

**16** DETAILED COST OF MATERIALS, PARTS, AND SUPPLIES

**General** - The materials, parts, and supplies listed below are those commonly consumed in the manufacture, processing, or assembly of the products listed in **2**. Please review the entire list and report separately each item consumed. Leave blank if you do not consume the item. If you use materials, parts, and supplies that are not listed, describe and report them in the "Cost of all other materials . . ." at the end of this section. If you consumed less than \$25,000 of a listed material, include the value with "Cost of all other materials . . ." Census material code 009700 99 8.

Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

**Valuation of Materials Consumed** - The value of the materials, etc., consumed should be based on the delivered cost; i.e., the amount paid or payable after discounts and including freight and other direct charges incurred in acquiring the materials.

Materials received from other plants within your company should be reported at their full economic value (the value assigned by the shipping plant, plus the cost of freight and other handling charges).

If purchases or transfers do not differ significantly from the amount actually put into production, you may report the cost of purchases or transfers. However, if consumption differs significantly from the amounts purchased or transferred, these amounts should be adjusted for changes in the materials and supplies inventories by adding the beginning inventory to the amount purchased or transferred and subtracting ending inventory.

**Contract Work** - Include all materials consumed those you purchased for use by others making products for you under contract. Amounts paid to the companies doing the contract work should be reported in **15**, line A5, and should include freight in and out. On the other hand, materials owned by others but used at this establishment in making products for others under contract or on commission should be excluded.

**Resales** - Cost for products bought and sold or transferred from other establishments of your company and sold without further manufacture, processing, or assembly should be reported in **15**, line A2, not in **16**. The value of these products shipped by this establishment should be reported in **2** under Census product code 000999 8900 6, "Resales."

INFORMATION COPY  
DO NOT USE TO REPORT

Line No.	Materials, parts, and supplies	Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
			Cost, including delivery cost (freight-in)		
			\$ Bil.	Mil.	Thou.
0634		0630	0631		
<b>1</b>	Electric motors, generators, and parts . . . . .	335312 07 0			
<b>2</b>	Hydraulic and pneumatic fluid power pumps, motors, and hydrostatic transmissions . . . . .	333996 01 5			
<b>3</b>	Clutches, couplings, shafts, sprockets, and other mechanical power transmission equipment . . . . .	333613 05 7			
<b>4</b>	Bearings (mounted or unmounted)				
	Ball . . . . .	332991 05 8			
<b>5</b>	Roller . . . . .	332991 03 3			
<b>6</b>	Balls, rollers, cages, collars, races, and other antifriction bearing components and parts . . . . .	332991 07 4			
<b>7</b>	Special dies, tools, die sets, jigs, and fixtures (excluding cutting tools for machine tools) . . . . .	335100 00 4			
<b>8</b>	Internal combustion engines (diesel, semidiesel, gasoline, and other carburetor) . . . . .	333618 09 8			
<b>9</b>	Fabricated metal products (excluding forgings)				
	Bolts, nuts, screws, rivets, washers, and screw machine products . . . . .	332722 03 2			
<b>10</b>	Other fabricated metal products . . . . .	332000 95 9			

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If not shown, please enter your 11-digit Census File Number (CFN) from the mailing address.

**16** DETAILED COST OF MATERIALS, PARTS, AND SUPPLIES - Continued

Line No.	Materials, parts, and supplies	Census material code	Consumption of purchased materials and of materials received from other establishments of your company		
			Cost, including delivery cost (freight-in)		
			\$ Bil.	Mil.	Thou.
0634		0630	0631		
<b>11</b>	Forgings Iron and steel				
	Cold .....	332111 03 8			
<b>12</b>	Other .....	332111 11 1			
<b>13</b>	Nonferrous .....	332112 01 0			
	Castings (rough and semifinished)				
<b>14</b>	Iron and steel .....	331510 01 6			
<b>15</b>	Nonferrous (aluminum, copper, etc.) .....	331520 11 4			
	Shapes and forms (excluding castings, forgings, and fabricated metal products)				
	Steel				
<b>16</b>	Bars, bar shapes, and plate .....	331200 07 1			
<b>17</b>	Sheet and strip .....	331200 17 0			
<b>18</b>	All other steel shapes and forms .....	331200 33 7			
<b>19</b>	Copper and copper-base alloy .....	331421 11 5			
<b>20</b>	All other nonferrous shapes and forms .....	331000 75 2			
<b>21</b>	Scrap; including iron, steel, and aluminum and aluminum-base alloy (excluding home scrap) .....	001900 60 4			
<b>22</b>	Grinding wheels and other abrasive products (excluding industrial diamonds) .....	327910 01 4			
<b>23</b>	Paperboard containers, boxes, and corrugated paperboard .....	322210 01 4			
<b>24</b>	Cost of all other materials and components, parts, containers, and supplies consumed (Specify the principal materials, etc., included in this value.) ↴	009700 99 8			
<b>25</b>	<b>TOTAL</b> (Should equal total reported in <b>16</b> , line A1) .....	771000 00 7			

**17-21** Not Applicable.

33321092

**22** DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE

**General** - The manufactured products and services listed below are generally made in your industry. If you make products that are not listed, describe and report them in the "All other products made in this establishment" section at the end of **2**. PLEASE DO NOT COMBINE PRODUCT LINES.

If quantities are requested, please use the unit of measure specified.

If the information as requested cannot be taken directly from your book records, REASONABLE ESTIMATES ARE ACCEPTABLE.

**Valuation of Products** - Report the value of the products shipped and services performed at the net selling value, f.o.b. plant to the customer; i.e., after discounts and allowances, and exclusive of freight charges and excise taxes.

If you transfer products to other establishments within your company, you should assign the full economic value to the transferred products; i.e., include all direct costs of production and a reasonable proportion of all other costs and profits.

**Contract Work** - Report PRODUCTS MADE BY OTHERS FOR YOU FROM YOUR MATERIALS on the specific lines as if they were made in this establishment. On the other hand, do not report on the specific product lines PRODUCTS THAT YOU MADE FROM MATERIALS OWNED BY OTHERS. Report only the amount that you received for "commission or contract receipts" under Census code 000930 0000 8.

**Resales** - Do not report on the specific product lines those PRODUCTS BOUGHT AND SOLD OR TRANSFERRED FROM OTHER ESTABLISHMENTS OF YOUR COMPANY AND SOLD WITHOUT FURTHER MANUFACTURE. Report only a value under Census code 000999 8900 6, "Resales."

**Detailed Data Reported Elsewhere** - Items denoted by an asterisk (\*) require totals for groups of products covered in the more frequent Current Industrial Reports (CIR). If you report on the CIR form, the sum of the detailed products should equal the total reported on this form.

**NOTE:** Only totals are requested; do not duplicate detail reported on the CIR.

**Lines 32 through 39** pertain to any concentric and parallel shaft speed reducer, motor-reducer, and gearmotor products for which input and output shafts are parallel and closely aligned with each other. Known by many names, including planetaries, cycloids, and epicyclics, these may be concentric constructions or those which may incorporate any type of internal speed reduction components such as spur, helical, and bevel gear teeth, harmonic, epicyclic, cycloidal, chain, cam, etc.

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts			
			Value, f.o.b. plant			
			\$ Bil.	Mil.	Thou.	
	0734	0730	0731			
<b>1</b>	Plain bearings, except engine					
	Plain bearings and bushings, unmounted, machined . . . . .	333613 1112 0				
<b>2</b>	Mounted bearings, plain . . . . .	333613 1151 8				
	Clutches and brakes					
<b>3</b>	Friction-type . . . . .	333613 3111 0				
<b>4</b>	Hydraulic-type (including hydraulic couplings) . . . . .	333613 3213 4				
<b>5</b>	Other . . . . .	333613 3219 1				
	Flexible couplings					
<b>6</b>	Gear-type . . . . .	333613 3327 2				
<b>7</b>	Other . . . . .	333613 3329 8				
<b>8</b>	Universal joints . . . . .	333613 3756 2				
	Chains for sprocket drives					
<b>9</b>	Roller chain meeting any ASME or ANSI standard . . . . .	333613 3444 5				
<b>10</b>	Other . . . . .	333613 3545 9				
<b>11</b>	Sprockets . . . . .	333613 3763 8				

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If not shown, please enter your 11-digit Census File Number (CFN) from the mailing address.

**22** DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
<b>12</b>	Pulleys . . . . .	333613 3767 9			
	Sheaves				
<b>13</b>	Single-drive . . . . .	333613 3648 1			
<b>14</b>	Multiple-drive . . . . .	333613 3649 9			
	Loose gearing, including gears, pinions, racks, and worms, sold separately (except for automobiles, buses, highway trucks, and aircraft) Coarse pitch (diametral pitch less than 20; corresponds to circular pitch more than .157 in.) Helical, herringbone, and spur gearing				
<b>15</b>	Diameter 24 in. (60.96 cm) or less, hard finished . . . . .	333612 3111 2			
<b>16</b>	Diameter 24 in. (60.96 cm) or less, other than hard finished . . . . .	333612 3113 8			
<b>17</b>	Diameter more than 24 in. (60.96 cm), up through 72 in. (182.88 cm) . . . . .	333612 3116 1			
<b>18</b>	Diameter more than 72 in. (182.88 cm) . . . . .	333612 3118 7			
<b>19</b>	Worms and worm gearing . . . . .	333612 3125 2			
<b>20</b>	Bevel gears (straight, spiral, and other) . . . . .	333612 3135 1			
<b>21</b>	Other types, including racks . . . . .	333612 3146 8			
	Fine pitch (diametral pitch 20 or more; corresponds to circular pitch .157 in. or less)				
<b>22</b>	Helical, herringbone, and spur gearing . . . . .	333612 3153 4			
<b>23</b>	Worms and worm gearing . . . . .	333612 3155 9			
<b>24</b>	Other, including bevel gears and racks . . . . .	333612 3157 5			
	Worm gear products, except worms and worm gears Worm speed reducers				
<b>25</b>	Single reduction, center distance less than 3 in. (7.62 cm), with C-face, flange, or scoop mount . . . . .	333612 7114 2			
<b>26</b>	Single reduction, center distance less than 3 in. (7.62 cm), without C-face, flange, or scoop mount . . . . .	333612 7116 7			
<b>27</b>	Single reduction, center distance 3 in. (7.62 cm) or more . . . . .	333612 7118 3			
<b>28</b>	Double or multiple reduction (worm/worm or helical/worm) . . . . .	333612 7121 7			

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**22** DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
	Worm gear products, except worms and worm gears - Continued				
	Right angle worm gear motors (enclosed right angle worm gear drive in common support with an electric motor, having an exclusive and dependent or "interrelated" interface design)				
<b>29</b>	Less than 1 horsepower (746 watts) . . . . .	333612 7225 6			
<b>30</b>	At least 1 horsepower (746 watts) . . . . .	333612 7226 4			
<b>31</b>	Replacement parts for worm gear products (except for worms and worm gears) . . . . .	333612 7329 6			
	Concentric and parallel shaft speed reducer, motor-reducer, and gearmotor products, including planetaries, cycloids, and allied products				
	Enclosed concentric and parallel shaft speed reducers and motor-reducers				
<b>32</b>	Output stage center distance 6 in. (15.24 cm) or less . . . . .	333612 7437 7			
<b>33</b>	Output stage center distance greater than 6 in. (15.24 cm) . . . . .	333612 7438 5			
	Concentric and parallel gearmotors (shaft motor-reducers; all units for which the enclosed reduction drive and electric motor have a common support and use an exclusive and dependent or "interrelated" interface design)				
<b>34</b>	Less than 1 horsepower (746 watts) . . . . .	333612 7441 9			
<b>35</b>	At least 1 horsepower (746 watts), up through 5 horsepower (3.73 kW)	333612 7443 5			
<b>36</b>	More than 5 horsepower (3.73 kW), up through 20 horsepower (14.9 kW) . . . . .	333612 7445 0			
<b>37</b>	More than 20 horsepower (14.9 kW) . . . . .	333612 7447 6			
<b>38</b>	Planetary, cycloidal, epicyclic, chain, and cam reducers and gearmotors .	333612 744G 6			
<b>39</b>	Replacement parts, all types . . . . .	333612 744R 4			
	Shaft-mounted speed reducers and screw conveyor drives				
<b>40</b>	Maximum bore of hollow shaft 2.756 in. (70 mm) or less in diameter . .	333612 7553 1			
<b>41</b>	Maximum bore of hollow shaft more than 2.756 in. (70 mm) in diameter	333612 7555 6			
<b>42</b>	Replacement parts, all types . . . . .	333612 7559 8			
<b>43</b>	Industrial high-speed drives, fixed ratio, pitch line velocity of 5000 feet (1525 meters) per minute or more (pinion speeds of at least 3600 rpm); and replacement parts . . . . .	333612 7666 1			

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22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued

Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
44	Offset parallel shaft and right angle speed reducers Offset parallel shaft reducers (including helical, herringbone, and spur) Low-speed center 15 in. (38.10 cm) or less . . . . .	333612 7771 9			
45	Low-speed center more than 15 in. (38.10 cm) . . . . .	333612 7773 5			
46	Right angle, single and multiple reduction reducers (other than worm) . . . . .	333612 7776 8			
47	Replacement parts . . . . .	333612 7879 0			
48	Mechanical adjustable speed drives (traction and belt variable speed changers, excluding parts and value of drivers) . . . . .	333612 7983 0			
49	Parts for mechanical adjustable speed drives (traction and belt variable speed changers) . . . . .	333612 7A88 6			
50	Other geared speed changers, industrial high-speed drives, and mechanical variable speed drives (gearboxes and allied products) nec, and parts . . . . .	333612 7B99 1			
51	Marine propulsion gear transmissions and drives . . . . .	333613 3788 5			
52	Other mechanical power transmission equipment, nec, including ball joints, nonflexible drive shafts and couplings, etc. . . . .	333613 3792 7			
53	Parts for mechanical power transmission equipment (including mountings for bearings) . . . . .	333613 3798 4			
54	Construction machinery and equipment (including similar machinery used for forestry) Complete units (including attachments which are themselves machinery) (Specify kind.) ↴	333120 WYWW 1			
55	Parts, sold separately (Specify kind.) ↴	333120 9YWW 7			
56	Ball bearings, complete, unmounted (Corresponds to value of shipments reported on CIR Form MA332Q, Antifriction Bearings, for 2002, item codes 2101 - 2155.)* . . . . .	332991 1100 6			
57	Tapered roller bearings (including cups and cones), unmounted (Corresponds to value of shipments reported on CIR Form MA332Q, Antifriction Bearings, for 2002, item codes 2232 - 2234.)* . . . . .	332991 3100 4			
58	Other roller bearings, unmounted (Corresponds to value of shipments reported on CIR Form MA332Q, Antifriction Bearings, for 2002, item codes 2311 - 2393.)* . . . . .	332991 5100 2			
59	Mounted bearings (except plain) (Corresponds to value of shipments reported on CIR Form MA332Q, Antifriction Bearings, for 2002, item codes 2417 - 2455.)* . . . . .	332991 7100 0			

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22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued					
Line No.	Products and services *Items correspond to products reported on Current Industrial Reports (CIR)	Census product code	Products shipped and other receipts		
			Value, f.o.b. plant		
			\$ Bil.	Mil.	Thou.
0734		0730	0731		
60	Parts and components for ball and roller bearings (including balls and rollers, sold separately, but excluding cups and cones) (Corresponds to value of shipments reported on CIR Form MA332Q, Antifriction Bearings, for 2002, item codes 2911 - 2959.)*	332991 9100 8			
61	All other products made in this establishment - <i>Specify and report each product with sales value of \$50,000 or more that cannot be assigned to one of the "listed products and services". For all remaining products, write "Other" and report a single total value.</i>	18			
62		26			
63		34			
64		42			
65		59			
66		67			
67	Contract work - Receipts for work done for others on their materials ( <i>Specify products worked on and kind of work.</i> ) ↴	000930 0000 8			
68	Miscellaneous receipts Sales of scrap and refuse	000999 8013 8			
69	Other miscellaneous receipts (including receipts for repair work, etc.)	000999 8098 9			
70	Resales - Sales of products bought and sold without further manufacture, processing, or assembly (The cost of such items should be reported in 15, line A2.)	000999 8900 6			
71	<b>TOTAL</b> (Should equal 4, line A)	770000 0000 8			

23-27 Not Applicable.



33321142

If not shown, please enter your 11-digit Census File Number (CFN) from the mailing address.

**28** ESTABLISHMENT ACTIVITIES

**A.** Indicate activities that were performed by this establishment or were performed for this establishment by another company during 2002.  
(Mark "X" ALL that apply.)

This activity was performed -			
By this establishment	By another establishment of this company	By another company	Not at all
0921 <input type="checkbox"/>	8071 <input type="checkbox"/>	0941 <input type="checkbox"/>	0961 <input type="checkbox"/>
<b>1.</b> Product design/engineering . . . . .			
<b>2.</b> Order fulfillment			
0923 <input type="checkbox"/>	8072 <input type="checkbox"/>	0943 <input type="checkbox"/>	0963 <input type="checkbox"/>
<b>a.</b> Bundling or kitting (combining multiple items into a prepackaged product) . . . . .			
0924 <input type="checkbox"/>	8073 <input type="checkbox"/>	0944 <input type="checkbox"/>	0964 <input type="checkbox"/>
<b>b.</b> Pick and pack (taking goods from inventory and packaging them to fill orders). . . . .			
0925 <input type="checkbox"/>	8074 <input type="checkbox"/>	0945 <input type="checkbox"/>	0965 <input type="checkbox"/>
<b>c.</b> Warehousing of finished products . . . . .			
0926 <input type="checkbox"/>	8075 <input type="checkbox"/>	0946 <input type="checkbox"/>	0966 <input type="checkbox"/>
<b>d.</b> Breaking bulk (reducing large shipments into smaller portions for customers) . . . . .			
0927 <input type="checkbox"/>	8076 <input type="checkbox"/>	0947 <input type="checkbox"/>	0967 <input type="checkbox"/>
<b>e.</b> Local delivery (within a city, town, or other local area, including adjoining towns and suburban areas) . . . . .			
0928 <input type="checkbox"/>	8077 <input type="checkbox"/>	0948 <input type="checkbox"/>	0968 <input type="checkbox"/>
<b>f.</b> Long distance delivery (beyond local areas and commercial zones) . . . . .			
0932 <input type="checkbox"/>	8078 <input type="checkbox"/>	0952 <input type="checkbox"/>	0972 <input type="checkbox"/>
<b>g.</b> Processing of returned merchandise . . . . .			

**B.** During 2002 did this establishment:

- 1. Manage inventory owned by this establishment AND held at this location? . . . . . 0936  Yes                      0937  No
- 2. Manage inventory owned by this establishment BUT held at a customer's location?. . . . . 0956  Yes                      0957  No
- 3. Manage inventory owned by another company BUT held at this location? . . . . . 0976  Yes                      0977  No
- 4. Manage inventory owned by another company AND held somewhere other than at this location?. . . . . 0994  Yes                      0995  No
- 5. Contract with another firm for any of your production using materials owned by this location? . . . . . 8041  Yes                      8042  No
- 6. Send any partially completed products to a foreign facility for processing that were then returned to this establishment for completion? . . . . . 8044  Yes                      8045  No
- 7. Manufacture products for a government to their specifications? . . . . . 8047  Yes                      8048  No
- 8. Manufacture products for another business to their specifications? . . . . . 8016  Yes                      8017  No
- 9. Manufacture products for a final retail customer to their specifications? . . . . . 8060  Yes                      8062  No



33321159



**29 OPERATIONAL STATUS**

Activity that best describes this establishment's status at the end of 2002  
(Mark "X" only ONE box.)

0011 <input type="checkbox"/> In operation	0013 <input type="checkbox"/> Temporarily or seasonally inactive							
0012 <input type="checkbox"/> Under construction, development, or exploration	0014 <input type="checkbox"/> Ceased operation - Give date at right →	0018 <table border="1"> <tr> <th>Month</th> <th>Day</th> <th>Year</th> </tr> <tr> <td> </td> <td> </td> <td> </td> </tr> </table>	Month	Day	Year			
Month	Day	Year						
	0015 <input type="checkbox"/> Sold or leased to another operator - Give date at right AND enter new name and mailing address below ↴	→						

0060 Name of new owner or operator		0061 Employer Identification Number		
		Enter EIN of new owner (9 digits) →		
0062 Mailing address (number and street, P.O. Box, etc.)				
0063 City, town, village, etc.		0064 State	0065 ZIP Code	

Remarks (Please use this space for any explanations that may be essential in understanding your reported data.)

**30 CERTIFICATION** - This report is substantially accurate and was prepared in accordance with the instructions.

Is the time period covered by this report a calendar year?							
0078 <input type="checkbox"/> Yes	0079 <input type="checkbox"/> No - Enter time period covered →	FROM 0070	Month	Year	TO 0071	Month	Year
0072 Name of person to contact regarding this report		0073 Title					
Telephone 0074	Area code	Number	Extension	Fax 0075	Area code	Number	
0076 Internet e-mail address				Date completed 0069	Month	Day	Year

**Thank you for completing your 2002 Economic Census form.**  
**PLEASE PHOTOCOPY THIS FORM FOR YOUR RECORDS AND RETURN THE ORIGINAL.**

33321167