

**M3000  
EVEN-LOK™  
SPHERICAL  
ROLLER  
BEARINGS**

**The latest addition to the Moline line, the M3000 Even-Lok™ mounted spherical bearing uses a built-in mechanical connector that applies a near 360° concentric grip and almost a 100% interface with the surface of the shaft.**

This unique locking mechanism helps eliminate vibration and slippage between the mating surfaces.

An excellent choice for screening and conveying, material and air handling, or industrial laundry applications, where there are problems with fretting corrosion, slippage on the shaft, or vibration, Moline's M3000 Even-Lok™ spherical roller bearing will help.

Save costly down time and expense by using this exciting new bearing.

The M3000 2-Bolt and 4-Bolt Pillow Blocks, 4-Bolt Flange Bearings, Piloted Flange Bearings and Wide Slot Take-up Bearings are ready to slip onto the shaft when received because they are completely assembled, adjusted, sealed and pre-lubricated at the factory. The self-aligning feature provides for speedy mounting with a minimum of field adjustment required. The housings are ruggedly designed and made in the USA of Class 30 cast iron.

The M3000 Even-Lok™ comes with mounting instructions and an Allen wrench for easy mounting and dismounting.

Our M3000 bearings are comparable to other adapter mounted spherical roller bearings, and are equipped with the SKF Explorer™ Spherical Roller Bearing Insert.

Moline M3000 bearings are available in expansion and non-expansion styles. The expansion units have the capacity to move up to .100". The bearings are available in shaft sizes from 1 $\frac{7}{16}$ " up to 4".

All Moline housings come with a standard paint finish. Custom Colors, Powder Coating, Stainless Powder coating, Nickel plating, Epoxy and Teflon coatings will be quoted on request. Special machining is also available, please call us at the factory for further information.

Moline M3000 Even-Lok™ Spherical Roller Bearings are carried in Moline warehouses and distributor stocks throughout the United States and in Canada.

M3000 EVEN-LOK™  
SPHERICALS

Solid cast iron housing,  
with center support  
Made in the USA

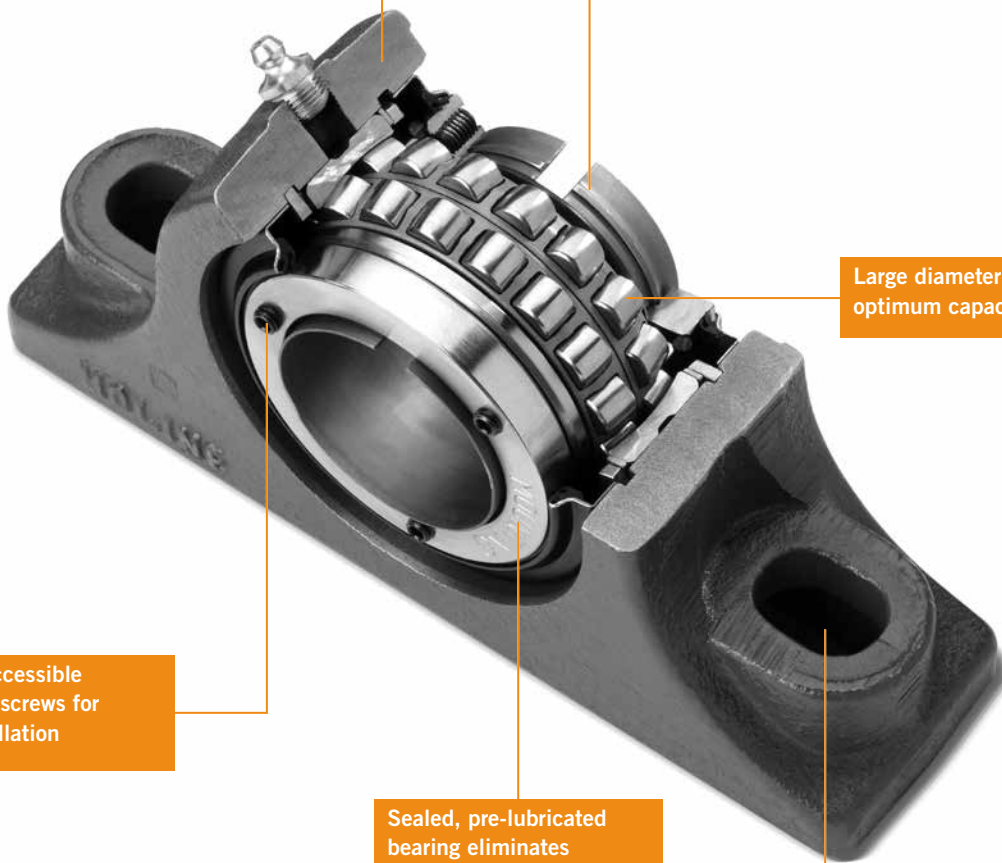
Even-Lok™ bearing provides  
near 360 degree/100%  
interface with shaft

Large diameter rollers for  
optimum capacity

Readily accessible  
mounting screws for  
easy installation

Sealed, pre-lubricated  
bearing eliminates  
most environmental  
contamination

Elongated bolt holes  
permit adjustment and  
increased mounting  
options



MOLINE M3000 EVEN-LOK™ SPHERICAL ROLLER BEARINGS

**SKF** SKF INSERT INSIDE

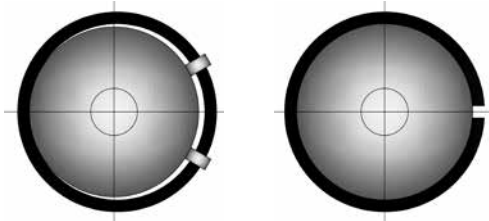


Jamieson Equipment Company  
www.jamiesonequipment.com  
toll free 800.875.0280

# FEATURES OF MOLINE M3000 EVEN-LOK™ SPHERICAL ROLLER BEARINGS

## WITH SKF® ROLLER BEARINGS

- Supplies near 360° concentric locking around the shaft which eliminates slippage due to vibration



Traditional Set  
Screw Locking

M3000 Even-Lok™

- Compared to traditional set screw locking, concentric locking reduces fretting corrosion
- Excellent choice for screening and conveying, material and air handling, industrial laundry applications, or any application where vibration, slippage or fretting corrosion is a problem
- Distributes locking force equally through Even-Lok™, reducing the risk of local material failure and particle infiltration in the inner sleeve
- Even-Lok™ is reliable, easy and fast to install and dismount
- Units come completely assembled, sealed and pre-lubricated
- Comes with special Allen wrench for easy mounting and dismounting
- Available in shaft sizes from 1 7/16" to 4"
- +/- 1 1/2° misalignment capacity
- Available in Expansion (red tag) and Non-Expansion (yellow tag) styles
- Expansion units have .100" capacity or .030" per foot of shaft
- Standard grease operating temperature is up to 250°, high temperature grease is 350°, additional lubrication options are available, please call the factory for more information
- Available with Standard Double Lip Contact Seal made by SKF®
- Housings available in the standard painted finish, Powder coating in RAL or custom colors, Stainless Steel Powder coating, Nickel Plating, Epoxy and Teflon coatings available upon request
- Custom machining and design is available upon request, please call the factory for more information
- Housings are made of Class 30 cast iron in Illinois and Iowa
- Made in the United States

Standard Double Lip Contact Seal made by SKF®



# M3000 EVEN-LOK™ 2-BOLT PILLOW BLOCK

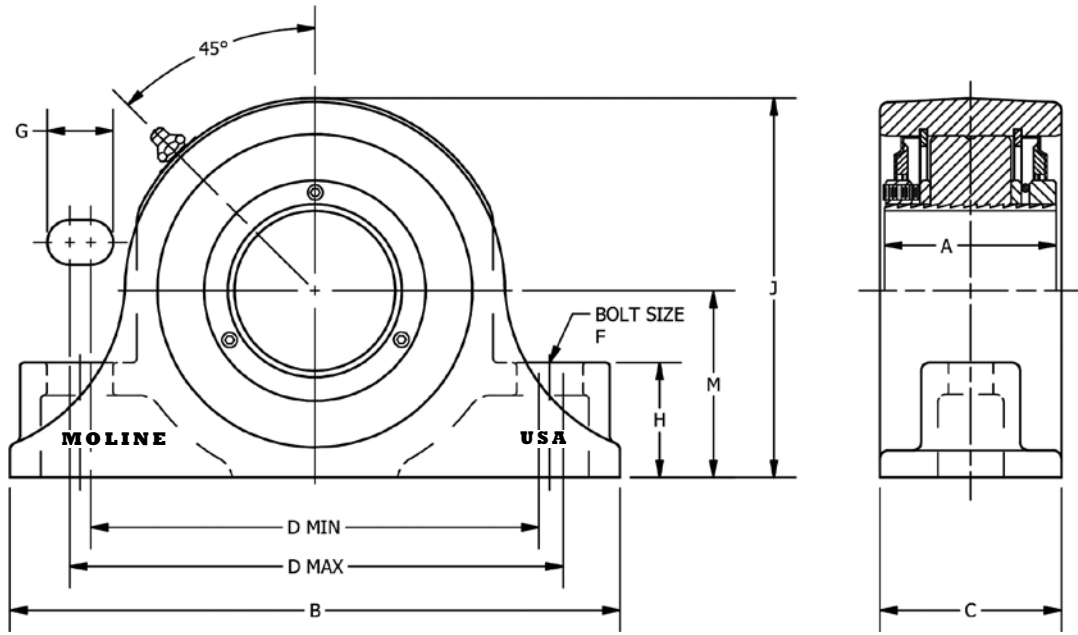
SHAFT SIZE	MOLINE PART #		DIMENSIONS (INCHES)											WEIGHT LBS.
	EXP	NON-EXP	A	B	C	MIN D	CENTER TO CENTER D	MAX D	F	G	H	J	M	
1 <sup>7</sup> / <sub>16</sub> 1 <sup>1</sup> / <sub>2</sub>	19621107 19621108	19721107 19721108	2 <sup>11</sup> / <sub>32</sub>	6 <sup>7</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>16</sub>	4 <sup>11</sup> / <sub>16</sub>	5	5 <sup>5</sup> / <sub>16</sub>	1/2	1 <sup>5</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>	3 <sup>7</sup> / <sub>8</sub>	1 <sup>7</sup> / <sub>8</sub>	6.9
1 <sup>11</sup> / <sub>16</sub> 1 <sup>3</sup> / <sub>4</sub>	19621111 19621112	19721111 19721112	2 <sup>11</sup> / <sub>32</sub>	7 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>16</sub>	5 <sup>3</sup> / <sub>16</sub>	5 <sup>1</sup> / <sub>2</sub>	5 <sup>13</sup> / <sub>16</sub>	1/2	1 <sup>5</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>8</sub>	8.1
1 <sup>15</sup> / <sub>16</sub> 2	19621115 19621200	19721115 19721200	2 <sup>11</sup> / <sub>32</sub>	8 <sup>3</sup> / <sub>8</sub>	2 <sup>3</sup> / <sub>16</sub>	5 <sup>15</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>4</sub>	6 <sup>9</sup> / <sub>16</sub>	5/8	1	1 <sup>3</sup> / <sub>8</sub>	4 <sup>9</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	9.1
2 <sup>3</sup> / <sub>16</sub>	19621203	19721203	2 <sup>11</sup> / <sub>32</sub>	8 <sup>7</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>2</sub>	6 <sup>7</sup> / <sub>16</sub>	6 <sup>3</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>16</sub>	5/8	1	1 <sup>5</sup> / <sub>8</sub>	5	2 <sup>1</sup> / <sub>2</sub>	11.8
2 <sup>7</sup> / <sub>16</sub> 2 <sup>1</sup> / <sub>2</sub>	19621207 19621208	19721207 19721208	2 <sup>37</sup> / <sub>64</sub>	9 <sup>1</sup> / <sub>4</sub>	2 <sup>3</sup> / <sub>4</sub>	6 <sup>13</sup> / <sub>16</sub>	7 <sup>1</sup> / <sub>8</sub>	7 <sup>7</sup> / <sub>16</sub>	5/8	1	1 <sup>3</sup> / <sub>4</sub>	5 <sup>11</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>	16.2
2 <sup>11</sup> / <sub>16</sub> 2 <sup>3</sup> / <sub>4</sub> 2 <sup>15</sup> / <sub>16</sub> 3	19621211 19621212 19621215 19621300	19721211 19721212 19721215 19721300	2 <sup>37</sup> / <sub>64</sub>	10 <sup>1</sup> / <sub>2</sub>	2 <sup>13</sup> / <sub>16</sub>	7 <sup>13</sup> / <sub>16</sub>	8 <sup>1</sup> / <sub>8</sub>	8 <sup>7</sup> / <sub>16</sub>	3/4	1 <sup>1</sup> / <sub>8</sub>	2 <sup>1</sup> / <sub>4</sub>	6 <sup>7</sup> / <sub>16</sub>	3 <sup>1</sup> / <sub>4</sub>	22.1
3 <sup>7</sup> / <sub>16</sub> 3 <sup>1</sup> / <sub>2</sub>	19621307 19621308	19721307 19721308	3 <sup>9</sup> / <sub>64</sub>	13	3 <sup>1</sup> / <sub>4</sub>	9 <sup>1</sup> / <sub>2</sub>	10	10 <sup>1</sup> / <sub>2</sub>	7/8	1 <sup>7</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>4</sub>	7 <sup>1</sup> / <sub>2</sub>	3 <sup>3</sup> / <sub>4</sub>	31.6
3 <sup>15</sup> / <sub>16</sub> 4	19621315 19621400	19721315 19721400	3 <sup>9</sup> / <sub>64</sub>	14 <sup>1</sup> / <sub>2</sub>	3 <sup>9</sup> / <sub>16</sub>	10	10 <sup>7</sup> / <sub>8</sub>	11 <sup>3</sup> / <sub>4</sub>	1	1 <sup>15</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>2</sub>	8 <sup>3</sup> / <sub>8</sub>	4 <sup>1</sup> / <sub>8</sub>	45

Refer to Mounting and Dismounting Instructions on pages 86 and 87.

M3000 EVEN-LOK™  
SPHERICALS



# M3000 EVEN-LOK™ 2-BOLT PILLOW BLOCK



M3000 EVEN-LOK™  
SPHERICALS



CAD drawings available upon request at no additional charge.



# M3000 EVEN-LOK™ 4-BOLT PILLOW BLOCK

SHAFT SIZE	MOLINE PART #		DIMENSIONS (INCHES)											WT. LBS.	
	EXP	NON-EXP	A	B	C	MIN D	CENTER TO CENTER D	MAX D	E	F	G	H	J		M
2 7/16 2 1/2	19641207 19641208	19741207 19741208	2 37/64	9 1/4	3 1/4	6 7/8	7 1/4	7 5/8	1 3/4	1/2	15/16	1 3/4	5 11/16	2 3/4	17
2 1 1/16 2 3/4 2 15/16 3	19641211 19641212 19641215 19641300	19741211 19741212 19741215 19741300	2 37/64	10 1/2	3 3/4	7 7/8	8 1/8	8 3/8	1 7/8	5/8	15/16	2 1/4	6 7/16	3 1/4	26
3 7/16 3 1/2	19641307 19641308	19741307 19741308	3 9/64	13	3 7/8	9 1/4	10	10 3/4	2	3/4	1 9/16	2 1/4	7 1/2	3 3/4	38
3 15/16 4	19641315 19641400	19741315 19741400	3 9/64	15 1/4	4 1/2	11	12	13	2 1/4	3/4	1 13/16	2 5/8	8 1/2	4 1/4	50

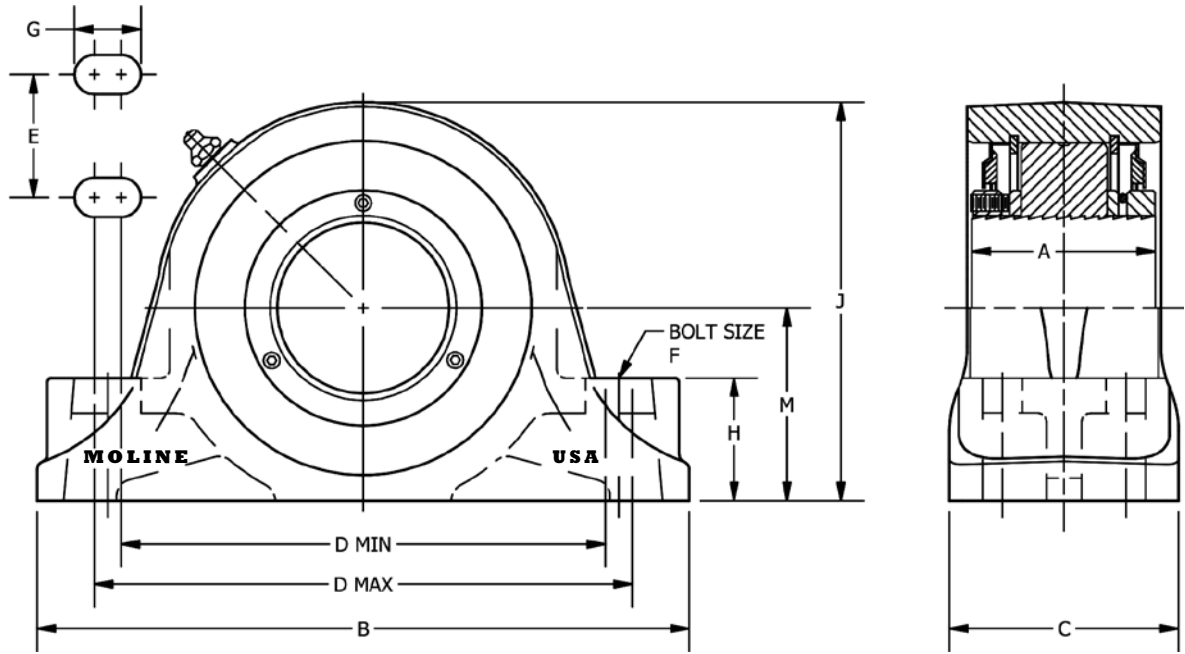
Refer to Mounting and Dismounting Instructions on pages 86 and 87.

M3000 EVEN-LOK™  
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# M3000 EVEN-LOK™ 4-BOLT PILLOW BLOCK



M3000 EVEN-LOK™  
SPHERICALS



CAD drawings available upon request at no additional charge.

# M3000 EVEN-LOK™ 4-BOLT FLANGE

SHAFT SIZE	MOLINE PART #		DIMENSIONS (INCHES)								WEIGHT LBS.
	EXP	NON-EXP	A	B	C	D	E	F	H	J	
1 7/16 1 1/2	19611107 19611108	19711107 19711108	2 11/32	4 5/8	2 1/4	3 17/32	5	1/2	3/4	3 7/8	7
1 11/16 1 3/4	19611111 19611112	19711111 19711112	2 11/32	5	2 1/4	3 57/64	5 1/2	1/2	3/4	4 1/4	10
1 15/16 2	19611115 19611200	19711115 19711200	2 11/32	5 1/4	2 1/4	4 1/16	5 3/4	1/2	3/4	4 1/2	10.5
2 3/16	19611203	19711203	2 11/32	5 7/8	2 7/16	4 1/2	6 3/8	5/8	3/4	5	12.5
2 7/16 2 1/2	19611207 19611208	19711207 19711208	2 37/64	6 1/8	2 3/4	4 25/32	6 3/4	5/8	1	5 3/4	16.5
2 11/16 2 3/4 2 15/16 3	19611211 19611212 19611215 19611300	19711211 19711212 19711215 19711300	2 37/64	7 1/4	2 7/8	5 9/16	7 7/8	3/4	1	6 5/8	25
3 7/16 3 1/2	19611307 19611308	19711307 19711308	3 9/64	8 3/8	3 1/4	6 23/32	9 1/2	3/4	1 1/8	7 5/8	35
3 15/16 4	19611315 19611400	19711315 19711400	3 9/64	9 1/2	3 9/16	7 19/32	10 3/4	7/8	1 3/16	8 3/8	48

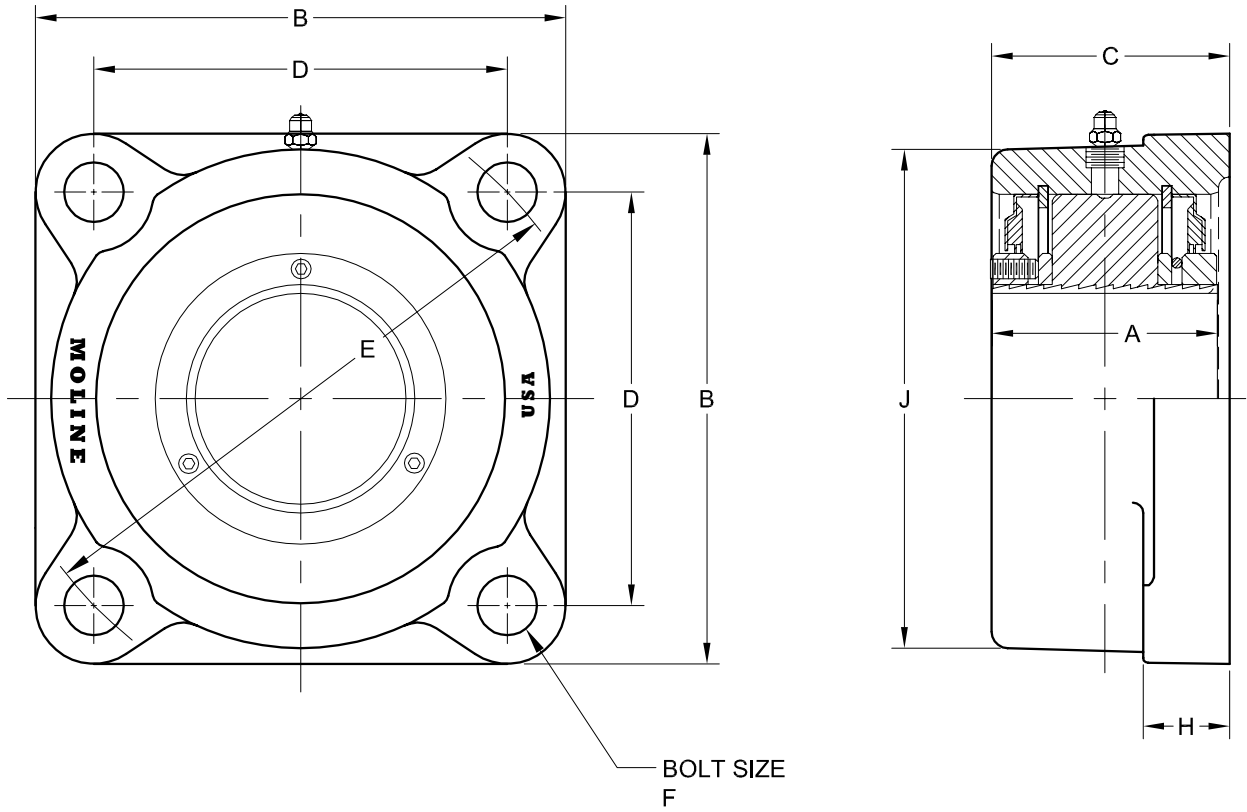
Refer to Mounting and Dismounting Instructions on pages 86 and 87.

Please Note: Before mounting, make sure there is sufficient clearance to access dismounting set screws on the back of the housing unit (yellow plastic protection plugs).

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# M3000 EVEN-LOK™ 4-BOLT FLANGE



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SPHERICALS



CAD drawings available upon request at no additional charge.

# M3000 EVEN-LOK™ PILOTED FLANGE CARTRIDGE

SHAFT SIZE	MOLINE PART #		DIMENSIONS (INCHES)										WEIGHT LBS.
	EXP	NON-EXP	A	B	C	D	E	F	G	H	K	M	
1 7/16 1 1/2	19631107 19631108	19731107 19731108	2 11/32	5 1/4	2 1/16	4 3/8	1 9/32	3/8	13/16	1/2	3 5/8	3 3/32	7
1 11/16 1 3/4	19631111 19631112	19731111 19731112	2 11/32	6 1/8	2 3/16	5 1/8	7/8	7/16	3/4	1/2	4 1/4	3 5/8	8.5
1 15/16 2	19631115 19631200	19731115 19731200	2 11/32	6 3/8	2 3/16	5 3/8	7/8	7/16	11/16	1/2	4 1/2	3 51/64	10.5
2 3/16	19631203	19731203	2 11/32	7 1/8	2 7/16	6	1	1/2	15/16	1/2	5	4 1/4	14.5
2 7/16 2 1/2	19631207 19631208	19731207 19731208	2 37/64	7 5/8	2 11/16	6 1/2	1	1/2	1 1/16	5/8	5 1/2	4 19/32	16
2 11/16 2 3/4 2 15/16 3	19631211 19631212 19631215 19631300	19731211 19731212 19731215 19731300	2 37/64	8 3/4	2 13/16	7 1/2	1 1/4	5/8	1	3/4	6 3/8	5 19/64	22
3 7/16 3 1/2	19631307 19631308	19731307 19731308	3 9/64	10 1/4	3 1/4	8 5/8	1 1/4	3/4	1 1/2	15/16	7 3/8	6 3/32	33
3 15/16 4	19631315 19631400	19731315 19731400	3 9/64	10 7/8	3 9/16	9 3/8	1 1/2	3/4	1 7/16	1 1/16	8 1/8	6 5/8	45

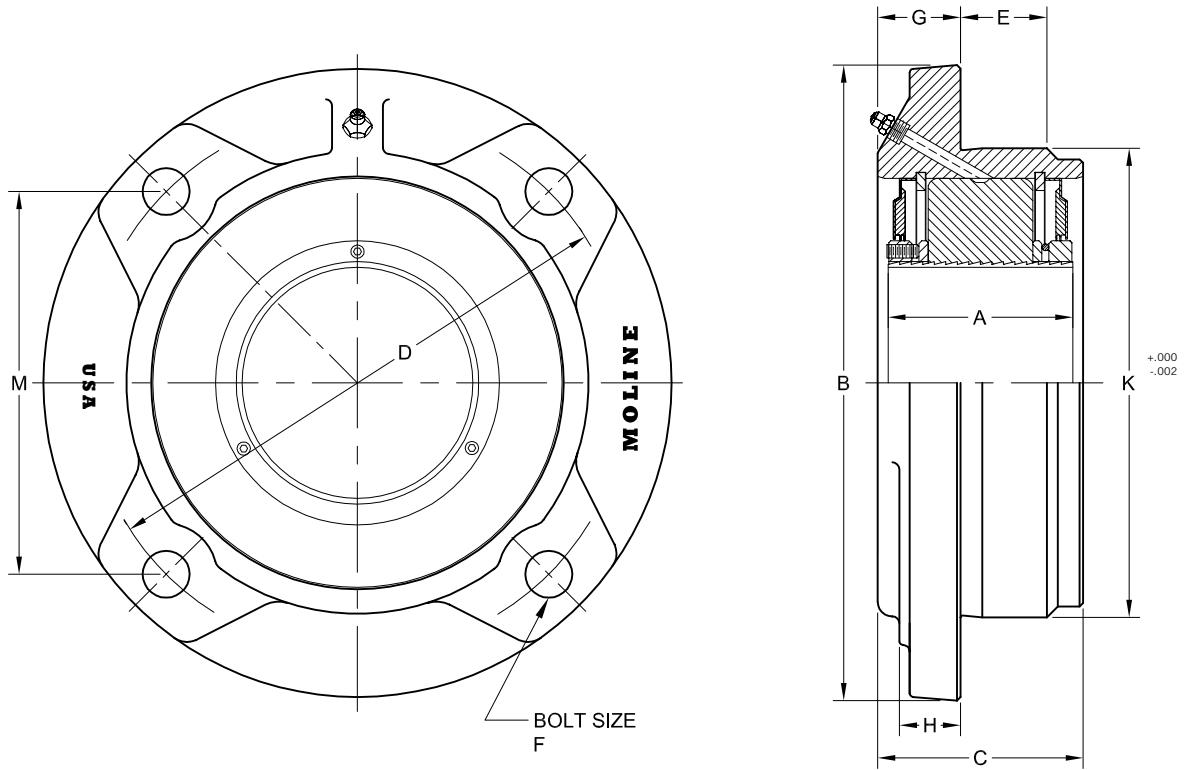
Refer to Mounting and Dismounting Instructions on pages 86 and 87.

Please Note: Before mounting, make sure there is sufficient clearance to access dismounting set screws on the back of the housing unit (yellow plastic protection plugs).

M3000 EVEN-LOK™  
SPHERICALS



# M3000 EVEN-LOK™ PILOTED FLANGE CARTRIDGE



M3000 EVEN-LOK™  
SPHERICALS



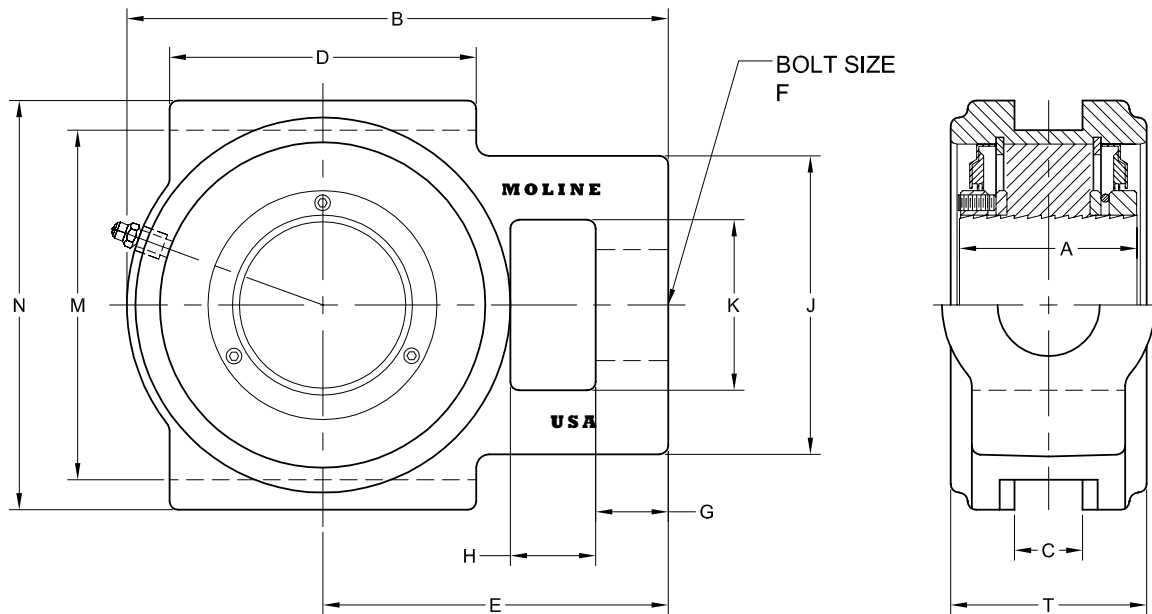
CAD drawings available upon request at no additional charge.



# M3000 EVEN-LOK™ WIDE SLOT TAKE-UP

SHAFT SIZE	MOLINE PART #		DIMENSIONS (INCHES)				
	EXP	NON-EXP	A	B	C	D	E
1 <sup>15</sup> / <sub>16</sub> 2	19651115 19651200	19751115 19751200	2 <sup>11</sup> / <sub>32</sub>	6 <sup>5</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>4</sub>	3 <sup>15</sup> / <sub>16</sub>
2 <sup>3</sup> / <sub>16</sub>	19651203	19751203	2 <sup>11</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>8</sub>	1 <sup>3</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>4</sub>	4 <sup>5</sup> / <sub>8</sub>
2 <sup>7</sup> / <sub>16</sub> 2 <sup>1</sup> / <sub>2</sub>	19651207 19651208	19751207 19751208	2 <sup>37</sup> / <sub>64</sub>	7 <sup>13</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>32</sub>	4 <sup>1</sup> / <sub>2</sub>	5 <sup>1</sup> / <sub>16</sub>
2 <sup>11</sup> / <sub>16</sub> 2 <sup>3</sup> / <sub>4</sub> 2 <sup>15</sup> / <sub>16</sub> 3	19651211 19651212 19651215 19651300	19751211 19751212 19751215 19751300	2 <sup>37</sup> / <sub>64</sub>	9 <sup>1</sup> / <sub>8</sub>	1 <sup>25</sup> / <sub>32</sub>	4 <sup>3</sup> / <sub>4</sub>	5 <sup>7</sup> / <sub>8</sub>
3 <sup>7</sup> / <sub>16</sub> 3 <sup>1</sup> / <sub>2</sub>	19651307 19651308	19751307 19751308	3 <sup>9</sup> / <sub>64</sub>	10 <sup>1</sup> / <sub>4</sub>	1 <sup>25</sup> / <sub>32</sub>	6	6 <sup>3</sup> / <sub>8</sub>

Refer to Mounting and Dismounting Instructions on pages 86 and 87.



M3000 EVEN-LOK™  
SPHERICALS



# M3000 EVEN-LOK™ WIDE SLOT TAKE-UP

SHAFT SIZE	DIMENSIONS (INCHES)								WEIGHT LBS.
	F	G	H	J	K	M	N	T	
1 15/16 2	1	15/16	3/4	3 5/16	1 15/16	4	4 3/4	2 7/16	12
2 3/16	1 1/8	1	1	3 7/8	2 1/4	4 1/2	5 1/4	2 9/16	16
2 7/16 2 1/2	1 1/2	1 1/16	1 1/4	4 1/4	2 1/2	5 1/8	6	2 3/4	21
2 11/16 2 3/4 2 15/16 3	1 1/2	1 3/8	1 1/4	4 7/8	2 3/4	5 15/16	6 3/4	3	30
3 7/16 3 1/2	1 3/4	1 1/16	1 5/8	4 7/8	2 7/8	6 13/16	7 13/16	3 13/16	45

M3000 EVEN-LOK™  
SPHERICALS



CAD drawings available upon request at no additional charge.

# M3000 EVEN-LOK™ APPLICATION GUIDE

At Moline, our goal is to provide you with the most reliable products, helpful service, and expert support. We work to make our mounting instructions clear and easy to understand. But if you have further questions, please feel free to call 800.242.4633 or e-mail support@molinebearing.com. We are here to help.

## MOUNTING INSTRUCTIONS

**PLEASE NOTE: BEFORE MOUNTING, MAKE SURE THERE IS SUFFICIENT CLEARANCE TO ACCESS DISMOUNTING SET SCREWS ON BACK OF UNIT (YELLOW PLASTIC PROTECTION PLUGS).**

For optimum bearing performance, it is important to start the mounting process with a shaft that is free of burrs and dirt. Please review your shaft and file down burrs and wipe clean then lubricate shaft with light oil. Check shaft diameter and review recommended shaft tolerances below:

SHAFT DIAMETER	TOLERANCE
1 7/16"–1 15/16"	+.000" to -.003"
2"– 4"	+.000" to -.004"



- Do not remove plastic end cap or plastic protection plugs inserted in the set screw holes until you are ready to install bearing onto shaft.
- Do not disassemble bearing prior to installation.
- **Do not tighten any mounting screws prior to installation.**
- Use only the supplied Even-lok™ wrench for tightening set screws on bearing. After storage or idle period, add a little fresh grease before running.

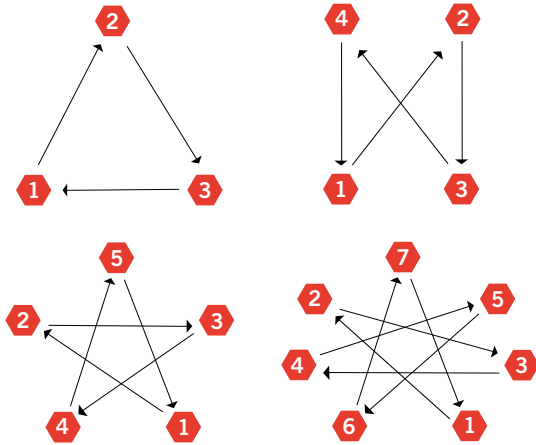
1. Clean the base of the bearing and support surface on which it rests. Be sure the supporting surface is flat. If the bearing elevation must be adjusted by shims, the shims **MUST** extend the full length and width of the support surface.
2. Slide the bearing, with the mounting side facing outward, on the shaft where the unit is to be secured. Leave 1 1/2" minimum housing spacing to allow for insertion of an Allen wrench in the dismounting side set screws. Bolt the housing securely to the support. Note: The mounting side of the bearing is the side which does not have the yellow plastic protection plugs inserted in the set screw holes.
3. The Expansion bearing must be centered in the housing to allow for axial shaft expansion. Move the bearing axially in the housing in both directions as far as it will go and determine the centered position. It will be necessary to relieve the bearing load while moving the assembly.
4. Snug the mounting screws located in the mounting side collar to finger tightness holding the short leg of the supplied Even-lok™ wrench. Tighten the mounting screws a total of 1/2 turn by alternately tightening in two increments (1/4 turn and 1/4 turn). Please refer to the following diagram for proper tightening pattern for each bearing size:



# M3000 EVEN-LOK™ APPLICATION GUIDE

## M3000 TIGHTENING PATTERNS

5. Tighten each set screw until the long end of the Even-lok™ wrench bows ½" under finger pressure. **Caution:** Do not use power driven or auxiliary equipment such as a hammer or pipe in tightening the screws.



## DISMOUNTING INSTRUCTIONS



1. Retighten the mounting side set screws until the long end of the Even-Lok™ wrench bows ½" under finger pressure only.
2. Loosen the mounting side set screws 1–2 full turns.

3. Using a screw driver or other suitable tool, remove and discard the 2 plastic protection plugs.
4. Alternately tighten the dismantling screws in ¼ turn increments until the bearing is released from the shaft. You should hear a distinctive “pop” indicating release.
5. Loosen the dismantling set screws, unbolt the housing from the support structure and remove the complete assembled unit from the shaft.

Note: If the bearing unit will not slip off the shaft during removal, do not continue to further tighten the dismantling set screws. This may tend to reverse tighten the bearing to the shaft. In the unlikely event that reverse tightening occurs, loosen the dismantling screws and retighten the screws on the mounting collar side following instructions. Repeat the dismantling procedure Steps 2 through 5.

## LUBRICATION INSTRUCTIONS

This bearing is factory lubricated with No. 2 consistency lithium base grease which is suitable for most applications. However, extra protection is necessary if bearing is subjected to excessive moisture, dust, or corrosive vapor. In these cases, bearing should contain as much grease as speed will permit (a full bearing with consequent slight leakage through the seal is the best protection against contaminant entry).

In extremely dirty environments, the bearing should be purged daily to flush out contaminants. For added protection, it is advisable to shroud the bearing from falling material.

## High Speed Operation

At higher operating speed, too much grease may cause overheating. In these cases, the amount of lubrication can only be determined by experience. If excess grease in the bearing causes overheating, it will be necessary to remove grease fittings and run for 10 minutes. This will allow excess grease to escape. Then wipe off excess grease and replace grease fittings.

In higher speed applications, a small amount of grease at frequent intervals is preferable to a large amount at long intervals. However, the proper volume and interval of lubrication can best be determined by experience.

# M3000 EVEN-LOK™ APPLICATION GUIDE CONTINUED

## Lubrication Guide

Read preceding paragraphs before establishing lubrication schedule.

HOURS RUN PER DAY	SUGGESTED LUBRICATION PERIOD IN WEEKS							
	1 TO 250 RPM	251 TO 500 RPM	501 TO 750 RPM	751 TO 1000 RPM	1001 TO 1500 RPM	1501 TO 2000 RPM	2001 TO 2500 RPM	2501 TO 3000 RPM
8	12	12	10	7	5	4	3	2
16	12	7	5	4	2	2	2	1
24	12	5	3	2	1	1	1	1

The above table is a general guide for normal operating conditions. However, some situations may require a change in lubricating periods as dictated by experience. If the bearing is exposed to unusual operating conditions, consult a reputable grease manufacturer.

### LUBRICATION GUIDE

Read preceding paragraphs before establishing lubrication schedule.

Abnormal bearing temperatures may indicate insufficient lubrication. Normal temperature may range from “cool to warm to the touch” up to the point of “too hot to touch for more than a few seconds,” depending on the bearing size and speed, and surrounding conditions. Unusually high temperature accompanied by excessive leakage of grease indicates too much grease. High temperature with no grease showing at the seals, particularly if the bearing seems noisy, usually indicates too little grease. Normal temperature and a slight showing of grease at the seals indicate proper lubrication.

If equipment will be idle for some time, before shutting down, add grease to the bearing until grease purges from the seals. This will ensure protection of the bearing, particularly when exposed to severe environmental conditions. After storage or idle period, add fresh grease to the bearing before starting.

### SPECIAL OPERATING CONDITIONS

Refer acid, chemical, extreme or other special operating conditions to the Moline Bearing Company.

Moline spherical bearings have the capacity to carry substantial radial loads, thrust loads or a combined radial and thrust load. The maximum load that can be applied is limited by the various components in the system, and the life requirements listed in this catalog. The factory should be consulted on any application that exceeds the recommendations in the catalog.

Select a bearing from the M3000 load-rating chart having a radial load rating at the operating speed equal to or greater than the calculated Equivalent Radial Load for a desired L10 life. This simple method is all that is necessary for most general applications and provides for occasional shock loads.

L10 Hours of Life – Is the life that may be expected from at least 90% of a given group of bearings operated under identical conditions. The average life (L50) will be approximately five times the L10 life.

# M3000 EVEN-LOK™ APPLICATION GUIDE

## M3000 Even-Lok™ Thrust Factors and Seal Speed

SHAFT SIZE	E	LIGHT THRUST IF FA/FR ≤ E		HEAVY THRUST IF FA/FR ≥ E		DYNAMIC CAPACITY C*		STANDARD SEAL RPM
		X	Y	X	Y	LBS.	NEWTONS	
1 7/16 – 1 1/2	.28	1.0	2.4	.67	3.6	21700	96526	4000
1 11/16 – 1 3/4	.26	1.0	2.6	.67	3.9	23000	102309	3700
1 15/16 – 2	.24	1.0	2.8	.67	4.2	23400	104088	3500
2 3/16	.24	1.0	2.8	.67	4.2	28100	124995	3250
2 7/16 – 2 1/2	.24	1.0	2.8	.67	4.2	43400	193052	2900
2 11/16 – 3	.22	1.0	3.0	.67	4.6	47700	212180	2600
3 7/16 – 3 1/2	.23	1.0	2.8	.67	4.2	73100	325165	2200
3 15/16 – 4	.24	1.0	2.8	.67	4.2	95700	425695	2000

\* Comparing Spherical to Tapered Roller Bearings—The dynamic capacity C (Spherical) and C90 (Tapered) are not the same base. To compare basic dynamic capacities, multiply C x .259 and compare to C90. To select and then compare, use the complete procedure for each bearing and then compare.

M3000 EVEN-LOK™  
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# M3000 EVEN-LOK™ RADIAL LOAD RATINGS

NOMINAL SHAFT DIAMETER (IN)	L10 HRS LIFE	RADIAL LOAD RATINGS AT VARIOUS REVOLUTIONS PER MINUTE								
		50	200	500	1200	1800	2200	2800	3500	4000
1 7/16 1 1/2	5000	9630	6354	4827	3712	3287	3095	2879	2692	2586
	10000	7822	5161	3920	3015	2670	2514	2338	2187	2101
	20000	6354	4192	3184	2449	2168	2042	1899	1776	1706
	50000	4827	3184	2419	1860	1647	1551	1443	1349	1296
	100000	3920	2586	1965	1511	1338	1260	1172	1096	1053
1 11/16 1 3/4	5000	10207	6734	5116	3934	3483	3280	3051	2853	-----
	10000	8291	5470	4155	3195	2829	2664	2478	2318	-----
	20000	6734	4443	3375	2596	2298	2164	2013	1883	-----
	50000	5116	3375	2564	1972	1746	1644	1529	1430	-----
	100000	4155	2741	2083	1602	1418	1335	1242	1162	-----
1 15/16 2	5000	10385	6851	5205	4002	3544	3337	3104	2903	-----
	10000	8435	5565	4227	3251	2879	2710	2521	2358	-----
	20000	6851	4520	3434	2641	2338	2202	2048	1915	-----
	50000	5205	3434	2609	2006	1776	1672	1556	1455	-----
	100000	4227	2789	2119	1629	1443	1358	1264	1182	-----
2 3/16	5000	12470	8227	6250	4806	4256	4007	3728	-----	-----
	10000	10129	6683	5077	3904	3457	3255	3028	-----	-----
	20000	8227	5428	4123	3171	2808	2644	2459	-----	-----
	50000	6250	4123	3132	2409	2133	2008	1868	-----	-----
	100000	5077	3349	2544	1957	1733	1631	1517	-----	-----
2 7/16 2 1/2	5000	19260	12707	9653	7423	6573	6189	5757	-----	-----
	10000	15644	10321	7841	6030	5339	5027	4676	-----	-----
	20000	12707	8384	6369	4898	4337	4083	3798	-----	-----
	50000	9653	6369	4838	3721	3294	3102	2885	-----	-----
	100000	7841	5173	3930	3022	2676	2520	2344	-----	-----
2 11/16 2 3/4 2 15/16 3	5000	21169	13966	10609	8159	7224	6802	-----	-----	-----
	10000	17194	11344	8618	6627	5868	5525	-----	-----	-----
	20000	13966	9214	7000	5383	4766	4488	-----	-----	-----
	50000	10609	7000	5317	4089	3621	3409	-----	-----	-----
	100000	8618	5685	4319	3321	2941	2769	-----	-----	-----
3 7/16 3 1/2	5000	32441	21403	16259	12503	11071	10425	-----	-----	-----
	10000	26350	17385	13206	10156	8993	8467	-----	-----	-----
	20000	21403	14121	10727	8249	7304	6878	-----	-----	-----
	50000	16259	10727	8149	6267	5549	5225	-----	-----	-----
	100000	13206	8713	6619	5090	4507	4244	-----	-----	-----
3 15/16 4	5000	42470	28020	21286	16369	14494	13647	-----	-----	-----
	10000	34497	22759	17289	13296	11773	11085	-----	-----	-----
	20000	28020	18486	14043	10800	9563	9004	-----	-----	-----
	50000	21286	14043	10668	8204	7264	6840	-----	-----	-----
	100000	17289	11407	8665	6664	5900	5556	-----	-----	-----

M3000 EVEN-LOK™ SPHERICALS



# M3000 EVEN-LOK™ SERIES INTERCHANGE

MOLINE	SKF CONCENTRA™	SEALMASTER SLEEVLOC™	REX SHURLOK™ ADAPTOR MOUNTED	DODGE IMPERIAL
2-Bolt Pillow Block (Pages 76-77) 19621 (Expansion) 19721 (Non-Expansion)	SYR-N SYR-NH	USRB5000A USRB5000	ZA6000 ZAS6000	P2BIP <i>or</i> 0694
4-Bolt Pillow Block (Pages 78-79) 19641 (Expansion) 19741 (Non-Expansion)	FSYR-N FSYR-NH	USRBF5000A USRBF5000	ZA6000-F ZAS6000-F	P4BIP <i>or</i> 0695
4-Bolt Flange (Pages 80-81) 19611 (Expansion) 19711 (Non-Expansion)	FYR-N* FYR-NH*	USFB5000A USFB5000	ZF6000* ZFS6000*	F4SIP <i>or</i> 0697
Piloted Flange (Pages 82-83) 19631 (Expansion) 19731 (Non-Expansion)	FYRP-N FYRP-NH	USFC5000A USFC5000A	ZBR6000	FCIP <i>or</i> 0698
Wide Slot Take-Up (Pages 84-85) 19651 (Expansion) 19751 (Non-Expansion)	TBR-N TBR-NH	USTU5000A USTU5000	ZT6000	WSTUIP <i>or</i> 0693

All units have tapered adaptor style locking mechanism.

\*Manufacture square and round 4-bolt flange.

Before mounting, make sure there is sufficient clearance to access dismounting set screws on back of unit.

Note: This is a general dimensional interchange.

For exact dimensions and comparison information on inserts and seals, please contact the factory.

For Nomenclature see pages 226-227

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