

Antifriction Bearings

1998

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Information about the scope of the survey, methodology, explanation of terms and historical notes for this survey may be found in the introduction of the 1997 Manufacturing Profiles, issued August 1999.

Current data are released electronically on Internet for all individual surveys as they become available. Use: <http://www.census.gov/econ/www/manumenu.html>. Individual reports can be accessed by choosing "Current Industrial Reports (CIR's)," clicking on "Report Number Index;" from the "Industrial Products by Numeric Index," choose the survey of interest. Follow the menu to view the PDF file or to download the worksheet file (WK format) to your personal computer.

These data are also available through the U.S. Department of Commerce and STAT-USA Electronic Bulletin Board by subscription. To access, dial 202-482-3870 and follow the prompts to register. Also, you may call

202-482-1986 or 1-800-STAT-USA, for further information. The Internet address is: www.stat-usa.gov/.

Summary of Findings

The value of shipments of complete anti-friction bearings and components, including balls and rollers, was \$5,877.8 million in 1998, an increase of 3 percent over shipments of \$5,723.2 million in 1997. The 1998 total includes complete ball bearings, \$2,110.1 million, an increase of 1 percent over the 1997 value of shipments; complete tapered roller bearings and roller bearing parts (except rollers), \$1,532.4 million, an increase of 8 percent; other complete roller bearings, \$1,171.1 million, an increase of 5 percent; mounted bearings (except plain), \$450.6 million, a decrease of 6 percent; and parts and components for ball and roller bearings, sold separately, \$613.3 million, a decrease of 7 percent.

Current
Industrial
Reports

Address inquiries concerning these data to Investment Goods Industries Branch, Manufacturing and Construction Division (MCD), Washington, DC 20233-6900, or call JoAnna T.Q. Nguyen, 301-457-4752.

For mail or fax copies of this publication, please contact the Information Services Center, MCD, Washington, DC 20233-6900, or call 301-457-4673.

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Table 1. Value of Shipments for Complete Antifriction Bearings and Components, Including
Balls and Rollers by Product Class: 1994 to 198
[Millions of dollars]

Product code	Product description	1998	1997	1996	1995	1994
332991-	Ball and roller bearings.....	r/5,877.8	5,723.1	5,488.0	5,205.4	4,693.8
3329911	Ball bearings, complete.....	2,110.1	2,095.9	1,989.1	1,896.7	1,676.2
3329913	Tapered roller bearings, cups and cones.....	1,532.4	1,420.9	1,408.8	1,283.1	1,139.2
3329915	Roller bearings, complete.....	1,171.3	1,117.2	1,017.4	987.5	935.5
3329917	Mounted bearings (except plain).....	r/450.6	426.1	458.4	459.7	407.8
3329919	Parts and components for ball and roller bearings, including balls and rollers sold separately.....	r/613.3	663.0	614.3	578.5	535.1
		1993	1992	1991	1990	1989
332991-	Ball and roller bearings.....	4,331.1	4,011.3	3,778.9	4,064.2	3,965.3
3329911	Ball bearings, complete.....	1,616.8	1,484.2	1,406.7	1,469.0	1,420.9
3329913	Tapered roller bearings, cups and cones.....	1,001.0	935.6	876.8	977.3	963.9
3329915	Roller bearings, complete.....	810.4	773.1	794.3	872.4	849.6
3329917	Mounted bearings (except plain).....	439.4	378.0	322.9	362.9	344.9
3329919	Parts and components for ball and roller bearings, including balls and rollers sold separately.....	467.0	440.4	378.3	382.6	386.1

r/Revised by 5 percent or more from previously published data.

Table 2. Quantity and Value of Shipments of Antifriction Ball and Roller Bearings, Components, and Parts: 1998 and 1997
[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	1998		1997	
			Quantity	Value	Quantity	Value
332991-	Antifriction bearings and components.....	(X)	(X) r/	5,877,759	(X)	5,723,117
3329911-	Ball bearings, complete.....	73	612,451	2,110,119	611,911	2,095,937
	Annular, including self-aligning:					
	Ground or precision:					
	Single row conrad:					
	Miniature (below 9 mm outside diameter):					
3329911001	Regular (ABEC 1 and 3).....	3	(D)	(D)	(D)	(D)
3329911002	Precision (ABEC 5 and up).....	5	5,542	22,408	5,905	24,400
	Other regular (ABEC 1 and 3):					
3329911003	9 mm outside diameter through 30 mm outside diameter.....	11	79,228	77,058	81,316	79,467
3329911004	Over 30 mm outside diameter through 52 mm outside diameter.....	21	126,821	194,611	131,945	204,608
3329911005	Over 52 mm outside diameter through 100 mm outside diameter.....	22	36,467	218,163	38,665	212,208
3329911007	Over 100 mm outside diameter.....	22	5,169	191,717	5,299	193,754
	Other precision (ABEC 5 and up):					
3329911009	9 mm outside diameter through 30 mm outside diameter.....	6	5,563	63,844	5,422	69,046
3329911011	Over 30 mm outside diameter through 52 mm outside diameter.....	9	665	46,039	720	46,781
3329911012	Over 52 mm outside diameter through 100 mm outside diameter.....	8	211	36,909	229	36,634
3329911013	Over 100 mm outside diameter.....	8	74	56,892	51	49,183
3329911014	Single-row maximum capacity type.....	10	1,752	25,704	1,520	24,702
3329911018	Integral shaft and integral spindle ball bearings.....	7	21,167	303,253	22,631	331,398
3329911020	Double row.....	14	31,394	213,056	29,047	200,992
	Angular contact:					
3329911019	Regular.....	13	1,066	78,738	1,084	73,031
3329911023	Precision.....	3	c/ 5,652 b/	77,025 b/	6,285 b/	83,081
3329911024	All other ground or precision bearings (ABEC 1 and up).....	4	(D)	(D)	(D)	(D)
3329911027	Ground bearings of less than ABEC 1 precision.....	6	b/ 11,195 a/	68,884 c/	9,614 b/	53,850
3329911029	Unground, including self-aligning (less than ABEC 1).....	18	221,210	135,028	217,655	129,535
	Thrust ball bearings:					
3329911033	Ground.....	14	7,786	33,367	7,799	33,156
3329911035	Unground.....	5	a/ 6,244	12,024 a/	5,919	12,446
3329911055	Other ball bearings.....	20	43,544	243,002	39,080	224,957
3329913-	Tapered roller bearings.....	19	263,181	1,532,382	264,622	1,420,860
3329913032	Cup and cone assemblies shipped as a set.....	17	(D)	(D)	(D)	(D)
3329913033	Cups shipped separately.....	14	(D)	(D)	(D)	(D)
3329913034	Cone assemblies shipped separately.....	17	124,328	634,420	125,052	613,967
3329915-	Cylindrical, spherical, needle, and other roller bearings.....	41	876,623	1,171,313 r/	849,063	1,117,246
	Cylindrical roller bearings:					
3329915011	Regular (ABEC 1 and 3).....	24	131,066	224,865	89,151 r/	194,550
3329915012	Precision (ABEC 5 and up).....	7	201	81,013 r/	198	74,969
	Spherical roller bearings, including hourglass and barrel:					
3329915024	Single row.....	5	(D)	(D)	(D)	(D)
3329915025	Double row.....	6	766	177,687	808	190,827
3329915041	Needle roller bearings.....	15	612,089	523,473 r/	658,099	511,720
3329915093	Other roller bearings not specified above.....	19	(D)	(D)	(D)	(D)
3329917-	Mounted bearings (except plain).....	20	r/ 9,357 r/	450,632	9,240	426,063

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Table 2. Quantity and Value of Shipments of Antifriction Ball and Roller Bearings, Components, and Parts: 1998 and 1997
[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	1998		1997	
			Quantity	Value	Quantity	Value
3329917017	Ball bearings, unit and/or split mounted.....	12	8,172	230,042	8,112	233,464
	Roller:					
3329917053	Unit-mounted.....	9 r/	1,005 r/	187,062	1,005	164,210
3329917055	Split-mounted.....	6 r/	181 r/	33,528	123	28,389
3329919-	Parts and components for ball and roller bearings, including balls and rollers sold separately.....	66	(X) r/	613,313	(X)	663,011
3329919011	Balls:					
	Shipments (thousands of units).....	21	27,993	221,664	31,022	256,304
3329919021	Production for all purposes (thousands of units)...	(X)	(S)	(X)	(S)	(X)
	Other antifriction ball and roller bearings components and parts, including unassembled ball bearings, cages, housing closures, races, etc. ...	20	(X)	99,237	(X)	104,807
3329919031	Rollers:					
	Shipments (thousands of units).....	19 r/	15,028 r/	136,616	16,251	140,737
	Production for all purposes (thousands of units)...	(X)	(S)	(X)	(S)	(X)
	Other roller bearing parts and components (except rollers):					
3329919035	For tapered roller bearings (except cup and cone assemblies).....	11	(X)	76,722	(X)	80,919
3329919036	For cylindrical roller bearings.....	6	(X)	21,890	(X)	22,852
3329919037	For spherical roller bearings.....	3	(X)	(D)	(X)	(D)
3329919049	For other roller bearings.....	10	(X)	(D)	(X)	(D)
3329919059	Housing and parts and components for housings, including housing closures, collars, spacers, sleeves, adapters, and other miscellaneous items.....	5	(X)	(D)	(X)	(D)

D Data withheld to avoid disclosing data for individual companies. r/Revised by 5 percent or more from previously published data. S Does not meet publication standards. X Not applicable.

Note: a/15 to 25 percent of this item is estimated. b/26 to 50 percent of this item is estimated. c/Over 50 percent of this item is estimated.

Table 3. Shipments, Exports, Imports, and Apparent Consumption of Antifriction Bearings and Components Including Balls and Rollers: 1998 and 1997
[Quantity in thousands of units. Value and duty in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise 1/		Imports for consumption 2/		Apparent consumption 3/	
	Quantity	Value f.o.b. plant	Quantity	Value at port	Quantity	C.i.f. and calculated duty	Quantity	Value
1998								
Radial ball bearings.....	547,740	1,563,864	16,674	134,673	547,625	653,387	1,078,691	2,082,578
Integral shaft and spindle ball bearings.....	21,167	303,253	1,698	19,615	19,676	56,743	39,145	340,381
Other ball bearings.....	43,544	243,002	20,723	109,116	64,242	61,403	87,063	195,289
Tapered roller bearings.....	263,181	1,532,382	16,554	234,753	58,910	195,470	305,537	1,493,099
Cylindrical roller bearings.....	131,267	305,878	2,791	56,691	15,368	114,214	143,844	363,401
Spherical roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Needle roller bearings.....	612,089	523,473	14,511	61,092	24,813	36,002	622,391	498,383
Other roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mounted bearings:								
Ball.....	8,172	230,042	603	23,652	3,577	24,655	11,146	231,045
Roller.....	r/ 1,186	r/ 220,590	158	9,034	933	8,747	775	(287)
Parts for ball and roller bearings:								
Balls (quantity in thousands of units).....	27,993	221,664	(NA)	29,361	(NA)	20,492	27,993	212,795
Rollers (quantity in thousands of units).....	14,938	135,895	(NA)	54,894	(NA)	29,275	14,938	110,276
Other parts for tapered roller and ball bearings.....	(X)	(D)	(NA)	(D)	(NA)	(D)	(NA)	(D)
1997								
Radial ball bearings.....	550,200	1,539,582	18,132	164,027	520,486	629,436	1,052,554	2,004,991
Integral shaft and spindle ball bearings.....	22,631	331,398	1,922	22,630	18,530	51,667	39,239	360,435
Other ball bearings.....	39,080	224,957	20,139	106,972	72,714	75,135	91,655	193,120
Tapered roller bearings.....	264,622	1,420,860	20,606	260,495	65,891	169,870	309,907	1,330,235
Cylindrical roller bearings.....	89,349	r/ 269,519	2,038	53,588	10,879	108,743	98,190	324,674
Spherical roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Needle roller bearings.....	r/ 658,099	511,720	16,353	63,069	19,899	32,722	661,645	481,373
Other roller bearings.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Mounted bearings:								
Ball.....	8,112	233,464	474	21,335	2,935	22,133	10,573	234,262
Roller.....	1,128	192,599	177	10,356	2,974	13,801	3,925	196,044
Parts for ball and roller bearings:								
Balls (quantity in thousands of units)...	31,008	249,239	(NA)	31,297	(NA)	13,097	31,008	231,039
Rollers (quantity in thousands of units).....	16,251	141,340	(NA)	35,580	(NA)	25,189	16,251	130,949
Other parts for tapered roller and ball bearings.....	(X)	(D)	(NA)	(D)	(NA)	(D)	(NA)	(D)

D Withheld to avoid disclosing data for individual companies. NA Not available. r/Revised by 5 percent or more from previously published data. X Not applicable.

1/Source: Census Bureau report EM 545, U.S. Exports.

2/Source: Census Bureau report IM 145, U.S. Imports for Consumption.

3/Apparent consumption is derived by subtracting exports from manufacturer's shipments plus imports.

Table 4. Comparison of North American Industry Classification-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 1998

Product code	Product description	Export number 1/	Import number 2/
332991-	Antifriction bearings and components:		
3329911-	Ball bearing complete:		
	Annular, ball bearings, include self aligning:		
3329911001	Miniature (below 9 mm outside diameter) regular (ABEC 1 and 3)	8482.10.5004	8482.10.5004
3329911002	Miniature (below 9 mm outside diameter) precision (ABEC 1 and 3)	8482.10.5016	8482.10.5016
3329911003	Other regular, 9 mm outside diameter through 30 mm outside diameter	8482.10.5024	8482.10.5024
3329911004	Other regular, over 30 mm outside diameter through 52 mm outside diameter	8482.10.5028	8482.10.5028
3329911005	Other regular, over 52 mm outside diameter through 100 mm outside diameter	8482.10.5032	8482.10.5032
3329911007	Other regular, over 100 mm outside diameter	8482.10.5036	8482.10.5036
3329911009	Other precision, 9 mm outside diameter through 30 mm outside diameter	8482.10.5044	8482.10.5044
3329911011	Other precision, over 30 mm diameter through 52 mm outside diameter	8482.10.5048	8482.10.5048
3329911012	Other precision, over 52 mm outside diameter through 100 mm outside diameter	8482.10.5052	8482.10.5052
3329911013	Other precision, over 100 mm outside diameter	8482.10.5056	8482.10.5056
3329911014	Single row maximum capacity type	8482.10.5060	8482.10.5060
3329911020	Double row	8482.10.5064	8482.10.5064
3329911019	Regular angular contact		
3329911023	Precision angular contact		
3329911024	All other ground or precision bearings (ABEC 1 and up)		
3329911027	Ground bearings of less than ABEC 1 Precision		
3329911029	Unground, including self-aligning		
3329911018	Integral shaft and spindle ball bearings	8482.10.1000	8482.10.1040 8482.10.1080
3329911033	Other ball bearings	8482.10.5004	8482.10.5004
3329911035		8482.10.5008	8482.10.5008
3329911055		8482.10.5068	8482.10.5068
3329913-	Tapered roller bearings:		
3329913032	Tapered roller bearings, including cone and tapered roller assemblies		
3329913033		8482.20.0020	8482.20.0020
3329913034		8482.20.0030	8482.20.0030
		8482.20.0040	8482.20.0040
		8482.20.0060	8482.20.0060
		8482.20.0070	8482.20.0070
		8482.20.0080	8482.20.0080
		8482.99.3010	8482.99.4510
3329915	Cylindrical, spherical, needle, and, other roller bearings:		
3329915011	Cylindrical roller bearings	8482.50.0000	8482.50.0000
3329915012			
3329915024	Spherical roller bearings	8482.30.0040	8482.30.0040
3329915025		8482.30.0080	8482.30.0080
3329915041	Needle roller bearings	8482.40.0000	8482.40.0000
3329915093	Other roller bearings	8482.80.0040 8482.80.0060 8482.80.0080 8482.80.0020	8482.80.0040 8482.80.0060 8482.80.0080
329917-	Mounted bearings (except plain):		
3329917017	Mounted ball bearings	8483.20.0010	8483.20.4040 8483.20.8040
3329917053	Mounted roller bearings	8483.20.0050	8483.20.4080 8483.20.8080
3329917055			

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Table 4. Comparison of North American Industry Classification-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 1998

Product code	Product description	Export number 1/	Import number 2/
3329919-	Parts and components for ball and roller bearings, including balls and rollers, sold separately:		
3329919011	Balls	8482.91.0010 8482.91.0020	8482.91.0010 8482.91.0020
3329919031	Rollers	8482.91.0040 8482.91.0050 8482.91.0070 8482.91.0080 8482.91.0090	8482.91.0040 8482.91.0050 8482.91.0070 8482.91.0080 8482.91.0090
3329919021	Other anti-friction ball and roller bearing components and parts,		
3329919035	including unassembled bearings cages, housing cases closures,		
3329919036	races, etc.	8482.99.1010	8482.99.1010
3329919037		8482.99.1050	8482.99.1050
3329919049		8482.99.3050	8482.99.3500
3329919059		8482.99.5000	8482.99.4550
		8482.99.7060	8482.99.6560
		8483.30.5020	8483.30.8020
		8483.30.5040	8483.30.8040

1/Source: 1998 edition, Harmonized System-Based Schedule B, Statistical Classification of Domestic and Foreign Commodities Exported from the United States.

2/Source: Harmonized Tariff Schedule of the United States, Annotated (1998).