465	195	...	...
1-7/16, 1-1/2	1070	1050	1030	1010	995	975	955	935	915	895	875	635	315	...	...	...
1-11/16, 1-3/4	1470	1440	1410	1370	1340	1310	1280	1240	1210	1180	930	410	...	...	...	...
1-15/16, 2	1920	1880	1830	1790	1740	1690	1640	1590	1500	1110	715	...	...	...	...	...
2-3/16, 2-1/4	2440	2390	2320	2240	2170	2100	2030	1960	1390	830	265	...	...	...	...	...
2-7/16, 2-1/2	3020	2940	2850	2750	2650	2560	2460	1860	1090	...	...	...	...	...	...	...
2-11/16, 2-3/4	3660	3560	3430	3300	3170	3040	2620	1580	545	...	...	...	...	...	...	...
2-15/16, 3	4370	4230	4060	3890	3720	3550	2440	...	...	...	...	...	...	...	...	...
3-7/16, 3-1/2	5960	5740	5470	5200	4930	3610	1440	...	...	...	...	...	...	...	...	...
3-15/16, 4	7790	7460	7060	6650	5910	...	...	...	...	...	...	...	...	...	...	...
4-7/16, 4-1/2	9860	9400	8820	8240	5400	...	...	...	...	...	...	...	...	...	...	...
4-15/16, 5	12180	11540	10740	9950	4090	...	...	...	...	...	...	...	...	...	...	...
5-7/16, 5-1/2	14740	13880	12820	10340	1820											
5-15/16, 6	17530	16420	15040	9520	...											
6-7/16, 6-1/2	20560	19150	17390	7900	...											
6-15/16, 7	23840	22070	19870	5350	...											
7-7/16, 7-1/2	29170	26850	23950	1880	...											
7-15/16, 8	31090	28450	23410	...	...											
9	35150	31760	18540													
10	38950	34760	2220													
12	52300	45520	...													

For speeds lower than 10 rpm consult DODGE.

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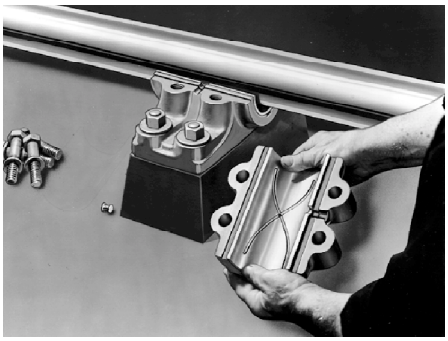
Sleeve Bearings—Bronze Bushings



U.S. Patent No. 3,071,419





- For Split Bronze Bushed Journal Bearings.
- For Rigid Bronze Bushed Pillow Blocks.
- For Angle Bronze Bushed Pillow Blocks.

These precision bushings are machined from quality cast cylinders of high grade leaded bronze. They are furnished in matched halves and sold in complete sets only. Grease grooves are provided in the top half for proper lubrication. Bushings are designed to be installed in the bearings listed above without removing the shaft or bearing base. A brass locking spool positions the bushing preventing lateral movement or rotation. This simple method minimizes down time and labor costs. They are particularly suited for heavy loads, elevated temperatures and corrosive conditions.

Bushings made of special alloys can be furnished where especially difficult heat problems may arise. They will be priced on application.

Bronze Bushing Sets ♠

Shaft Size	Bushing Sets†		Locking Spools*
	Part No.	Wt.	Part No.
1-15/16	**005055**	1.7	**005050**
2-3/16	**005056**	2.1	
2-7/16	**005057**	2.5	
2-11/16	**005058**	3.1	
2-15/16	**005059**	3.6	
3-7/16	**005060**	4.9	
3-15/16	**005061**	9.7	**005051**
4-7/16	**005062**	14	
4-15/16	**005063**	15	
5-7/16	**005064**	18	**005052**
5-15/16	**005065**	21	
6-1/2	**005066**	28	**005053**
7	**005067**	33	
7-1/2	**005117**	37	
8	**005068**	42	

♠ For other bushing material consult DODGE

† Price is for one bushing set which includes upper and lower half. Busings are sold in complete sets only.

* Order separately if desired.