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SEALMASTER
PERFORMANCE WITHOUT COMPROMISE™

**Reduced
Maintenance
Bearings**




EMERSON
Industrial Automation

EMERSON. CONSIDER IT SOLVED.



Uptime... Not Overtime

Unit Material Handling

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When should you consider a Sealmaster[®] reduced maintenance design?

- When accessibility for bearing relubrication is limited. Your conveyor may be literally out of reach inside or, for example, with an HVAC application, outside on a rooftop. It may require costly and time-consuming dismantling of shields and guards in order to gain access to your bearings.
- When economically, labor resources would be better utilized elsewhere.
- When you need to operate in accordance with a predictable maintenance plan. Rather than tolerating frequent line shutdowns, you wish to run on a more proactive schedule.
- Most importantly, when you account for overall expenditures and recognize that a longer-running bearing will actually **reduce your overall costs**.

The Optimal Combination for Inaccessible and Inhospitable Locations:

Sealmaster brand bearings
Tapered Lands technology

Sealmaster[®] GoldPlex™-HP Grease

Three distinctive Sealmaster sealing options

Why a Sealmaster Reduced Maintenance Design Outperforms a Generic “Lubed for Life” Product

Other bearing suppliers may see your application as a place to install so-called “Lubed for Life” products. These products are standard bearings with plugs instead of grease fittings that merely prevent you from adding new grease. These designs do nothing to address the inevitable ingress of contaminants, maintaining necessary lubrication circulation and ultimate bearing failure.

In stark contrast, Sealmaster *reduced maintenance* bearings are the result of a breakthrough design change to dramatically extend bearing life. A new, patented **Tapered Lands** bearing race profile means that critical lubricant is circulated more efficiently, while requiring no regular service intervals. The *reduced maintenance* line of bearings is available with one of **three types of sealing solutions**: the patented Sealmaster **felt seal** is a low-drag seal providing outstanding protection against dry contaminants; the **spring loaded lip seal** is designed to perform excellently in heavy contamination environments or the **single lip seal** that provides a balance between seal drag and wet contamination avoidance.

Finally, each reduced maintenance bearing is filled with the specially formulated Sealmaster **GoldPlex-HP** grease designed to run longer and cooler in mounted bearing applications.



SEALMASTER[®]
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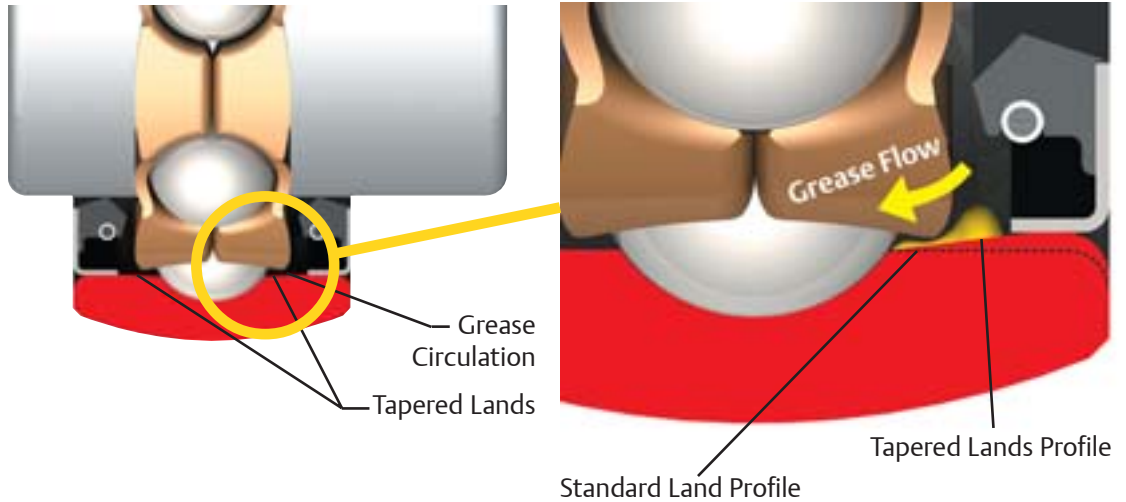
SEALMASTER

A close-up photograph of a tapered roller bearing. The outer ring is the primary focus, showing its tapered surface and the brass land riding retainers. A metal screw is visible, securing one of the retainers. The background is a deep blue, and the lighting highlights the metallic textures and the precision of the engineering.

Reduced Maintenance Tapered Lands Technology...

How does this technology keep your maintenance time and costs to a minimum? This patented Tapered Lands outer ring design, along with a *brass land riding retainer* employed by all Sealmaster brand ball bearings, provides improved lubricant circulation. The result of this design is that bearing grease ends up where it is needed most — in the ball path.

Bearing Race Design

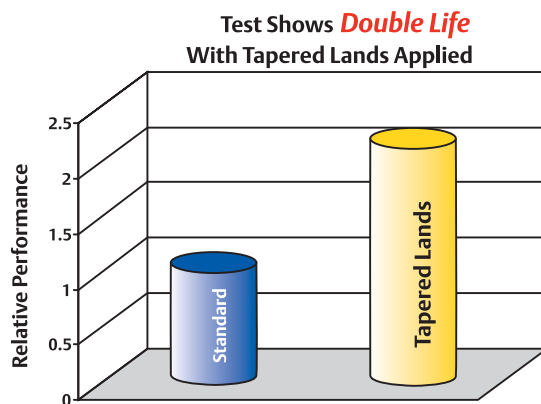


Tapered Lands design
Patent No. 5,199,798

Note: The above illustration is an exaggerated figure to demonstrate the difference of standard vs. Tapered Lands

The outer land surface in a conventional bearing is parallel to the axis of the inner ring. The Tapered Lands surface is tapered in a radial direction toward the bearing race. This subtle yet crucial design change ensures that lubricant will be easily redirected back to the raceway. With improved bearing lubricant circulation comes significantly longer bearing service life. This improved circulation and service life comes without any reductions in bearing radial or thrust capacities.

Life Comparison of Patent Testing



The results of rigorous patent testing show a dramatic service life expectancy difference between bearings with Tapered Lands and bearings with conventional land geometry. The test results to the left illustrate the difference between a standard Sealmaster bearing with no relubrication compared to a Sealmaster bearing using Tapered Lands with no relubrication.

Performance benefits of Tapered Lands is demonstrated by the results of accelerated life testing shown in the graph above. In this test, standard Sealmaster bearings having a conventional land geometry were compared to Sealmaster bearings incorporating Tapered Lands. The accelerated life test exposes *non-relubricated bearings to higher loads and speeds that are designed to fail units in less than three months. The results of rigorous patent testing show a dramatic service life expectancy difference as a direct result of the Tapered Lands effect.

* For bearings that are maintained and relubricated on a regular basis, there is no significant difference in expected life.

Seals Designed for Wet/Dry Conditions

Sealmaster provides reduced maintenance bearings with three different sealing approaches.

- The patented Sealmaster felt seal is a low drag seal that provides outstanding protection against dry, gritty contaminants.
- The Sealmaster single lip contact seal offers a balance between seal drag and wet contamination avoidance.
- Finally, where a standard seal just won't do, Sealmaster also offers a reduced maintenance bearing with the spring loaded V seal for outstanding performance in heavy contamination environments, with drag characteristics that won't slow your bearings down to a crawl.

Shaft Size	Nomenclature Size	Series						
		NP	NPL	SFT	SF	TB	ST	FB
5/8	10	✓	✓	✓	✓	✓	✓	✓
3/4	12	✓	✓	✓	✓	✓	✓	✓
1	16	✓	✓	✓	✓	✓	✓	✓
1 3/16	19	✓	✓	✓	✓	✓	✓	✓
1 1/4	20R	✓	✓	✓	✓	✓	✓	✓
1 1/4	20	✓	✓	✓	✓	✓	✓	✓
1 7/16	23	✓	✓	✓	✓	✓	✓	✓
1 1/2	24	✓	✓	✓	✓	✓	✓	-
1 11/16	27	✓	✓	✓	✓	✓	✓	-
1 3/4	28	✓	✓	✓	✓	✓	✓	-
1 15/16	31	✓	✓	✓	✓	✓	✓	✓
2	32	✓	✓	✓	✓	-	✓	-
2 3/16	35	✓	✓	✓	✓	-	✓	-
2 7/16	39	✓	✓	-	✓	-	✓	-

Note: Items checked are nine days or less, RM product available in set screw locking only. Seals available are contact, spring loaded V-seal and felt.

For availability on items not highlighted call EPT customer service (800)-626-2120.

*For additional housing and locking styles or bore sizes, contact Sealmaster application engineering or mounted bearing technical service at (219) 465-2211.



Patented Felt Seal

- Excellent for dry contamination
- Good for higher speeds
- Low drag


Nomenclature: NP-16RM



Single Lip Contact Seal

- Good for wet environments
- Good for moderate to high speeds
- Moderate drag capabilities

Nomenclature: NP-16C RM



Spring Loaded V Seal

- Designed for combination water/dirt environments
- Slow to moderate speeds
- Heavier drag than single lip contact seal

Nomenclature: NP-16U RM

NP-16 C RM

- NP = Pillow Block
- NPL = Low Base Pillow Block
- SFT = 2 Bolt Flange
- SF = 4 Bolt Flange
- TB = Tapped Base Pillow Block
- ST = Wide Slot Take Ups
- FB = High Bracket Flange Bracket

Bore Size (in 1/16")

- C = Contact Seal
- U = Spring Loaded V Seal
- No Letter = Felt

- Reduced Maintenance Suffix**
- Tapered Lands
 - GoldPlex-HP Grease
 - Sealed for Life

Load Ratings



STANDARD DUTY		MEDIUM DUTY		BASIC DYNAMIC RADIAL RATING	L10 HOURS	REVOLUTIONS PER MINUTE																
SHAFT SIZE	INSERT #	SHAFT SIZE	INSERT #			50	500	1000	1750	2000	3000	3500	4000	4500	5000	5500	6000	6500				
						SPRING LOADED V-SEALS							FELT & CONTACT SEALS									
1/2	2-08			2611	5000	619	491	390	324	310	270	257	246	215	204	195	188	181	175	170	209	
9/16	2-09				10000	583	390	310	257	246	215	204	195	188	181	175	170	166				
5/8	2-010				30000	583	270	215	178	170	149	141	135	130	126	122	118	115				
11/16	2-011				50000	491	228	181	150	144	126	119	114	110	106	103	100	97				
3/4	2-012				100000	390	181	144	119	114	100	95	91	87	84	81	79	77				
20mm	5204																					
13/16	2-013			2801	5000	664	527	418	347	332	290	276	264	230	219	209	201	194	188	183	-	
7/8	2-014				10000	625	418	332	276	264	230	219	209	201	194	188	183	-				
15/16	2-015				30000	625	290	230	191	183	160	152	145	139	135	130	127	-				
25mm	5205				50000	527	245	194	161	154	135	128	122	118	114	110	107	-				
1	2-1				100000	418	194	154	128	122	107	102	97	93	90	87	85	-				
1 1/16	2-11	15/16	3-015	4381	5000	1039	825	654	543	519	454	431	412	396	383	370	-					
1 1/8	2-12	1	3-1		10000	978	654	519	431	412	360	342	327	315	304	294	-					
1 3/16	2-13	25mm	5305		30000	978	454	360	299	286	250	237	227	218	211	204	-					
30mm	5206				50000	825	383	304	252	241	211	200	191	184	178	172	-					
1 1/4R	1-14				100000	654	304	241	200	191	167	159	152	146	141	136	-					
1 1/4	2-14	30mm	5306	5782	5000	1290	1088	864	717	686	599	569	544	523	-							
1 5/16	2-15	1 3/16	3-13		10000	1290	864	686	569	544	475	452	432	415	-							
1 3/8	2-16				30000	1290	599	475	394	377	330	313	299	288	-							
35mm	5207				50000	1088	505	401	333	318	278	264	253	243	-							
1 7/16	2-17				100000	864	401	318	264	253	221	210	200	193	-							
1 1/2	2-18	1 7/16	3-17	7340	5000	1638	1381	1096	910	870	760	722	691	-								
1 9/16	2-19	35mm	5307		10000	1638	1096	870	722	691	603	573	548	-								
40mm	5208				30000	1638	760	603	501	479	418	397	380	-								
					50000	1381	641	509	422	404	353	335	321	-								
					100000	1096	509	404	335	321	280	266	254	-								
1 5/8	2-110	1 1/2	3-18	7901	5000	1763	1487	1180	979	937	818	777	-									
1 11/16	2-111	45mm	5308		10000	1763	1180	937	777	744	650	617	-									
1 3/4	2-112				30000	1763	818	650	539	516	450	428	-									
45mm	5209				50000	1487	690	548	455	435	380	361	-									
					100000	1180	548	435	361	345	301	286	-									
1 13/16	2-113	1 11/16	3-111	7889	5000	1760	1485	1178	978	935	817	776	-									
1 7/8	2-114	1 3/4	3-112		10000	1760	1178	935	776	742	649	616	-									
1 15/16	2-115	45mm	5309		30000	1760	817	649	538	515	450	427	-									
50mm	5210				50000	1485	689	547	454	434	379	360	-									
	1-2				100000	1178	547	434	360	345	301	286	-									
2	2-2	1 15/16	3-115	9752	5000	2176	1835	1457	1209	1156	1010	-										
2 1/8	2-22	50mm	5310		10000	2176	1457	1156	959	918	802	-										
55mm	5211				30000	2176	1010	802	665	636	556	-										
2 3/16	2-23				50000	1835	852	676	561	537	469	-										
					100000	1457	676	537	445	426	372	-										
2 1/4	2-24	55mm	5311	11789	5000	2631	2219	1761	1461	1398	-											
2 5/16	2-25	2 3/16	3-23		10000	2631	1761	1398	1160	1109	-											
60mm	5212				30000	2631	1221	969	804	769	-											
2 3/8	2-26				50000	2219	1030	817	678	649	-											
2 7/16	2-27				100000	1761	817	649	538	515	-											

Values in the table represent loads at ideal conditions with press fit mounting to the shaft. ABMA recommends de-rating of slip fit mounted bearings. To obtain de-rated load, divide the load in the table by 1.3. Values in the table represent equivalent radial loads only.

For more information, consult Sealmaster application engineering at (219) 465-2211 or email: sealmaster.engineering@emerson-ept.com for load and speed applications not covered in this table.

Reduced Maintenance...



Bulk Material Handling



Beverage Processing



Automation

Sealmaster recognizes the value of plant productivity.

Sealmaster addresses the variety of industries and applications.

Sealmaster reduced maintenance ball bearings minimize maintenance cost.

Cooling Towers



Uptime... Not Overtime

SEALMASTER®

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For ordering information, contact your authorized distributor or Sealmaster customer service at:

*Emerson Power Transmission
Telephone 1-800-626-2120
Fax 1-800-262-3292*

For additional information contact Sealmaster mounted bearing technical service at (219) 465-2211 or email Sealmaster application engineers at sealmaster.engineering@emerson-ept.com.

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APPLICATION CONSIDERATIONS

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending upon the use and application of such products and components. The scope of the technical and application information included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components and the customer should carefully review its requirements. Any technical advice or review furnished by Emerson Power Transmission Corporation and its divisions with respect to the use of products and components is given in good faith and without charge, and Emerson assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

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