Bearings

US Industry Study with Forecasts for 2013 & 2018

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This study was prepared with the special cooperation of the American Bearing Manufacturers Association, and includes data based on an exclusive survey of ABMA members.
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US demand to expand 3% annually through 2013

Ball, roller and plain bearing demand in the US is projected to expand 3.0 percent per year through 2013 to $10.6 billion. Sales increases for ball and roller bearings, including both mounted and unmounted types and associated parts, will outpace those of plain bearings, reaching $8.5 billion in 2013. Advances will be supported by sales of high-value, large diameter bearings as the wind energy and heavy equipment markets expand. Continued, albeit moderating, growth in the production of aerospace equipment and machinery will also support gains. Recovery in motor vehicle production from the low levels of 2008, particularly in heavy truck and bus manufacturing, will also benefit bearing suppliers. Market gains will be damped, however, as US companies in a variety of bearing-using industries continue to move production offshore where labor costs are lower.

Shipment of bearings from US plants are expected to expand 2.8 percent annually through 2013 to $10.0 billion, slightly below domestic demand increases. Industry output will be stimulated by growth in several key domestic bearing-using industries (e.g., motor vehicles, machinery) and by rising demand in a number of export markets. Further investment in US bearing plants by foreign firms will contribute to production gains as well. US bearing manufacturers’ ongoing efforts to improve the quality and performance of their products, and to increase the efficiency of their manufacturing processes, will also help spur output growth.

Roller bearings to post strongest market gains

The strongest market gains through 2013 will be posted by roller bearings, benefitting from renewed strength in US production of motor vehicles and from sales of advanced, high-value products for applications such as wind turbines and heavy machinery. Demand for mounted bearings and bearing parts will also outperform bearing demand overall. Mounted bearing demand increases will be spurred by original equipment manufacturers’ (OEM) desires to simplify their production processes and reduce future maintenance requirements.

Engine, turbine uses among best prospects

OEM bearing applications, which currently account for 78 percent of all demand, will approximate the performance of maintenance/repair/operations (MRO) applications through 2013. Sales conditions will be particularly strong in the automotive and engine, turbine and power transmission equipment manufacturing markets. MRO bearing demand will be bolstered by growing maintenance expenditures for aerospace equipment and construction machinery.
MARKETS

Bearing Market -- Sales of ball, roller and plain bearings in the machinery OEM market are expected to increase to $1.3 billion in 2013, growing 2.4 percent annually and moderating from the 2003 to 2008 period. Increases will not be as strong as those forecast for the overall OEM bearing market. Gains will be driven by continued sales growth in most categories of machinery, particularly general purpose machinery (which includes technically advanced equipment such as semiconductor machinery). Increases will also be supported by sales of highly-engineered, higher value bearing products designed to improve efficiency and operation.

Demand gains will be restrained to some degree by slowing growth in HVAC and commercial refrigeration machinery shipments, as well as commercial and service industry machinery shipments, both of which are expected to increase less than one percent per year through 2013. Furthermore, pressure from large machinery manufacturers to lower costs and the expected decline of some metal prices will hold back bearing sales increases in dollar terms.

Machinery manufacturers use a wide range of bearing products, including all of the major types. Often, bearing manufacturers offer value-added products that meet the needs of a specialized machinery application. For instance, NSK offers a variety of ball and roller bearings specifically for food and beverage processing machinery. In addition to performing the basic function of bearings, these products meet the stringent hygiene requirements of the food and beverage industry. Bearings utilized in machinery are often required to endure heavy loads and extreme operating environments. Danaher’s SUPERSMART ball bushing bearings are produced with the company’s proprietary 60 CASE LINEAR RACE shaft-deflection technology that optimizes load distribution between ball tracks and ensures uniform ball loading over the entire bearing length.

**TABLE IV-6**

<table>
<thead>
<tr>
<th>Item</th>
<th>1998</th>
<th>2003</th>
<th>2008</th>
<th>2013</th>
<th>2018</th>
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<tr>
<td>Machinery Shipments (bil $)</td>
<td>159.3</td>
<td>141.2</td>
<td>178.0</td>
<td>198.6</td>
<td>230.4</td>
</tr>
<tr>
<td>$ bearings/000$ machinery</td>
<td>6.08</td>
<td>5.32</td>
<td>6.24</td>
<td>6.29</td>
<td>6.32</td>
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<tr>
<td>Machinery Bearing Demand</td>
<td>969</td>
<td>751</td>
<td>1110</td>
<td>1250</td>
<td>1455</td>
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<tr>
<td>By Machinery Type:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>General Purpose</td>
<td>425</td>
<td>340</td>
<td>535</td>
<td>595</td>
<td>700</td>
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<tr>
<td>HVAC &amp; Commercial Refrigeration</td>
<td>67</td>
<td>56</td>
<td>85</td>
<td>88</td>
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<td>Metalworking</td>
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<td>139</td>
<td>190</td>
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<td>Commercial &amp; Service Industry</td>
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<td>88</td>
<td>120</td>
<td>125</td>
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</tr>
<tr>
<td>Other</td>
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<td>128</td>
<td>180</td>
<td>237</td>
<td>287</td>
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<tr>
<td>% machinery</td>
<td>15.3</td>
<td>12.9</td>
<td>15.6</td>
<td>15.2</td>
<td>15.2</td>
</tr>
<tr>
<td>OEM Bearing Demand</td>
<td>6345</td>
<td>5832</td>
<td>7110</td>
<td>8250</td>
<td>9570</td>
</tr>
</tbody>
</table>

* Includes mounted & unmounted bearings, & associated parts

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American Roller Bearing Company
400 2nd Avenue, Northwest
Hickory, NC  28601
828-624-1460
http://www.amroll.com

Annual Sales:  $55 million (estimated)
Employment:  540 (estimated)
Key Products:  tapered roller, cylindrical roller, ball, thrust and rolling mill bearings

American Roller Bearing is a manufacturer of rolling-element bearings for various types of industrial equipment. The company is privately held. The Company is active in the US bearing industry through the manufacture of tapered roller, cylindrical roller, ball, thrust and rolling mill bearings. Many of these products are offered in standard and metric dimensions, as well as in outside diameters of up to 72 inches.

American Roller Bearing’s tapered roller bearings are offered in single- and double-row styles, while cylindrical roller bearings are made in European-style metric, domestic-style metric, inch-series and journall types. The Company’s ball bearings are produced in such designs as angular contact metric and deep groove. Thrust bearings encompass roller, double-acting roller, tapered roller and ball models. Rolling mill bearings from American Roller Bearing are available in TDIE-and VVFT-type roll-neck thrust, multi-row cylindrical and tapered roller, Z-type cluster mill, line shaft and table, and VFTX- and VFTV-type screw-down thrust varieties. In addition, the Company manufactures specialty cylindrical bearings for use in assembly and operating conditions that require non-standard bearings.

“Mounted roller bearing demand is forecast to increase 3.4 percent per year to $295 million in 2013, outpacing 2003 to 2008 market performance and in line with the forecast growth rate for mounted ball and plain bearings. Manufacturers’ efforts to simplify installation and assembly processes will support gains in this market. Furthermore, the introduction of better performing products will contribute to market gains as well.”

--Section III, pg. 87
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