

CURRENT INDUSTRIAL REPORTS SERIES

2007

MA332Q — ANTIFRICTION BEARINGS (SHIPMENTS)

DEFINITIONS AND SPECIAL INSTRUCTIONS

1. Scope of Survey

This survey covers all companies engaged in the manufacture of complete antifriction bearings and components, including balls and rollers, in the United States. Plain bearings are not collected on this survey.

2. Figures to be reported

Companies with more than one establishment manufacturing the products covered by this survey are requested to complete a separate report form for each location. If you have not received a separate form for each of your establishments, please call the contact listed on the report form or write to the U.S. Census Bureau for additional forms.

a. Quantity and value of shipments

The figures on quantity and value of shipments should include the physical shipments of all products sold, transferred to other establishments within your company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customers or branch to which the products are shipped, net of discounts, allowances, freight charges, and returns. Shipments to your own branches should be assigned the same value as comparable sales to unaffiliated customers; i.e., the value includes an appropriate allocation of company overhead and profit. Products bought and resold without further manufacture should not be included in shipments.

b. Columnar structure of report

When posting your figures to the original report, please be sure to report information in the correct columns. These are:

Column 1 — Quantity of shipments (domestic and export)

Column 2 — Value of shipments (\$1,000) (domestic and export)

Column 3 — Quantity produced for all purposes includes total quantity of balls and rollers produced in thousands of units, whether shipped or produced and consumed at the same establishment.

3. Definitions

ANTIFRICTION BEARINGS — Bearings using rolling elements, i.e., balls or rollers. Plain bearings, i.e., those with no rolling elements, are not to be included.

BALL BEARINGS, COMPLETE, UNMOUNTED — Antifriction bearings using balls as rolling elements.

Annular ball bearings — Antifriction bearings primarily designed to support load perpendicular to shaft axis. More commonly called "radial" ball bearings.

Ground or precision ball bearings — Excludes all unground ball bearings.

Single-Row Conrad Ball Bearings — Deep groove ball bearings with only one row of balls and a cage (i.e., retainer, separator). Included are all standard and special types, all inner race configurations (extended, wide, etc.) and all outer race configurations (spherical O.D., cylindrical O.D., wide, etc.)

MINIATURE BALL BEARINGS — Ball bearings with outside diameter below, but not including, 3/8" or 9mm O.D.

ABEC 1 and ABEC 3 — The "regular" standards of ground ball bearings precision. (Item code 2101)

ABEC 5 and up — The higher, or "precision" standards of ground ball bearings precision. (Item code 2102)

Single-row maximum capacity type distinguished from the conrad type by a filling slot in both outer and inner rings which allows the bearings to contain a greater number of larger balls than the corresponding conrad bearings without filling slots. Also known as "max" type or "full complement" or "filling slot" ball bearings. (Item code 2114)

Integral shaft and integral spindle ball bearings — Have a solid inner race, i.e., a shaft, which has the ball raceway(s) ground into the shaft surface, thus making the inner race/shaft integral to the bearings. Examples include, but are not restricted to, water pump bearings, some automotive hub units, and computer spindle bearings. (Item code 2118)

Double row ball bearings — Unitary bearings with two rows of balls. Includes both angular contact and deep groove types, and both conrad and max types. All

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DEFINITIONS AND SPECIAL INSTRUCTIONS — Continued

3. Definitions — Continued

ABEC 1 and up of all standard and special configurations are to be included, but self-aligning double row ball bearings should not be included. (Item code 2120)

Angular contact ball bearings — Have a single row of balls whose internal clearances and ball race locations are such as to result in a definite contact angle and predetermined relationship of inner to outer ring faces. All standard and special configurations and all ABEC 1 and up precisions are included. (Item codes 2121 and 2123)

All other ground or precision bearings (ABEC 1 and up) — This category should include only those ground ball bearings, etc., which cannot be classified above. (Item code 2124)

Ground ball bearings of less than ABEC 1 precision — All types of radial (single-row, double-row, angular contact, other) ball bearings which have ground raceways but are less than the ABEC 1 precision grade. (Item code 2126)

Unground (less than ABEC 1) — Antifriction ball bearings with unground raceways. All radial types, styles and configurations should be included. (Item code 2128)

Thrust ball bearings — Concentric axial loading only, both ground (less than ABEC 1 and up) and unground types, of all configurations. Both single direction thrust and double direction thrust ball bearings are to be included. Do not include angular contact bearings. (Item codes 2133 and 2135)

Linear ball bearings — Ball bearings designed for linear relative motion between its raceways in the direction of rolling.

Other ball bearings — Those which do not qualify under any of the previous categories. This category should only include those bearings which cannot be classified above. (Item code 2155)

Tapered roller bearings, including cups and cones, unmounted — Antifriction bearings using taper-shaped rollers as rolling elements.

Cup and cone assemblies shipped as a set — This is a complete tapered roller bearing, which includes the cup and cone and roller assembly, each of which may be sold separately. (Item code 2232)

Cups shipped separately — Tapered bearing outer races. (Item code 2233)

Cone assemblies shipped separately — Tapered bearing inner race, with cage and rollers. (Item code 2234)

Cylindrical roller bearings — Antifriction bearings using cylindrical shaped rollers as the rolling elements. Axes of rollers are parallel to the bearing axis. Regular (ABEC 1 and 3) and precision (ABEC 5 and up) are reported separately, but within each category all types and configurations should be included; single-row and multi-row, radial and thrust, traction motor, journal, aeroengine, and others, except those classified as needle roller bearings, as defined below. (Item codes 2311 and 2312)

Spherical roller bearings — Self-aligning antifriction bearings using convex (spherical, or barrel-shaped or concave hourglass shaped) rollers as the rolling elements. Within each category of single-row and double-row types, all configurations of radial and thrust, and all precisions should be included: geared outer, spherangular, air frame, and all other similar types. (Item codes 2324 and 2325)

Needle roller bearings — Antifriction bearings using “needle” rollers as the rolling elements. Needle rollers are cylindrical shaped but are long and slim, with a uniform diameter not exceeding 5mm and having a length of at least three times the diameter. The ends of the rollers may be of several shapes. (Item code 2341)

Linear roller bearings — Roller bearings designed for linear relative motion between its raceways in the direction of rolling. (Item code 2351)

Other roller bearings, n.e.c. — This category should only include those roller bearings not classified above. (Item code 2393)

Mounted bearings (except plain) — Antifriction ball or roller bearings which are encased (mounted) in an enclosure (a mounting, or housing, or housing closure) usually made of iron, steel, or rubber. The enclosure, or housing, may be of a one-piece unit) or two-piece (split) construction. Major types included are pillow blocks, flange units, takeup units, rubber tired bearings, and any other types of mounted bearings. Loose bearing inserts sold separately are not to be included here, but should be included in appropriate bearing categories above. (Item codes 2417–2455)

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DEFINITIONS AND SPECIAL INSTRUCTIONS — Continued

3. Definitions — Continued

Parts and components for ball and roller bearings (except cups and cones) including balls and rollers sold separately — as described in the following:

Balls — Ball bearing type steel balls of all grades.

Shipments — Should include the physical shipments of all products sold, transferred to other establishments within your company, or shipped on consignment, whether for domestic or export sale.

Production — For all purposes, both for internal production of bearings or other products, and for external shipments. (Item code 2911)

Other antifriction ball bearing component and parts, including unassembled ball bearings, cages, races, seals, shields, etc. No bearings are to be placed in this category. (Item code 2921)

Rollers — Roller bearing typed steel rollers of all grades.

Shipments — Should include the physical shipments of all products sold, transferred to other establishments within your company, or shipped on consignment, whether for domestic or export sale.

Production — For all purposes, both for internal production of bearings and other products, and for external shipments. (Item code 2931)

Other roller bearing parts and components, (except rollers) Examples include, but are not restricted to seals and shields. Also, no bearings are to be placed in this category. (Item codes 2942–2953)

Housings and parts and components for housings — Includes housing closures, collars, spacers, sleeves, adapters, and other miscellaneous items. (Item code 2959)

NOTE: Bearing types such as rod ends and cam followers/track rollers should be placed in the appropriate bearing category such as single row deep groove conrad type, spherical roller, cylindrical roller, etc.

4. Comparability

Data reported in this survey should correspond to data reported in the Economic Census - Manufacturing Sector form. The sum of values for item codes shown in column (a) should correspond to dollar values reported under product codes indicated in column (b) below.

Current Industrial Reports (Form MA332Q)	Economic Census - Manufacturing Sector
Item codes (a)	Product codes (b)
2101 through 2155	3329911100
2232 through 2234	3329913100
2311 through 2393	3329915100
2417 through 2455	3329917100
2911 through 2959	3329919100

CURRENT INDUSTRIAL REPORTS SERIES

REFERENCE LIST — Continued

FORM MA332Q		
ANTIFRICTION BEARINGS (SHIPMENTS)		
Product code	Item code	Item description
		BALL BEARINGS, COMPLETE, UNMOUNTED
		Annular, include self-aligning
		Ground or precision
		Single-row conrad
		Miniature (below 9mm. O.D.)
3329911101	2101	Regular (ABEC 1 and 3)
3329911102	2102	Precision (ABEC 5 and up)
		Other regular (ABEC 1 and 3)
3329911103	2103	9mm. O.D. thru 30mm. O.D.
3329911104	2104	Over 30mm. O.D. thru 52mm. O.D.
3329911105	2105	Over 52mm. O.D. thru 100mm. O.D.
3329911107	2107	Over 100 mm. O. D.
		Other Precision (ABEC 5 and up)
3329911109	2109	9mm. O.D. thru 30mm. O.D.
3329911111	2111	Over 30mm. O.D. thru 52mm. O.D.
3329911112	2112	Over 52mm. O.D. thru 100mm. O.D.
3329911113	2113	Over 100 mm. O. D.
3329911114	2114	Single-row maximum capacity type
3329911118	2118	Integral shaft and integral spindle ball bearings
3329911120	2120	Double-row
		Angular contact
3329911119	2121	Regular
3329911123	2123	Precision
3329911124	2124	All other ground or precision bearings (ABEC 1 and up)
3329911127	2126	Ground bearings of less than ABEC 1 precision
3329911129	2128	Unground (less than ABEC 1)
		Thrust ball bearings
3329911133	2133	Ground
3329911135	2135	Unground
3329911155	2155	Other ball bearings
3329911100	2199	TOTAL, complete, unmounted ball bearings (Sum of item codes 2101–2155)
		TAPERED ROLLER BEARINGS, INCLUDING CUPS AND CONES, UNMOUNTED
3329913132	2232	Cup and cone assemblies shipped as a set
3329913133	2233	Cups shipped separately
3329913134	2234	Cone assemblies shipped separately
3329913100	2299	TOTAL, tapered roller bearings, including cups and cones, unmounted (Sum of item codes 2232–2234)

CURRENT INDUSTRIAL REPORTS SERIES

REFERENCE LIST — Continued

FORM MA332Q		
Product code	Item code	Item description
ROLLER BEARINGS (EXCEPT TAPERED), UNMOUNTED		
3329915111	2311	Cylindrical roller bearings Regular (ABEC 1 and 3)
3329915112	2312	Precision (ABEC 5 and up)
Spherical roller bearings, including hourglass and barrel		
3329915124	2324	Single-row
3329915125	2325	Double-row
3329915141	2341	Needle roller bearings
3329915193	2393	Other roller bearings, n.e.c.
3329915100	2399	TOTAL, roller bearings, (except tapered), unmounted <i>(Sum of item codes 2311–2393)</i>
MOUNTED BEARINGS (EXCEPT PLAIN)		
3329917117	2417	Ball bearings, unit and/or split mounted
Roller		
3329917153	2453	Unit-mounted
3329917155	2455	Split-mounted
3329917100	2499	TOTAL, mounted bearings (except plain) <i>(Sum of item codes 2417–2455)</i>
PARTS AND COMPONENTS FOR BALL AND ROLLER BEARINGS (EXCEPT CUPS AND CONES), INCLUDING BALLS AND ROLLERS SOLD SEPARATELY		
3329919111	2911	Balls (thousands of units)
3329919121	2921	Other antifriction ball bearing components and parts, including unassembled ball bearings, cages, races, seals, shields, etc. (except balls)
3329919131	2931	Rollers (thousands of units)
Other roller bearing parts and components (except rollers)		
3329919135	2942	For tapered roller bearings (except cup and cone assemblies)
3329919136	2944	For cylindrical roller bearings
3329919137	2946	For spherical roller bearings
3329919149	2953	For other roller bearings
3329919159	2959	Housings and parts and components for housings, including housing closures, collars, spacers, sleeves, adapters, and other miscellaneous items
3329919100	2999	TOTAL, parts and components for ball and roller bearing (except cups and cones), including balls and rollers sold separately <i>(Sum of item codes 2911–2959)</i>

10/25/07

DUE DATE: 30 Days After Receipt

OMB No. 0607-0392: Approval expires 07-31-09

REPORT FOR CALENDAR YR 2007
 U.S. DEPARTMENT OF COMMERCE
 BUREAU OF THE CENSUS
 FORM **MA332Q**
CURRENT INDUSTRIAL REPORTS

The 8-digit number that appears above indicates that the Office of Management and Budget has approved this survey. If that number is not displayed, do not complete this form. **YOUR RESPONSE IS REQUIRED BY LAW** (Title 13, United States Code). By section 9 of the same law, **YOUR REPORT IS CONFIDENTIAL**. It may be seen only by persons sworn to uphold the confidentiality of Census Bureau information and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

ANTI-FRICTION BEARINGS
 (Shipments)

**In correspondence pertaining to this establishment's report,
 please refer to the 11 digit Identification Number (ID) 01234567890**



ID 01234567890 556 00 0701 17 MA332Q
 01 2007A1 MA332Q

SEQ: 1

ATTN: Controller
 DUMMY

DUMMY MD 20746

If you have questions regarding this report form please contact:

G. PEBBLES-BUTLER X3
 1(800)201-4647

EMPLOYER IDENTIFICATION (EI) NUMBER. Identification number used on Employer's Quarterly Federal Tax Return (U.S. Treasury Department Form 941) **(Enter if not shown, correct if wrong.)**

CONTACT PERSON (Enter information if not shown, correct if wrong.)
 Name ATTN: Controller

Area code Number

Fax number

(Please correct any error in name and address including ZIP Code)

Enter or correct email address: []

PART I FOR EACH ITEM LISTED BELOW, ENTER FIGURES OR "0" for current period. (The figures shown in the shaded areas were reported for the previous two periods.) PLEASE REFER TO THE INSTRUCTIONS BEFORE COMPLETING THIS REPORT FORM.

Item (Product code - Description)	Item code	Report period	Total Shipments Domestic & Export		{Do not report imported or purchased products on which your company performed no further fabrication or significant assembly.}					
			Quantity Number of units	Value \$1,000	1	2	3	4	5	6
3329911101-Ball bearings, comp.annul.,grnd or precis. single-row conrad, miniature regular {ABEC 1 and 3}	2101	2007								
		2006								
		2005								
3329911102-Ball bearings, comp. annul.,grnd or precis. single-row conrad, miniature precis.{ABEC 5 & up}	2102	2007								
		2006								
		2005								
3329911103-Ball bear.,com., annular,grd.or prec.,single row conrad,other regular, 9mm O.D. through 30mm.O.D.	2103	2007								
		2006								
		2005								
3329911104-Ball bear.,com., annular,grnd.or prec.,single row conrad, other reg. over 30mm O.D. through 52mm.O.D.	2104	2007								
		2006								
		2005								

* Figures not received when form was prepared. PLEASE ENTER, if not previously submitted.

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PART I - Continued

Item (Product code - Description)	Item code	Report period	Total Shipments Domestic & Export		{Do not report imported or purchased products on which your company performed no further fabrication or significant assembly.}									
			Quantity Number of units	Value \$1,000										
			1	2	3	4	5	6						
3329911105-Ball bear.,comp., annular,grnd.or prec.,single row conrad, other reg., over 52mm O.D. through 100mm O.D.	2105	2007												
		2006												
		2005												
3329911107-Ball bear.,comp., annular,grnd.or prec.,single row conrad, other regular, over 100mm O.D.	2107	2007												
		2006												
		2005												
3329911109-Ball bear.,com., annular,grnd.or prec.,single row conrad, other precision, 9mm O.D. through 30mm O.D.	2109	2007												
		2006												
		2005												
3329911111-Ball bear.,comp., annular,grnd.or prec.,single row conrad,other precision, over 30mm O.D.thru 52 mm.O.D	2111	2007												
		2006												
		2005												
3329911112-Ball bear.,comp., annular,grnd.or prec.,single row conrad,other prec.,over 52mm O.D. through 100mm O.D	2112	2007												
		2006												
		2005												
3329911113-Ball bear.,comp., annular,grnd.or precision, single row conrad, other precision,over 100mm O.D.	2113	2007												
		2006												
		2005												
3329911114-Ball bearings, complete, annular,ground or precision single-row maximum capacity type	2114	2007												
		2006												
		2005												
3329911118-Ball bearings, complete, integral shaft & integral spindle ball bearings	2118	2007												
		2006												
		2005												
3329911120-Ball bearings, complete, annular, ground or precision, double-row	2120	2007												
		2006												
		2005												
3329911119-Ball bearings, complete, annular, ground or precision, angular contact, regular	2121	2007												
		2006												
		2005												

CURRENT INDUSTRIAL REPORTS - Continued

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PART I - Continued

Item (Product code - Description)	Item code	Report period	Total Shipments & Export		{Do not report imported or purchased products on which your company performed no further fabrication or significant assembly.}			
			Quantity Number of units	Value \$1,000				
			1	2	3	4	5	6
3329911123-Ball bearings, complete, annular, ground or precision, angular contact, precision	2123	2007						
		2006						
		2005						
3329911124-Ball bearings, complete, annular, Other ground or precision bearings {ABEC 1 and up}	2124	2007						
		2006						
		2005						
3329911127-Ball bear., complete, annular, ground or precision ground bearings of less than ABEC 1 precision	2126	2007						
		2006						
		2005						
3329911129-Ball bearings, complete, annular, unground {less than ABEC 1}	2128	2007						
		2006						
		2005						
3329911133-Thrust ball bearings, complete - ground	2133	2007						
		2006						
		2005						
3329911135-Thrust ball bearings, complete - unground	2135	2007						
		2006						
		2005						
3329911155-Other ball bearings	2155	2007						
		2006						
		2005						
3329911100-Total, ball bearings, complete, unmounted sum of codes {2101-2155}	2199	2007						
		2006						
		2005						
3329913132-Tapered roller bearings - cup and cone assemblies shipped as a set- incl cups & cones, unmounted	2232	2007						
		2006						
		2005						
3329913133-Tapered roller bearings - cups shipped separately - including cups, unmounted	2233	2007						
		2006						
		2005						

CURRENT INDUSTRIAL REPORTS - Continued

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PART I - Continued

Item (Product code - Description)	Item code	Report period	Total Domestic	Shipments & Export	{Do not report imported or purchased products on which your company performed no further fabrication or significant assembly.}							
			Quantity Number of units	Value \$1,000								
			1	2	3	4	5	6				
3329913134-Tapered roller bearings - cone assemblies shipped separately - including cones, unmounted	2234	2007										
		2006										
		2005										
3329913100-Total, tapered roller bearings {sum of codes 2232-2234} including cups & cones, unmounted	2299	2007										
		2006										
		2005										
3329915111-Cylindrical roller bearings - regular {ABEC 1 and 3}	2311	2007										
		2006										
		2005										
3329915112-Cylindrical roller bearings - precision {ABEC 5 and up}	2312	2007										
		2006										
		2005										
3329915124-Spherical roller bearings, including hour-glass and barrel - single-row	2324	2007										
		2006										
		2005										
3329915125-Spherical roller bearings, including hour-glass and barrel - double-row	2325	2007										
		2006										
		2005										
3329915141-Needle roller bearings	2341	2007										
		2006										
		2005										
3329915193-Other roller bearings, n.e.c.	2393	2007										
		2006										
		2005										
3329915100-Total, cylindrical, spherical, needle, and other roller bearings {sum of codes 2311-2393}	2399	2007										
		2006										
		2005										
3329917117-Mounted bearings, except plain - ball bearings, unit and/or split-mounted	2417	2007										
		2006										
		2005										

CURRENT INDUSTRIAL REPORTS - Continued

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PART I - Continued

Item (Product code - Description)	Item code	Report period	Total Domestic	Shipments & Export	{Do not report imported or purchased products on which your company performed no further fabrication or significant assembly.}			
			Quantity Number of units	Value \$1,000	3	4	5	6
3329917153-Mounted bearings, except plain - roller, unit-mounted	2453	2007	1	2	3	4	5	6
		2006						
		2005						
3329917155-Mounted bearings, except plain - roller, split-mounted	2455	2007						
		2006						
		2005						
3329917100-Total, mounted bearings, except plain {sum of codes 2417-2455}	2499	2007						
		2006						
		2005						
			Total Domestic	Shipments & Export	Quantity produced for all purposes	{Do not report imported or purchased products on which your co. performed no further fabrication or significant assembly}		
			Quantity 1,000 units	Value \$1,000	1,000 units			
PARTS & COMPONENTS FOR BALL & ROLLER BEARINGS, INCL. BALLS & ROLLERS, SOLD SEP. {EXCEPT CUPS & CONES}								
3329919111-Balls {thousands of units}	2911	2007						
		2006						
		2005						
3329919121-Other antifriction ball bearing components & parts {see manual for inclusions} {value only}	2921	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			
3329919131-Rollers {thousands of units}	2931	2007						
		2006						
		2005						
3329919135-Roller bearing parts & compon. {ex. rollers for tapered roller bearings {ex. cup & cone assembly}	2942	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			

PART I - Continued								
Item (Product code - Description)	Item code	Report period	Total Domestic	Shipments & Export	Quantity produced for all purposes	{Do not report imported or purchased products on which your co. performed no further fabrication or significant assembly}		
			Quantity 1,000 units	Value \$1,000	1,000 units	4	5	6
			1	2	3	4	5	6
3329919136-Roller bearing parts & components {except rollers} for cylindrical roller bearings	2944	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			
3329919137-Roller bearing parts & components {except rollers} for spherical roller bearings	2946	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			
3329919149-Roller bearing parts & components {except rollers} for other roller bearings	2953	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			
3329919159-Housings and parts & components for housings, {see manual for inclusions}	2959	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			
3329919100-Total, parts and components for ball and roller bearings {sum of codes 2911-2959}	2999	2007	XXXXX		XXXXX			
		2006	XXXXX		XXXXX			
		2005	XXXXX		XXXXX			

If all your items are not listed, please use additional lines or a blank sheet of paper.

PART II Has there been any change in the ownership or operation of this establishment during this period?
 Yes - Indicate type of change below. No - Skip to Part III.

A. <input type="checkbox"/> Purchased from	Name of company	Address (Number and street, city, State, ZIP Code)	Date of change
B. <input type="checkbox"/> Sold to			
C. <input type="checkbox"/> Plant discontinued all operations	Date		
D. <input type="checkbox"/> Plant operations no longer covered by this survey - Describe in "Remarks" the products currently produced.			
E. <input type="checkbox"/> Reorganized - Describe in "Remarks;" e.g., partnership change or change in corporate status.			

PART III Do the figures shown on this report and on your last report cover the identical establishments?
 Yes No - Indicate reasons for difference in "Remarks."

PART IV Remarks

PART V CERTIFICATION - This report is substantially accurate and has been prepared in accordance with instructions.

Signature of authorized official	Title	Date
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Complete and return this form in the envelope provided or to: **Bureau of the Census**
 1201 East Tenth Street
 Jeffersonville, IN 47132

NOTE: Please make a photocopy of this for your records.