# LM76 JET Rail

LM76 Linear Bearings JET RAIL

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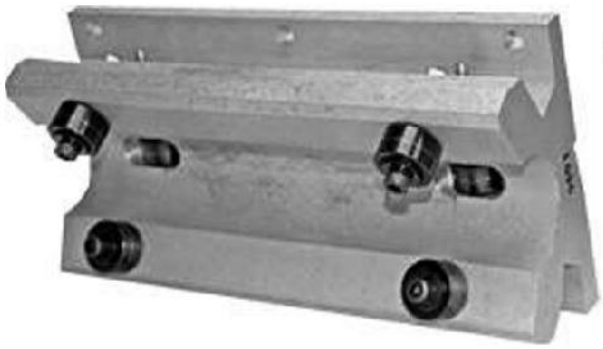
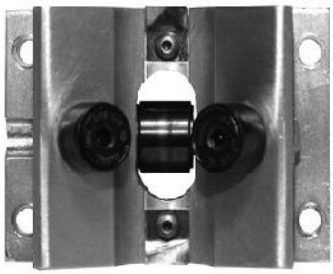
## Direct Drop-In Replacements for Linear Ball Bearings



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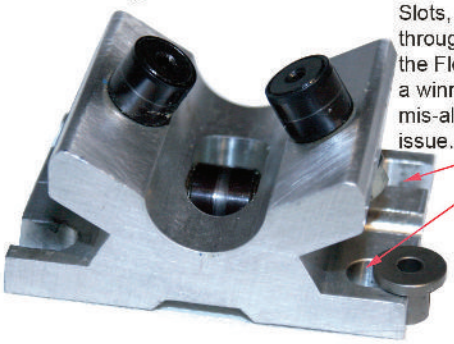
# Balls

VS

# Rollers

**HIGHER SPEEDS –**
The design of the JET Rail Roller Bearing Pillow Block incorporates a larger "rolling" diameter than ball bearing pillow blocks. This allows operation at significantly higher speeds and acceleration than the equivalent size recirculating ball pillow blocks.

**SHAFT PARALLELISM –**
JET Rail Roller Bearing Pillow Blocks feature a "Floating Option" which will permit shafts to be out of parallelism. JET Rail Roller Bearing Pillow Blocks are the only linear motion pillow blocks with this patented option to compensate for non-parallel shafts. For instance, a 1" JET Rail Bearing can float 3/32".



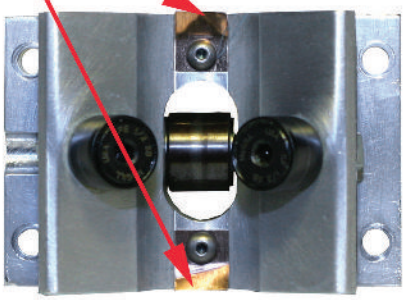
Slots, as opposed to through holes, make the Floating Option a winner when shaft mis-alignment is an issue.

**LOW FRICTION –**
JET Rail Roller Bearing Pillow Blocks have a very low "rolling" dynamic coefficient of friction (0.004 on average) and a very low resistance to motion. Unlike ball bearing pillow blocks which require shaft seals for proper operation, the JET Rail Roller Bearing Pillow Blocks have individually sealed rollers, and does not require shaft seals that generate resistance to motion.

**LONGER LIFE AND SHAFT PROTECTION –**
Unlike recirculating ball pillow blocks which create a point contact between the ball and the shaft, the main roller outer race of JET Rail Roller Bearing Pillow Blocks feature a concave groove to match the shaft diameter. This creates a line contact versus a point contact. The point contact associated with recirculating ball bearings generates very high stress, is prone to shaft grooving, and premature shaft failure.

**CORROSION RESISTANCE –**
JET Rail Roller Bearing Pillow Blocks are constructed with an aluminum body. The exposed surfaces of the rollers have a black oxide finish to resist corrosion. Special rollers of stainless steel or chrome plated are available in some sizes.

Scrapers clear a pathway for top rollers when debris is an issue.



**LM76 Linear Motion Bearings**
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**Sales@LM76.com**

# LM76 Linear Bearings

Designed to overcome the limitations of linear bearings with multiple re-circulating ball circuits and to provide a product with trouble free operation, LM76 Roller Bearing Pillow Blocks provide the following advantages:

## ADVANTAGES:

**ADJUSTMENT -**
LM76 Roller Bearing Pillow Blocks constructed with an adjustable eccentric stud feature to allow easy radial clearance adjustment. The clearance is set at the factory for optimum shaft clearance for LM76 Bearings 60 RC shaft tolerance “B”. This shaft clearance can easily be adjusted to provide for “very loose” to “preload” conditions.

**ALIGNMENT –**
LM76 Single Roller Bearing Pillow Blocks are self aligning due to the unique design. This Roller Bearing Pillow Block has a higher tolerance to shaft deflection than the recirculating ball pillow block . In most applications, the double and twin models also either match or exceed the tolerances for misalignment offered by recirculating ball pillow block.

**CORROSION RESISTANCE –**
LM76 Roller Bearing Pillow Blocks are constructed with an aluminum body. The exposed surfaces of the rollers have a black oxide finish to resist corrosion. Special rollers of stainless steel or chrome plated are available in some sizes.

**HIGHER SPEEDS –**
The design of the LM76 Roller Bearing Pillow Block incorporates a larger “rolling” diameter than ball bushing pillow blocks. This allows operation at significantly higher speeds and acceleration than the equivalent size recirculating ball pillow blocks.

**INTERCHANGEABILITY –**
LM76 Roller Bearing Pillow Blocks mounting hole locations and shaft center to mounting surface dimensions are identical to all of the other popular linear pillow blocks of the same size.

**LONGER LIFE AND SHAFT PROTECTION –**
Unlike recirculating ball pillow blocks which create a point contact between the ball and the shaft, the main roller outer race of the LM76 Roller Bearing Pillow Block has a concave groove to match the shaft diameter. This creates a line contact versus a point contact. The point contact associated with recirculating ball bushings generates very high stress, is prone to shaft grooving, and premature shaft failure.

**REBUILDABLE –**
Each roller component can be easily replaced without replacing the entire pillow block. For information regarding rebuild kits see page 5.

**LOW FRICTION –**
LM76 Roller Bearing Pillow Block s have a very low “rolling” dynamic coefficient of friction (0.004 on average) and a very low resistance to motion. Unlike ball bushing pillow blocks which require shaft seals for proper operation, the LM76 Roller Bearing Pillow Block s have individually sealed rollers and does not require shaft seals that generate resistance to motion.

**LUBRICATION –**
Each roller bearing is individually lubricated with a lithium base grease and sealed. This minimizes the need for periodic lubrication. Lithium base grease is preferred in this type of application because it has the ability to stand up under churning action in a confined space. This type of grease is also designed to run on an oiled shaft for optimum travel life. The bearings can run on a dry shaft, but a shorter travel life will result.

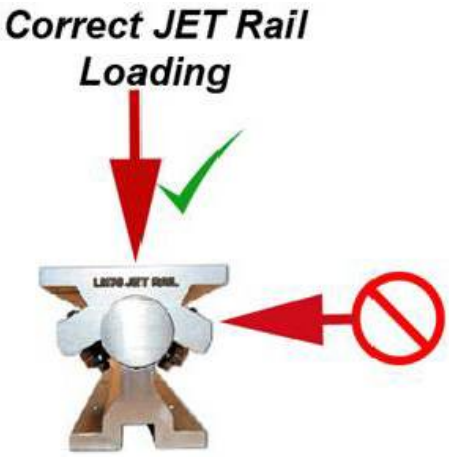
**OPERATING TEMPERATURE –**
The operating temperature of the LM76 Roller Bearing Pillow Block is determined by the temperature limit of the lubrication and seals. The normal operating temperature range is –60F to 250F.

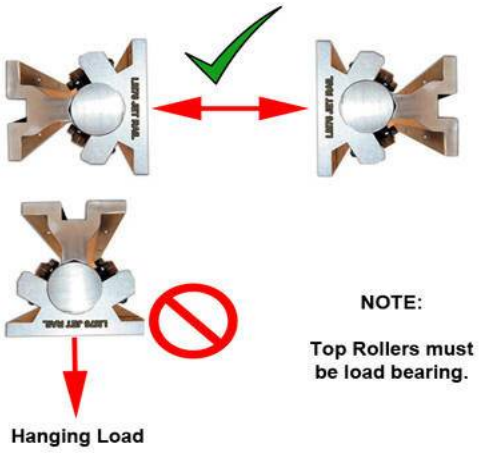
**SHAFT PARALLELISM –**
The LM76 Roller Bearing Pillow Block s feature a “Floating Option” will permit shafts to be out of parallelism. The LM76 Roller Bearing Pillow Block is the only linear motion pillow block with this patented option to compensate for non-parallel shafts.


For applications that exceed normal bearing requirements or for applications that are unusual or abnormal, please contact the factory.

JET RAIL ROLLER BLOCKS

# JET Rail Loading Data




Jet Rail Rail Roller Blocks offer smooth, very quiet and solid linear motion. Their design dictates that the load fall on the top rollers which have a center radius which meets the crown of the shaft. Thus a straight and uniform compressive load is ideal for their construction. They are not designed for side loading - where the side rollers are being loaded. Nor are they to be inverted (upside down/ceiling mounted), again loading the side rollers.

Since the cam follower is a needle bearing with an inner and outer race, we do not want a load scenario where the inner and outer races are put in shear. This will cause the races to separate and fail prematurely.

JET RAIL ROLLER BLOCKS

## Inch Sizes

# LM76 Linear Bearings

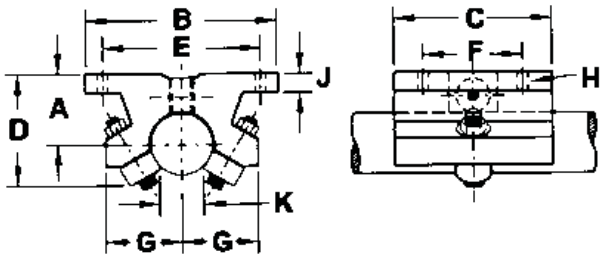



**TABLE #1**
DIMENSIONS & LOAD RATINGS FOR SINGLE PILLOW BLOCKS

| MODEL | SHAFT DIA | DYN. LOAD | WGT. | +-0.003 A | B | C | D | E | F | G | BOLT | HOLE | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JRS-8-OPN | 1/2 | 400 | 0.4 | 0.687 | 2 | 1-1/2 | 1-5/32 | 1.688 | 1.000 | 1 | #6 | 5/32 | 0.240 | 5/16 |
| JRS-10-OPN | 5/8 | 500 | 0.5 | 0.875 | 2-1/2 | 1-3/4 | 1-13/32 | 2.125 | 1.125 | 1-1/16 | #8 | 3/16 | 0.270 | 3/8 |
| JRS-12-OPN | 3/4 | 600 | 0.6 | 0.937 | 2-3/4 | 1-7/8 | 1-9/16 | 2.375 | 1.250 | 1-1/16 | #8 | 3/16 | 0.300 | 7/16 |
| JRS-16-OPN | 1 | 955 | 1.0 | 1.187 | 3-1/4 | 2-5/8 | 2 | 2.875 | 1.750 | 1-3/8 | #10 | 7/32 | 0.360 | 11/16 |
| JRS-20-OPN | 1 1/4 | 1400 | 2.0 | 1.500 | 4 | 3-3/8 | 2-9/16 | 3.500 | 2.000 | 1-3/4 | #10 | 7/32 | 0.424 | 13/16 |
| JRS-24-OPN | 1 1/2 | 1660 | 2.8 | 1.750 | 4-3/4 | 3-3/4 | 2-7/8 | 4.125 | 2.500 | 1-7/8 | 1/4 | 9/32 | 0.474 | 1-1/16 |
| JRS-32-OPN | 2 | 2400 | 5.0 | 2.125 | 6 | 4-3/4 | 3-1/2 | 5.250 | 3.250 | 2-1/2 | 3/8 | 13/32 | 0.600 | 1-3/8 |
| JRS-48-OPN | 3 | 6260 | 14.0 | 3.500 | 8-3/8 | 5-1/2 | 5-1/2 | 7.000 | 4.000 | 3-5/8 | 5/8 | 21/32 | 1.000 | 2-1/8 |
| JRS-64-OPN | 4 | 10500 | 31.0 | 4.500 | 10-1/4 | 6-1/4 | 7-1/2 | 8.875 | 4.500 | 5-1/8 | 3/4 | 25/32 | 1.125 | 2-3/4 |

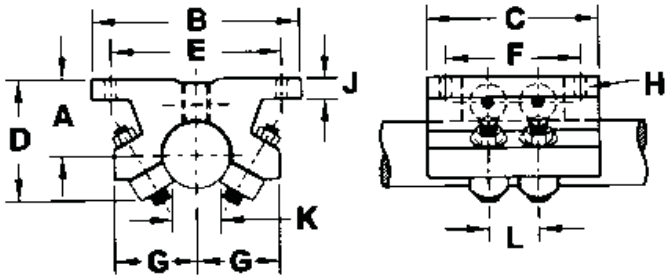



**TABLE #2**
DIMENSIONS & LOAD RATINGS FOR DOUBLE PILLOW BLOCKS

| MODEL # | SHAFT DIA | DYN. LOAD | WGT. | +-0.003 A | B | C | D | E | F | G | BOLT | HOLE | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JRD-8-OPN | 1/2 | 800 | 0.50 | 0.69 | 2 | 2 | 1-5/32 | 1.688 | 1.625 | 1 | #6 | 5/32 | 0.240 | 5/16 | .562 |
| JRD-10-OPN | 5/8 | 1000 | 0.70 | 0.88 | 2-1/2 | 2-1/2 | 1-13/32 | 2.125 | 2 | 1-1/16 | #8 | 3/16 | 0.270 | 3/8 | 0.562 |
| JRD-12-OPN | 3/4 | 1200 | 0.80 | 0.94 | 2-3/4 | 2-5/8 | 1-9/16 | 2.375 | 1.25 | 1-1/16 | #8 | 3/16 | 0.300 | 7/16 | 0.562 |
| JRD-16-OPN | 1.0 | 1910 | 1.20 | 1.19 | 3-1/4 | 2-5/8 | 2 | 2.875 | 1.75 | 1-3/8 | #10 | 7/32 | 0.360 | 11/16 | 0.720 |
| JRD-20-OPN | 1-1/4 | 2800 | 2.30 | 1.50 | 4 | 3-3/8 | 2-9/16 | 3.5 | 2 | 1-3/4 | #10 | 7/32 | 0.424 | 13/16 | 0.937 |
| JRD-24-OPN | 1-1/2 | 3320 | 3.00 | 1.75 | 4-3/4 | 3-3/4 | 2-7/8 | 4.125 | 2.5 | 1-7/8 | 1/4 | 9/32 | 0.474 | 1-1/16 | 0.937 |
| JRD-32-OPN | 2.0 | 4800 | 5.50 | 2.13 | 6 | 4-3/4 | 3-1/2 | 5.25 | 3.25 | 2-1/2 | 3/8 | 13/32 | 0.600 | 1-3/8 | 1.187 |
| JRD-48-OPN | 3.0 | 12500 | 20.00 | 3.50 | 8-3/8 | 7-1/4 | 5-1/2 | 7 | 5.875 | 3-5/8 | 5/8 | 21/32 | 1.000 | 2-1/8 | 2.080 |
| JRD-64-OPN | 4.0 | 21000 | 51.00 | 4.50 | 10-1/4 | 9.0 | 7-1/2 | 8.875 | 7.25 | 5-1/8 | 3/4 | 25/32 | 1.125 | 2-3/4 | 2.600 |

JET RAIL ROLLER BLOCKS

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# Inch Twin Sizes

## LM76 Linear Bearings

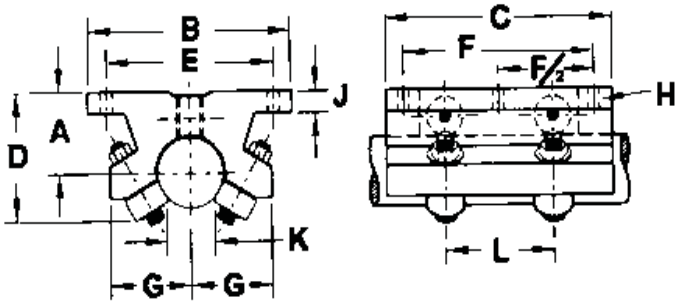


**TABLE #3**
DIMENSIONS & LOAD RATINGS FOR TWIN PILLOW BLOCKS

| MODEL # | SHAFT DIA. | DYN. LOAD | WGT. | +-.003 A | B | C | D | E | F | G | BOLT | HOLE | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JRT-8-OPN | 1/2 | 800 | 0.80 | 0.69 | 2 | 3-1/2 | 1-5/32 | 1.69 | 2.5 | 1 | #6 | 5/32 | 0.24 | 5/16 | 1.500 |
| JRT-10-OPN | 5/8 | 1000 | 1.00 | 0.88 | 2-1/2 | 4 | 1-13/32 | 2.13 | 3 | 1-1/16 | #8 | 3/16 | 0.27 | 3/8 | 2.125 |
| JRT-12-OPN | 3/4 | 1200 | 1.20 | 0.94 | 2-3/4 | 4-1/2 | 1-9/16 | 2.38 | 3.5 | 1-1/16 | #8 | 3/16 | 0.30 | 7/16 | 2.500 |
| JRT-16-OPN | 1.0 | 1910 | 2.30 | 1.19 | 3-1/4 | 6 | 2 | 2.88 | 4.5 | 1-3/8 | #10 | 7/32 | 0.36 | 11/16 | 3.750 |
| JRT-20-OPN | 1-1/4 | 2800 | 4.40 | 1.50 | 4 | 7-1/2 | 2-9/16 | 3.50 | 5.5 | 1-3/4 | #10 | 7/32 | 0.42 | 13/16 | 4.625 |
| JRT-24-OPN | 1-1/2 | 3320 | 6.50 | 1.75 | 4-3/4 | 9 | 2-7/8 | 4.13 | 6.5 | 1-7/8 | 1/4 | 9/32 | 0.47 | 1-1/16 | 5.500 |
| JRT-32-OPN | 2.0 | 4800 | 12.40 | 2.13 | 6 | 12 | 3-1/2 | 5.25 | 10.5 | 2-1/2 | 3/8 | 13/32 | 0.60 | 1-3/8 | 8.250 |

# Metric Single Sizes

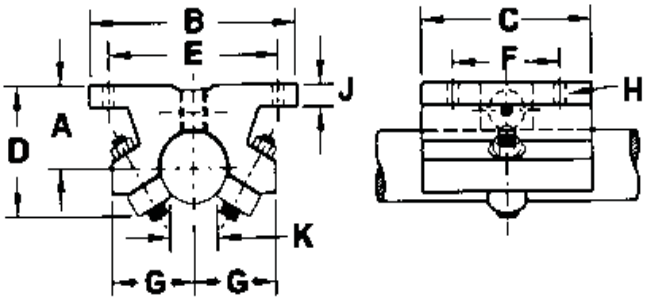


**TABLE #4**
DIMENSIONS & LOAD RATINGS FOR METRIC SINGLE PILLOW BLOCKS

| MODEL # | SHAFT DIA. | DYN. LOAD | WGT. | +-.003 A | B | C | D | E | F | G | BOLT | HOLE | J | K |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JRMS-16-0PN | 16 MM | 500 | 0.50 | 0.877 | 2-1/2 | 1-3/4 | 1-13/32 | 2.125 | 1.125 | 15/16 | #8 | 3/16 | 0.270 | 3/8 |
| JRMS-20-OPN | 20 MM | 600 | 0.60 | 0.956 | 2-3/4 | 1-7/8 | 1-9/16 | 2.375 | 1.250 | 1-1/16 | #8 | 3/16 | 0.300 | 7/16 |
| JRMS-25-OPN | 25 MM | 955 | 1.00 | 1.179 | 3-1/4 | 2-5/8 | 2 | 2.875 | 1.750 | 1-3/8 | #10 | 7/32 | 0.360 | 11/16 |
| JRMS-30-OPN | 30 MM | 1400 | 2.00 | 1.465 | 4 | 3-3/8 | 2-9/16 | 3.500 | 2.000 | 1-3/4 | #10 | 7/32 | 0.424 | 13/16 |

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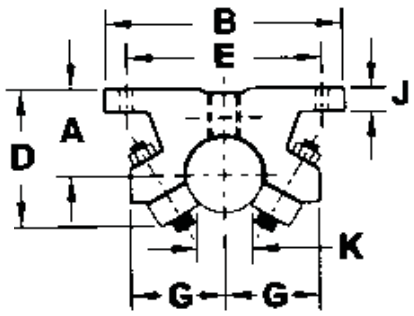
# Metric Double Sizes

## LM76 Linear Bearings



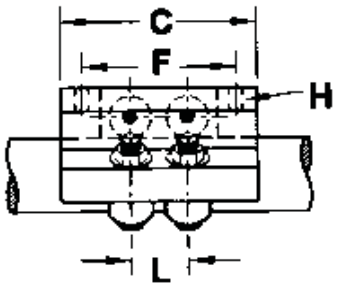
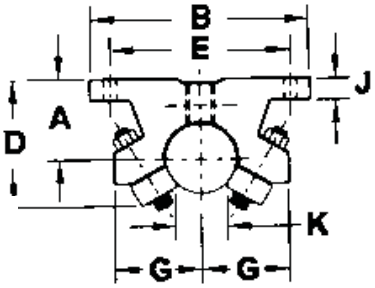




**TABLE #5**

DIMENSIONS & LOAD RATINGS FOR METRIC DOUBLE PILLOW BLOCKS

| MODEL # | SHAFT DIA. | DYN. LOAD | WGT. | A | B | C | D | E | F | G | BOLT | HOLE | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JRMD-16-OPN | 16 MM | 1000 | 0.7 | 0.877 | 2-1/2 | 2-1/2 | 1-13/32 | 2.125 | 2.000 | 15/16 | #8 | 3/16 | 0.270 | 3/8 | 0.562 |
| JRMD-20-OPN | 20 MM | 1200 | 0.8 | 0.956 | 2-3/4 | 2-5/8 | 1-9/16 | 2.375 | 1.250 | 1-1/16 | #8 | 3/16 | 0.300 | 7/16 | 0.562 |
| JRMD-25-OPN | 25 MM | 1910 | 1.2 | 1.179 | 3-1/4 | 2-5/8 | 2 | 2.875 | 1.750 | 1-3/8 | #10 | 7/32 | 0.360 | 11/16 | 0.720 |
| JRMD-30-OPN | 30 MM | 2800 | 3 | 1.465 | 4 | 3-3/8 | 2-9/16 | 3.500 | 2.000 | 1-3/4 | #10 | 7/32 | 0.424 | 13/16 | 0.812 |

# Metric Twin Sizes



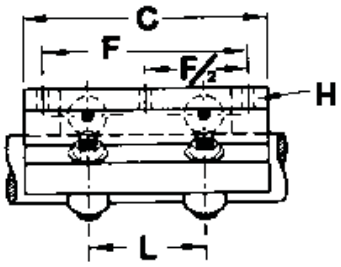




**TABLE #6**

DIMENSIONS & LOAD RATINGS FOR METRIC TWIN PILLOW BLOCKS

| MODEL # | SHAFT DIA. | DYN. LOAD | WGT. | A | B | C | D | E | F | G | BOLT | HOLE | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| JRMT-16-OPN | 16 MM | 1000 | 1 | 0.877 | 2-1/2 | 4 | 1-13/32 | 2.125 | 3.000 | 15/16 | #8 | 3/16 | 0.270 | 3/8 | 2.125 |
| JRMT-20-OPN | 20 MM | 1200 | 1.2 | 0.956 | 2-3/4 | 4-1/2 | 1-9/16 | 2.375 | 3.500 | 1-1/16 | #8 | 3/16 | 0.300 | 7/16 | 2.500 |
| JRMT-25-OPN | 25 MM | 1910 | 2.3 | 1.179 | 3-1/4 | 6 | 2 | 2.875 | 4.500 | 1-3/8 | #10 | 7/32 | 0.360 | 11/16 | 3.750 |
| JRMT-30-OPN | 30 MM | 2800 | 4.4 | 1.465 | 4 | 7-1/2 | 2-9/16 | 3.500 | 5.500 | 1-3/4 | #10 | 7/32 | 0.424 | 13/16 | 4.625 |

JET RAIL ROLLER BLOCKS

JET Rail
LM76 Linear Bearings JET RAIL
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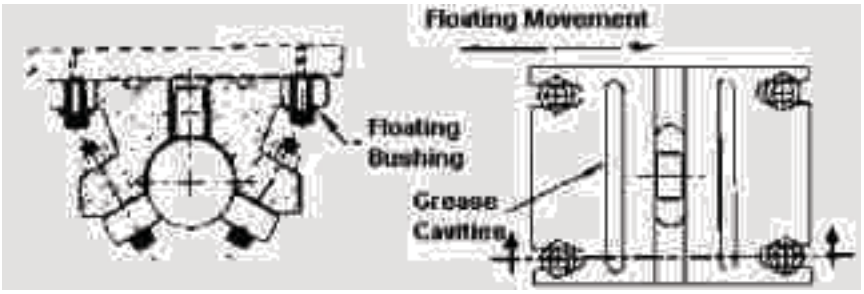
Our new High Temp bearings have been used in temperatures up to 200C (398F) and incorporate a high temperature grease typically used on oven conveyors or rotisseries. Developed around a specific high temperature application for a major corporation, JET Rail HT linear roller blocks have been operating successfully for over 2 years and have outlasted the original linear ball bearings by 6:1.

| P/N | Description |
|---|---|
| **JRS 8 OPN-HT** | Single 1/2” Roller Block |
| **JRD 8 OPN-HT** | Double 1/2” Roller Block |
| **JRT 8 OPN-HT** | Twin 1/2” Roller Block |
| **JRS 12 OPN-HT** | Single 3/4” Roller Block |
| **JRD 12 OPN-HT** | Double 3/4” Roller Block |
| **JRT 12 OPN-HT** | Twin 3/4” Roller Block |

JET Rail roller blocks are available with fixed and floating configurations. This patented option is the only product on the market that provides a real solution for shafting that is out of parallel. This option is particularly effective with long shaft runs that are inherently difficult to install with precision parallelism.



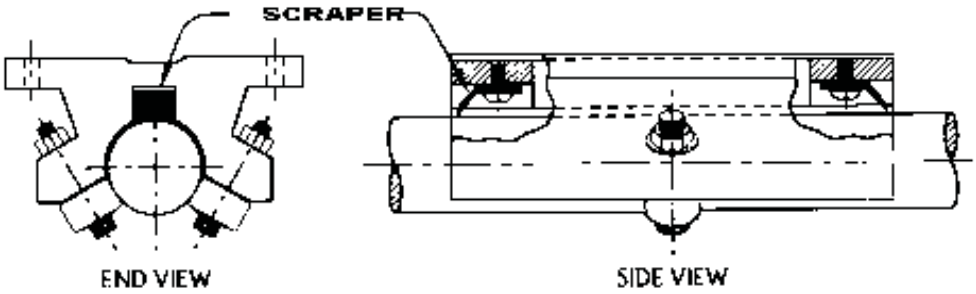
# Roller Bearing Pillow Block
## Options



**SCRAPER OPTION**

When pillow blocks run in an environment where chips or sludge accumulate on the top of the linear shaft, select the "scraper option". The scraper is made from spring steel – tempered phosphor bronze and conforms to the shaft diameter. A scraper is mounted to each end of the bearing assembly which cleans the top of the shaft in either direction.

The "scraper option" requires a specially machined pillow block, and cannot be added as a retrofit to a pillow block originally ordered without this option. This option may temporarily increase resistance to motion, but after a short break-in period this increase will be insignificant.




To order the "scraper option", add the suffix "-S" after the pillow block model number.
For example SPB-16-OPN-S

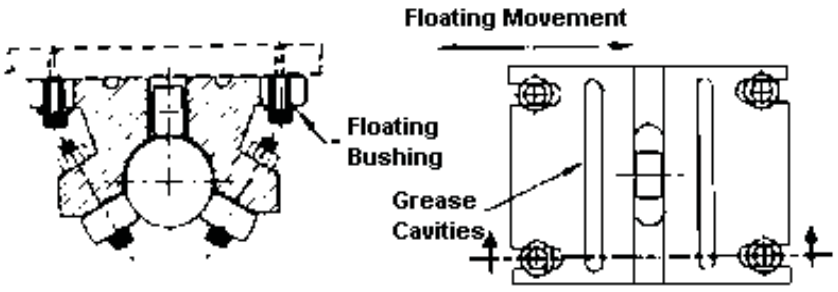
**FLOATING OPTION**

The floating option is available on all models of the Roller Bearing Pillow Block. This patented option is the only product on the market that provides a real solution for shafting that is out of parallel.This option is beneficial when trying to align long shafts, or when the system does not meet the required parallelism.

"Floating" pillow blocks should be used in conjunction with standard pillow blocks which ride on one shaft and the "floating" on the other shaft. On the top of each "floating" pillow block are two grooves which should be filled with the special grease that is supplied. When installing, care should be taken not to over tighten the mounting screws or bolts, causing the floating bushings to bind.

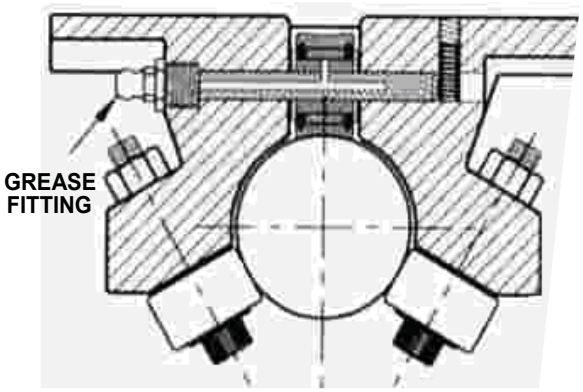
To order "floating" pillow blocks add the prefix "F" to the single, double, or twin bearing.
For example FSPB-16-OPN

| Pillow Block Size | 8,10,12 | 16 | 20,24 | 32 | 48,64 |
|---|---|---|---|---|---|
| Floating Movement | 1/16" | 3/32" | 1/8" | 5/32" | 3/16" |



## TOP GREASE OPTION

The LM76 Roller Bearing Pillow Block rollers are lubricated and sealed, but in some applications it is desired to re-grease the main support roller. The "top grease option" can help achieve full bearing life in applications that reduce or contaminant the grease inside the roller. Such Conditions may exist in applications where solvents or contaminants leach out the grease through the vents in the seals, or where contaminants are so fine or extreme that they must be purged out of the roller with fresh grease. The "top grease option" is also recommended when high speeds or extreme temperatures are present.




TOP GREASE OPTION DETAIL

**To order the "top grease option". Add the suffix "-TG" after the pillow block model number. For Example SPB-24-OPN-TG. Available in 1-1/4" Pillow Blocks and larger.**

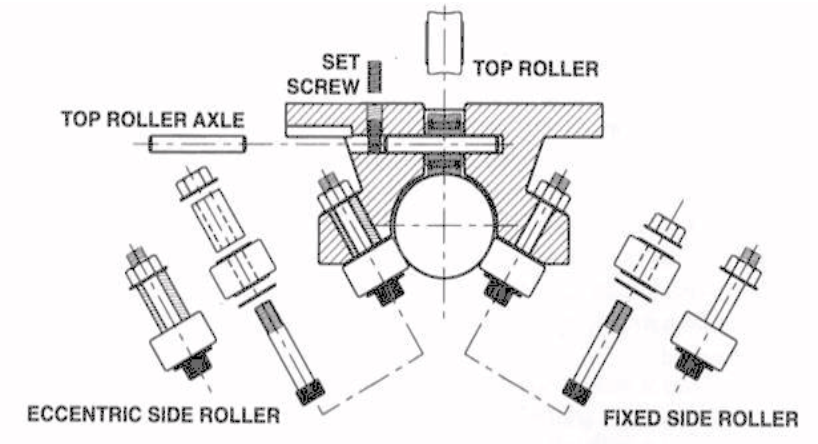
## PILLOW BLOCK REBUILD KITS

Rebuild kits for LM76 Roller Bearing Pillow Blocks are available with all the required parts to completely rebuild each unit. For single units order one kit. For Double or Twins, order two kits.

When ordering a rebuild kit, you must advise the factory of the run number that is stamped on the end face of the pillow block. This run number assures you will get the correct parts needed to rebuild your unit.

For example: #BK 16-1047.
This would be one kit for a 1" pillow block with a run number of 1047. Each kit contains one fixed side roller, one eccentric side roller, one top roller, one top roller axle and one set screw.

Individual Parts are also available. However, it is recommended when a pillow block is removed for parts replacement, all components should be replaced before the pillow block is re-installed.




| REBUILD KIT | NOM DIA. | REBUILD KIT | NOM. DIA. |
|---|---|---|---|
| BK08 | 1/2" | BK20 | 1-1/4" |
| BK10 | 5/8" | BK24 | 1-1/2" |
| BK12 | 3/4" | BK32 | 2" |
| BK16 | 1" | BK48 | 3" |

PRECISION LINEAR SHAFTING

## HARDENED AND PRECISION GROUND LINEAR SHAFTING

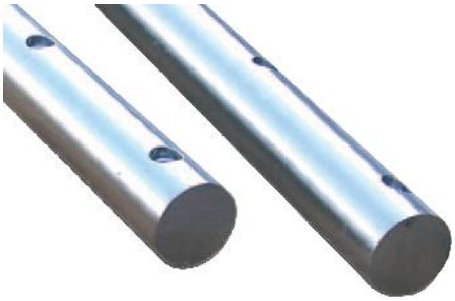
### 1060 STEEL CASE HARDENED AND PRECISION GROUND LINEAR SHAFTING

| NOMINAL DIA. (IN) | CLASS "L" DIA. (IN) | CLASS "S" DIA. (IN) | CLASS "D" DIA. (IN) | CLASS "N" DIA. (IN) | MIN. DEPTH OF 60-65 Rc (IN) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (FT) | NOMINAL DIA. (IN) |
|---|---|---|---|---|---|---|---|---|
| 3/16 | .1870/.1865 | - | - | - | .027 | .008 | 5 | 3/16 |
| 1/4 | .2495/.2490 | .2490/.2485 | - | .2500/.2498 | .027 | .014 | 8 | 1/4 |
| 3/8 | .3745/.3740 | .3740/.3735 | - | .3750/.3748 | .027 | .031 | 14 | 3/8 |
| 1/2 | .4995/.4990 | .4990/.4985 | - | .5000/.4998 | .040 | .055 | 14 | 1/2 |
| 5/8 | .6245/.6240 | .6240/.6235 | - | .6250/.6248 | .040 | .086 | 15 | 5/8 |
| 3/4 | .7495/.7490 | .7490/.7485 | - | .7500/.7498 | .060 | .125 | 15 or 17* | 3/4 |
| 7/8 | .8745/.8740 | - | - | .8750/.8748 | .060 | .170 | 15 | 7/8 |
| 1 | .9995/.9990 | .9990/.9985 | 1.0000/1.003 | 1.0000/.9998 | .060 | .222 | 15 or 17* | 1 |
| 1-1/8 | 1.1245/1.1240 | - | - | 1.1250/1.1248 | .080 | .281 | 15 | 1-1/8 |
| 1-1/4 | 1.2495/1.2490 | 1.2490/1.2485 | 1.2500/1.2503 | 1.2500/1.2498 | .080 | .348 | 17 | 1-1/4 |
| 1-3/8 | 1.3745/1.3740 | - | - | 1.3750/1.3747 | .080 | .420 | 15 | 1-3/8 |
| 1-1/2 | 1.4994/1.4989 | 1.4989/1.4984 | 1.5000/1.5003 | 1.5000/1.4997 | .080 | .500 | 17 | 1-1/2 |
| 1-5/8 | 1.6245/1.6240 | - | - | 1.6250/1.6247 | .080 | .587 | 15 | 1-5/8 |
| 1-3/4 | 1.7495/1.7490 | - | - | 1.7500/1.7497 | .100 | .681 | 15 | 1-3/4 |
| 2 | 1.9994/1.9987 | 1.9987/1.9980 | 2.0000/2.0003 | 2.0000/1.9997 | .100 | .890 | 17 | 2 |
| 2-1/2 | 2.4993/2.4985 | 2.4985/2.4977 | - | 2.5000/2.4996 | .100 | 1.391 | 17 | 2-1/2 |
| 3 | 2.9992/2.9983 | 2.9983/2.9974 | - | 3.0000/2.9996 | .100 | 2.003 | 15 or 17* | 3 |
| 3-1/2 | 3.4990/3.4980 | - | - | - | .100 | 2.726 | 17 | 3-1/2 |
| 4 | 3.9988/3.9976 | 3.9976/3.9964 | - | - | .100 | 3.560 | 17 | 4 |

### 440C STAINLESS STEEL CASE HARDENED AND PRECISION GROUND LINEAR SHAFTING

| NOMINAL DIA. (IN) | CLASS "L" DIA. (IN) | CLASS "S" DIA. (IN) | MIN. DEPTH OF 50-60 Rc (IN) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (FT) | NOMINAL DIA. (IN) |
|---|---|---|---|---|---|---|
| 1/4 | .2495/.2490 | .2490/.2485 | .027 | .014 | 5 | 1/4 |
| 3/8 | .3745/.3740 | .3740/.3735 | .027 | .031 | 14 | 3/8 |
| 1/2 | .4995/.4990 | .4990/.4985 | .040 | .055 | 14 | 1/2 |
| 5/8 | .6245/.6240 | .6240/.6235 | .040 | .086 | 14 | 5/8 |
| 3/4 | .7495/.7490 | .7490/.7485 | .060 | .125 | 15 or 17* | 3/4 |
| 1 | .9995/.9990 | .9990/.9985 | .080 | .222 | 15 or 17* | 1 |
| 1-1/4 | 1.2495/1.2490 | 1.2490/1.2485 | .080 | .348 | 17 | 1-1/4 |
| 1-1/2 | 1.4994/1.4989 | 1.4989/1.4984 | .080 | .500 | 17 | 1-1/2 |
| 2 | 1.9994/1.9987 | 1.9987/1.9980 | .100 | .890 | 17 | 2 |
| 2-1/2 | 2.4993/2.4985 | 2.4985/2.4977 | .100 | 1.391 | 17 | 2-1/2 |

NOTES:
- (*) 17 FT. LENGTHS AVAILABLE IN CLASS “L” ONLY
- 303 AND 316 STAINLESS STEEL (UNHARDENED CLASS “L”) AVAILABLE UPON REQUEST
- CUSTOM LINEAR SHAFTING INQUIRES CAN BE FAXED OR EMAILED TO: 413-525-3735 mquinn@LM76.com



## HARDENED AND PRECISION GROUND PRE-DRILLED SHAFTING

**1060 STEEL CASE HARDENED AND PRECISION GROUND PREDRILLED LINEAR SHAFTING**

| NOMINAL DIA. (IN) | CLASS "L" DIA. (IN) | STANDARD THREAD SIZE | X (IN) | Y (IN) | MIN. DEPTH OF 60-65 Rc (IN) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (IN) | NOMINAL DIA. (IN) |
|---|---|---|---|---|---|---|---|---|
| 1/2 | .4995/.4990 | #6-32 | 4 | 2 | .040 | .055 | 166 | 1/2 |
| 5/8 | .6245/.6240 | #8-32 | 4 | 2 | .040 | .086 | 178 | 5/8 |
| 3/4 | .7495/.7490 | #10-32 | 6 | 3 | .060 | .125 | 178 | 3/4 |
| 1 | .9995/.9990 | 1/4-20 | 6 | 3 | .080 | .222 | 178 | 1 |
| 1-1/4 | 1.2495/1.2490 | 5/16-18 | 6 | 3 | .080 | .348 | 178 | 1-1/4 |
| 1-1/2 | 1.4994/1.4989 | 3/8-16 | 8 | 4 | .080 | .500 | 178 | 1-1/2 |
| 2 | 1.9994/1.9987 | 1/2-13 | 8 | 4 | .100 | .890 | 178 | 2 |

**440C STAINLESS STEEL CASE HARDENED AND PRECISION GROUND PREDRILLED LINEAR SHAFTING**

| NOMINAL DIA. (IN) | CLASS "L" DIA. (IN) | STANDARD THREAD SIZE | X (IN) | Y (IN) | MIN. DEPTH OF 50-60 Rc (IN) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (IN) | NOMINAL DIA. (IN) |
|---|---|---|---|---|---|---|---|---|
| 1/2 | .4995/.4990 | #6-32 | 4 | 2 | .040 | .055 | 166 | 1/2 |
| 5/8 | .6245/.6240 | #8-32 | 4 | 2 | .040 | .086 | 178 | 5/8 |
| 3/4 | .7495/.7490 | #10-32 | 6 | 3 | .060 | .125 | 178 | 3/4 |
| 1 | .9995/.9990 | 1/4-20 | 6 | 3 | .080 | .222 | 178 | 1 |
| 1-1/4 | 1.2495/1.2490 | 5/16-18 | 6 | 3 | .080 | .348 | 178 | 1-1/4 |
| 1-1/2 | 1.4994/1.4989 | 3/8-16 | 8 | 4 | .080 | .500 | 178 | 1-1/2 |
| 2 | 1.9994/1.9987 | 1/2-13 | 8 | 4 | .100 | .890 | 178 | 2 |

**52100 STEEL CASE HARDENED AND PRECISION GROUND TUBULAR LINEAR SHAFTING**

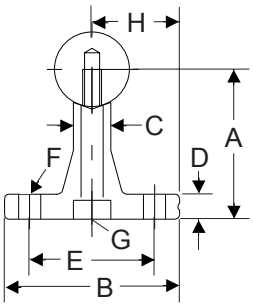
| NOMINAL DIA. (IN) | NOMINAL I.D. (IN) | CLASS "L" DIA. (IN) | CLASS "S" DIA. (IN) | MIN. DEPTH OF 58 Rc (IN) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (FT) | NOMINAL DIA. (IN) |
|---|---|---|---|---|---|---|---|
| 3/4 | .438 ± 5% | .7495/.7490 | .7490/.7485 | .060 | .075 | 15 | 3/4 |
| 1 | .599 ± 5% | .9995/.9990 | .9990/.9985 | .060 | .158 | 15 | 1 |
| 1-1/2 | .890 ± 5% | 1.4994/1.4989 | 1.4989/1.4984 | .080 | .328 | 15 | 1-1/2 |
| 2 | 1.250 ± 5% | 1.9994/1.9987 | 1.9987/1.9980 | .100 | .542 | 15 | 2 |
| 2-1/2 | 1.750 ± 5% | 2.4993/2.4985 | 2.4985/2.4977 | .100 | .749 | 15 | 2-1/2 |
| 3 | 2.000 ± 10% | 2.9992/2.9983 | 2.9983/2.9974 | .100 | 1.112 | 15 | 3 |
| 4 | 3.000 ± 10% | 3.9988/3.9976 | 3.9976/3.9964 | .100 | 1.558 | 15 | 4 |

NOTES:

- CUSTOM PREDRILLED OR TUBULAR LINEAR SHAFTING INQUIRES CAN BE FAXED OR EMAILED TO: 413-525-3735 mquinn@LM76.com

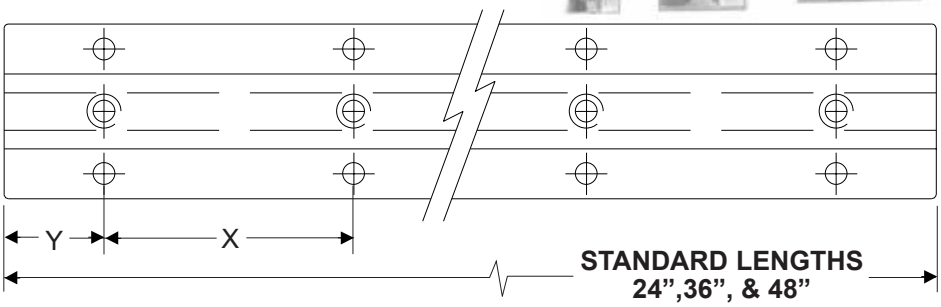
PRECISION LINEAR SHAFTING

## SHAFT SUPPORT ASSEMBLIES

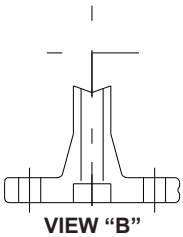



VIEW "A"

VIEW "A"

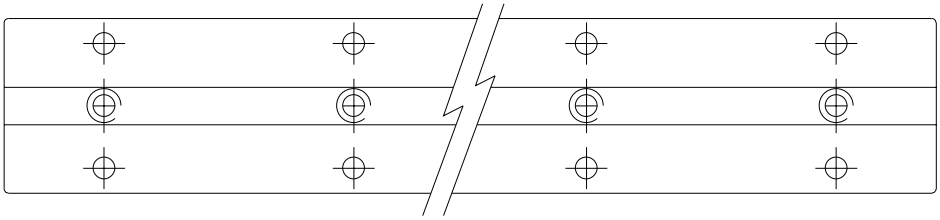



## PREDRILLED SHAFT SUPPORT RAILS



VIEW "B"

VIEW "B"



| SHAFT DIA. | SHAFT SUPPORT ASSEMBLY | PREDRILLED SHAFT SUPPORT RAIL | *PLAIN SHAFT SUPPORT RAIL | A +/-.001 | B | C | D | E +/-.005 |
|---|---|---|---|---|---|---|---|---|
| 1/2 | LMSA-8 | SR-8-PD | SMR-8 | 1.125 | 1-1/2 | 1/4 | 3/16 | 1.000 |
| 5/8 | LMSA-10 | SR-10-PD | SMR-10 | 1.125 | 1-5/8 | 5/16 | 1/4 | 1.125 |
| 3/4 | LMSA-12 | SR-12-PD | SMR-12 | 1.500 | 1-3/4 | 3/8 | 1/4 | 1.250 |
| 1 | LMSA-16 | SR-16-PD | SMR-16 | 1.750 | 2-1/8 | 1/2 | 1/4 | 1.500 |
| 1-1/4 | LMSA-20 | SR-20-PD | SMR-20 | 2.125 | 2-1/2 | 9/16 | 5/16 | 1.875 |
| 1-1/2 | LMSA-24 | SR-24-PD | SMR-24 | 2.500 | 3 | 11/16 | 3/8 | 2.250 |
| 2 | LMSA-32 | SR-32-PD | SMR-32 | 3.250 | 3-3/4 | 7/8 | 1/2 | 2.750 |

| SHAFT DIA. | F BOLT | F HOLE | G SCREW | G HOLE | H +/-.001 | X | Y | WT/FT LBS |
|---|---|---|---|---|---|---|---|---|
| 1/2 | 6 | .169 | 6-32 x 7/8 | .169 | .750 | 4 | 2 | .6 |
| 5/8 | 8 | .193 | 8-32 x 7/8 | .193 | .812 | 4 | 2 | .8 |
| 3/4 | 10 | .221 | 10-32 x 1-1/4 | .221 | .875 | 6 | 3 | 1.0 |
| 1 | 1/4 | .281 | 1/4-20 x 1-1/2 | .281 | 1.062 | 6 | 3 | 1.4 |
| 1-1/4 | 5/16 | .343 | 5/16-18 x 1-3/4 | .343 | 1.250 | 6 | 3 | 2.1 |
| 1-1/2 | 5/16 | .343 | 3/8-16 x 2 | .406 | 1.500 | 8 | 4** | 2.6 |
| 2 | 3/8 | .406 | 1/2-13 x 2-1/2 | .531 | 1.875 | 8 | 4** | 4.2 |

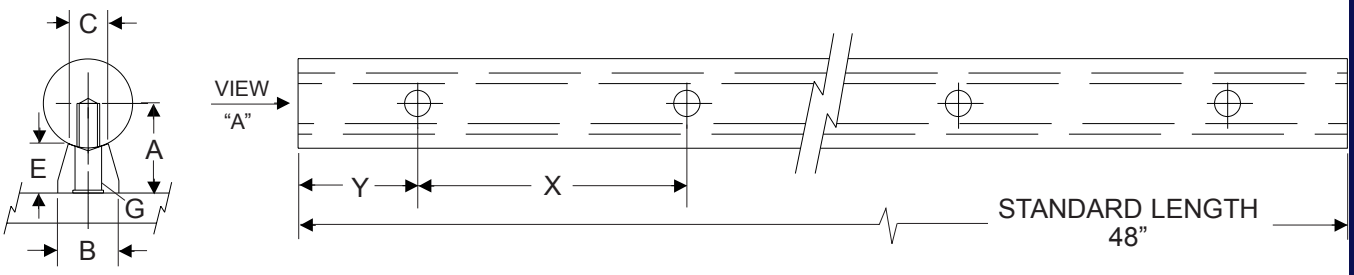
NOTES:
- (*) DOES NOT INCLUDE ANY HOLES IN SHAFT SUPPORT
- (**) LMSA-24-PD-36" & SMR-32-PD-36" (Y=2")
- MANUFACTURED FROM EXTRUDED 6061-T6 ALUMINUM FOR ENGINEERED PERFORMANCE

CUSTOM SHAFT SUPPORT AND ASSEMBLY INQUIRES CAN BE FAXED OR EMAILED TO: 413-525-3735 mquinn@LM76.com

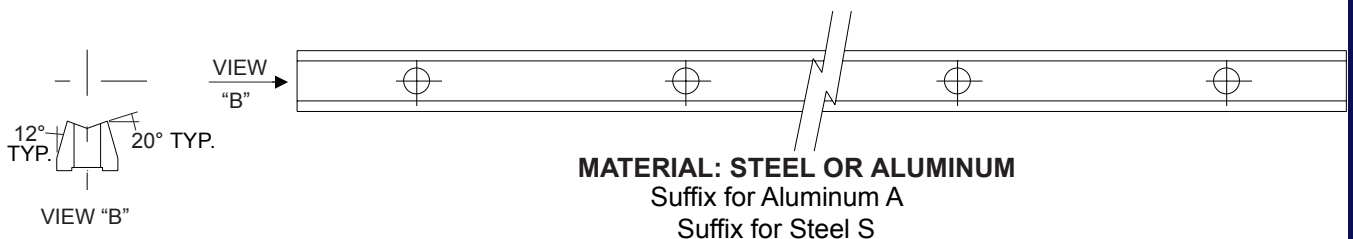
**1-800-513-3163** **www.LM76.com**

PRECISION LINEAR SHAFTING

## LOW SHAFT SUPPORT ASSEMBLIES




## PRE-DRILLED LOW SHAFT SUPPORT RAILS




**MATERIAL: STEEL OR ALUMINUM**
Suffix for Aluminum A
Suffix for Steel S

| SHAFT DIA. | SHAFT SUPPORT ASSEMBLY | PREDRILLED SHAFT SUPPORT RAIL | *PLAIN SHAFT SUPPORT RAIL | A +/-.001 | B | C |
|---|---|---|---|---|---|---|
| 1/2 | LSRA-8 | LSR-8-PD | LSR-8 | .562 | .370 | 1/4 |
| 5/8 | LSRA-10 | LSR-10-PD | LSR-10 | .687 | .450 | 5/16 |
| 3/4 | LSRA-12 | LSR-12-PD | LSR-12 | .750 | .510 | 3/8 |
| 1 | LSRA-16 | LSR-16-PD | LSR-16 | 1.000 | .690 | 1/2 |
| 1-1/4 | LSRA-20 | LSR-20-PD | LSR-20 | 1.187 | .780 | 9/16 |
| 1-1/2 | LSRA-24 | LSR-24-PD | LSR-24 | 1.375 | .930 | 11/16 |
| 2 | LSRA-32 | LSR-32-PD | LSR-32 | 1.750 | 1.180 | 7/8 |

| SHAFT DIA. | E (REF.) | G SCREW | G HOLE | X | Y | WT/FT LBS |
|---|---|---|---|---|---|---|
| 1/2 | .341 | 6-32 | .169 | 4 | 2 | .32 |
| 5/8 | .412 | 8-32 | .193 | 4 | 2 | .49 |
| 3/4 | .420 | 10-32 | .221 | 6 | 3 | .59 |
| 1 | .560 | 1/4-20 | .281 | 6 | 3 | 1.01 |
| 1-1/4 | .626 | 5/16-18 | .343 | 6 | 3 | 1.27 |
| 1-1/2 | .703 | 3/8-16 | .406 | 8 | 4 | 1.68 |
| 2 | .845 | 1/2-13 | .531 | 8 | 4 | 2.59 |

NOTES:

- (*) DOES NOT INCLUDE ANY HOLES IN SHAFT SUPPORT
- CUSTOM SHAFT SUPPORT AND ASSEMBLY INQUIRES CAN BE FAXED OR EMAILED TO: 413-525-3735 mquinn@LM76.com

PRECISION LINEAR SHAFTING

# HARDENED AND PRECISION GROUND METRIC LINEAR SHAFTING

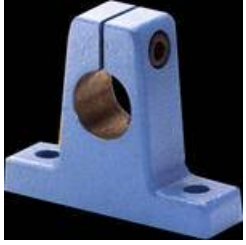
| 1060 STEEL CASE HARDENED AND PRECISION GROUND METRIC LINEAR SHAFTING | | | | | |
|---|---|---|---|---|---|
| NOMINAL DIA. (MM) | TOLERANCES CLASS "M" (h6) (IN) | MIN. DEPTH OF 60-65 Rc (MM) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (MM) | NOMINAL DIA. (MM) |
| 5 | .1969/.1965 | 0.4 | .008 | 3600 | 5 |
| 6 | .2362/.2359 | 0.4 | .012 | 4000 | 6 |
| 8 | .3150/.3146 | 0.4 | .022 | 4000 | 8 |
| 10 | .3937/.3933 | 0.4 | .034 | 4000 | 10 |
| 12 | .4724/.4720 | 0.6 | .050 | 6000 | 12 |
| 14 | .5512/.5507 | 0.6 | .068 | 6000 | 14 |
| 15 | .5906/.5901 | 0.6 | .076 | 6000 | 15 |
| 16 | .6299/.6295 | 0.6 | .088 | 6000 | 16 |
| 18 | .7087/.7082 | 0.6 | .111 | 6000 | 18 |
| 20 | .7874/.7869 | 0.9 | .137 | 6000 | 20 |
| 24 | .9449/.9444 | 0.9 | .198 | 6000 | 24 |
| 25 | .9843/.9838 | 0.9 | .214 | 6000 | 25 |
| 30 | 1.1811/1.1806 | 0.9 | .308 | 6000 | 30 |
| 35 | 1.3780/1.3773 | 1.5 | .419 | 6000 | 32 |
| 40 | 1.5748/1.5743 | 1.5 | .548 | 6000 | 40 |
| 50 | 1.9685/1.9679 | 1.5 | .855 | 6000 | 50 |
| 60 | 2.3622/2.3615 | 2.2 | 1.23 | 6000 | 60 |
| 80 | 3.1496/3.1489 | 2.2 | 2.19 | 6000 | 80 |

| 440C STAINLESS STEEL CASE HARDENED AND PRECISION GROUND METRIC LINEAR SHAFTING | | | | | |
|---|---|---|---|---|---|
| NOMINAL DIA. (MM) | TOLERANCES CLASS "M" (h6) (IN) | MIN. DEPTH OF 50-60 Rc (MM) | WEIGHT PER IN. (LBS/IN) | MAX LENGTH (MM) | NOMINAL DIA. (MM) |
| 5 | .1969/.1965 | 0.4 | .008 | 3600 | 5 |
| 8 | .3150/.3146 | 0.4 | .022 | 4000 | 8 |
| 10 | .3937/.3933 | 0.4 | .034 | 4000 | 10 |
| 12 | .4724/.4720 | 0.6 | .050 | 6000 | 12 |
| 16 | .6299/.6295 | 0.6 | .088 | 6000 | 16 |
| 20 | .7874/.7869 | 0.9 | .137 | 6000 | 20 |
| 25 | .9843/.9838 | 0.9 | .214 | 6000 | 25 |
| 30 | 1.1811/1.1806 | 0.9 | .308 | 6000 | 30 |
| 40 | 1.5748/1.5743 | 1.5 | .548 | 6000 | 40 |
| 50 | 1.9685/1.9679 | 1.5 | .855 | 6000 | 50 |
| 60 | 2.3622/2.3615 | 2.2 | 1.23 | 6000 | 60 |

NOTES:
- PREDRILLED AND ASSEMBLED METRIC LINEAR SHAFTING AVAILABLE UPON REQUEST
- CUSTOM METRIC LINEAR SHAFTING INQUIRES CAN BE FAXED OR EMAILED TO: 413-525-3735 mquinn@LM76.com

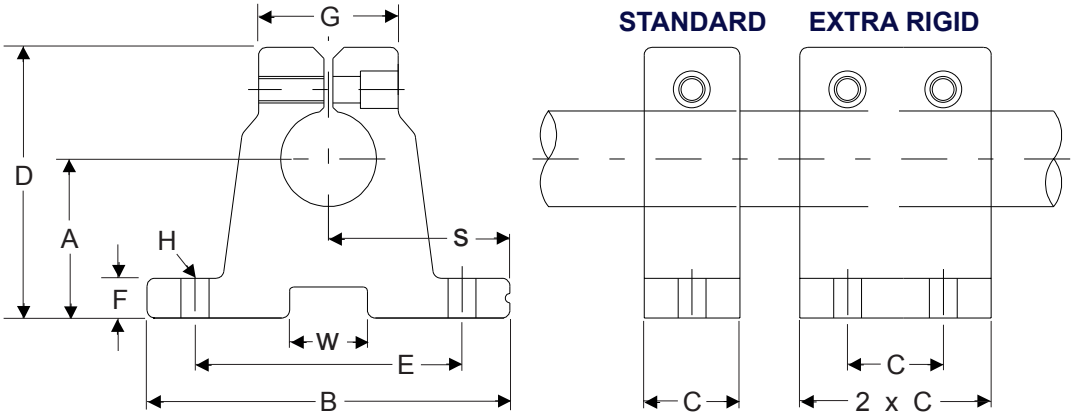
PRECISION LINEAR SHAFTING

Aluminum = A



Steel = S

# STANDARD AND EXTRA RIGID SHAFT END SUPPORTS




| SHAFT DIA. | STANDARD SHAFT END SUPPORT | EXTRA RIGID SHAFT END SUPPORT | A +/-.001 | B | C | D | E +/-.005 |
|---|---|---|---|---|---|---|---|
| 1/4 | LMSB-4-A or S | RSB-4 | .750 | 1-5/8 | 9/16 | 1-3/16 | 1.250 |
| 3/8 | LMSB-6-A or S | RSB-6 | .750 | 1-5/8 | 9/16 | 1-3/16 | 1.250 |
| 1/2 | LMSB-8-A or S | RSB-8 | 1.000 | 2 | 5/8 | 1-5/8 | 1.500 |
| 5/8 | LMSB-10-A or S | RSB-10 | 1.000 | 2-1/2 | 11/16 | 1-3/4 | 1.875 |
| 3/4 | LMSB-12-A or S | RSB-12 | 1.250 | 2-3/4 | 3/4 | 2-1/8 | 2.000 |
| 1 | LMSB-16-A or S | RSB-16 | 1.500 | 3-1/4 | 1 | 2-9/16 | 2.500 |
| 1-1/4 | LMSB-20-A or S | RSB-20 | 1.750 | 4 | 1-1/8 | 3 | 3.000 |
| 1-1/2 | LMSB-24-A or S | RSB-24 | 2.000 | 4-3/4 | 1-1/4 | 3-1/2 | 3.500 |
| 2 | LMSB-32-A or B | RSB-32 | 2.500 | 6 | 1-1/2 | 4-1/2 | 4.500 |

| SHAFT DIA. | F | G | H BOLT | H HOLE | S +/-.001 | *W +.00/-.01 | T |
|---|---|---|---|---|---|---|---|
| 1/4 | 1/4 | 11/16 | 6 | 5/32 | .812 | 1/4 | 1/8 |
| 3/8 | 1/4 | 11/16 | 6 | 5/32 | .812 | 1/4 | 1/8 |
| 1/2 | 1/4 | 3/4 | 8 | 3/16 | 1.000 | 1/2 | 3/16 |
| 5/8 | 5/16 | 7/8 | 10 | 7/32 | 1.250 | 1/2 | 3/16 |
| 3/4 | 5/16 | 1 | 10 | 7/32 | 1.375 | 5/8 | 1/4 |
| 1 | 3/8 | 1-3/8 | 1/4 | 9/32 | 1.625 | 5/8 | 1/4 |
| 1-1/4 | 7/16 | 1-3/4 | 5/16 | 11/32 | 2.000 | 5/8 | 1/4 |
| 1-1/2 | 1/2 | 2 | 5/16 | 11/32 | 2.375 | 3/4 | 5/16 |
| 2 | 5/8 | 2-5/8 | 3/8 | 13/32 | 3.000 | 1 | 3/8 |

NOTES:
- (*) THE DIMENSION “W” IS NOT MACHINED (PROVISION CAN BE MADE FOR THIS DIMENSION TO BE MACHINED)
- MANUFACTURED FROM EXTRUDED 6061-T6 ALUMINUM FOR ENGINEERED PERFORMANCE
- CUSTOM SHAFT END SUPPORTS INQUIRES CAN BE FAXED OR EMAILED TO: 413-525-3735 mquinn@LM76.com

PRECISION LINEAR SHAFTING

# Linear Bearings that EXCEED the Challenge!

## More Linear Motion Products from LM76


LM-Tarbell's modern facility in East Longmeadow Massachusetts
Home of the MINUTEMAN Linear/Rotary Bearing

LM-Tarbell is the combination of two internationally prominent manufacturers of sleeve bearings:

# J.C. Tarbell Associates

Founded in 1938, J.C. Tarbell Associates was one of the first exclusive regional distributors for Chrysler's oil impregnated bronze bearing line - a technological innovation at the time. Over the past 60 years, Tarbell has engineered this material into every product conceivable from sewing machines to jet engines. Today, Tarbell supplies engineering expertise, standard products and machined specials to companies throughout the world.

# LM76

Founded in 1976, LM76 found its genesis in combating traditional problems which plagued linear ball bushings: mechanical cage/ball failure and shaft brinelling or grooving. LM76's response was their ceramic coated, direct drop-in replacement linear bearing line which was hailed as a genuine innovation by engineers and maintenance personnel alike. LM76's latest product innovation is its MINUTEMAN Self Lubricating Linear/Rotary bearing line. This line offers outstanding load carrying capability coupled with a remarkably low coefficient of friction.

Add these two companies together and you get a singular wealth of sleeve bearing experience. Moreover, you can be confident that our recommendations/products are solid, proven and the best your company can purchase.

**1-800-513-3163** **www.LM76.com**