

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Report materials, parts, and supplies purchased, transferred from other plants of your company, or withdrawn from inventory.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

Produced and Consumed - Forgings, foundries, and screw machine products - Report the quantities produced and used in manufacturing other products made in this establishment in **25**. Note that the materials used to produce these items should be reported in **16**.

Lines 6 through 8 - Scrap generated in other establishments of your company and transferred to this establishment should be reported as scrap purchased from outside sources. Exclude home scrap.

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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		
1	Shapes and forms (excluding castings, forgings, and fabricated metal products)				
	Copper and copper-base alloy	331421 11 5			
2	Aluminum and aluminum-base alloy	331000 39 8			
3	Zinc and zinc-base alloy	331491 05 0			
4	Magnesium and magnesium-base alloy	331419 35 8			
5	All other nonferrous shapes and forms	331000 AG 4			
	Nonferrous scrap (excluding home scrap)				
6	Copper and copper-base alloy	001900 24 0			
7	Aluminum and aluminum-base alloy	001900 40 6			
8	All other nonferrous scrap	001900 80 2			

CONTINUE WITH **16** ON PAGE 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		
9	Industrial and commercial machinery and computer equipment				
	Industrial patterns	332997 00 6			
10	Industrial dies, molds, jigs, and fixtures	333500 03 1			
11	All other industrial and commercial machinery and computer equipment	001900 A4 1			
12	Sand	212320 05 5			
13	Grinding wheels and other abrasive products, excluding industrial diamonds	327910 01 4			
14	Cost of all other materials and components, parts, containers, and supplies consumed (Specify the principal materials, etc., included in this value.) ↴	009700 99 8			
15	TOTAL (Should equal total reported in 16 , line A1)	771000 00 7			

17-21 Not Applicable.

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.

Products Shipped and Other Receipts - Report the quantity and value of each product made and physically shipped during 2002 from this establishment; include products shipped to other plants, sales branches, retail stores, or warehouses of your company and on consignment. Deduct returned goods. Also report the value of services performed at this establishment.

Quantities - Lines 1 through 8, 31, 34, and 36 through 38 - Where requested, report the weight of castings before machining. The removal of gates; risers; sprues; and tumbling, dipping, or sandblasting do not constitute machining. Report in **26** the weight of rough castings you produced and machined or assembled into other products in this establishment. The quantity and value of the machined castings or the finished product in which the castings are incorporated should be entered in appropriate columns on lines 48 through 53.

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.

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

Line 35 - Report heat and/or corrosion resistant steel castings containing eight percent or more of chromium or nickel, or both, with or without molybdenum or other elements.

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."

Line No.	Products and services	Census product code	Unit of measure for quantities	Products shipped and other receipts				
				Quantity	Value, f.o.b. plant			
					\$ Bil.	Mil.	Thou.	
0734		0730	0736	0732	0731			
1	Aluminum and aluminum-base alloy die-castings	331521 0100 3	↑ 1000 lb ↓					
2	Nonferrous die-castings (except aluminum) Copper and copper-base alloys (including bearings and bushings)	331522 0101 9						
3	Zinc and zinc-base alloys	331522 0206 6						
4	Magnesium and magnesium-base alloys	331522 0311 4						
5	Lead and lead-base alloys	331522 0416 1						
6	Other nonferrous metal die-castings (<i>Specify kind of metal.</i>) ↴ 	331522 0521 8						
7	Aluminum and aluminum-base alloy castings (excluding die-castings) Aluminum and aluminum-base alloy castings (except cast aluminum cooking utensils) Sand	331524 0101 5	↑ 1000 lb ↓					
8	Permanent and semipermanent mold	331524 0206 2						
9	Investment	331524 0311 0						
10	Other	331524 0421 7						
11	Nonelectric cast aluminum pressure cookers, household-type and nonelectric cast aluminum cooking utensils	331524 0416 7						
12	Copper and copper-base alloy castings (excluding die-castings) Copper and copper-base alloy castings (except bearings and bushings) Sand castings Alloy (C84400)	331525 0101 2						
13	Leaded red and semired brasses (C83100-C84000)	331525 0206 9						
14	Tin bronzes (including leaded and high-leaded (C90100-C94500))	331525 0411 5						

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

Line No.	Products and services	Census product code	Unit of measure for quantities	Products shipped and other receipts				
				Quantity	Value, f.o.b. plant			
					\$ Bil.	Mil.	Thou.	
0734		0730	0736	0732	0731			
15	Copper and copper-base alloy castings (excluding die-castings) - Continued Copper and copper-base alloy castings (except bearings and bushings) - Continued Sand castings - Continued Copper and high-copper alloys (C80100-C82900)	331525 0416 4						
16	Engineered alloys including manganese bronzes (C86100-C86900), silicon bronzes and brasses (C87100-C87900), aluminum bronzes (C95100-C95900), copper nickels (C96100-C96900)	331525 0221 8						
17	Other alloys including yellow and leaded yellow brasses (C85100-C85900), nickel tin bronzes (C94600-C94900), nickel silvers (C97100-C97900), lead bronzes (C98100-C98900), special alloys (C99100-C99900)	331525 0426 3						
18	Permanent and semipermanent mold	331525 0531 0						
19	Centrifugal	331525 0536 9						
20	Investment	331525 0541 9						
21	Other	331525 0546 8						
22	Copper-base alloy bearings and bushings, nonmachined	331525 0651 6						
23	Other nonferrous castings, nec (excluding die-castings) Zinc and zinc-base alloy	331528 0201 4						
24	Magnesium and magnesium-base alloy Sand	331528 0206 3						
25	Other (including permanent and semipermanent mold and cast anodes) . . .	331528 0211 3						
26	Nickel and nickel-base alloy	331528 0116 4						
27	Other nonferrous metal castings (Specify kind of metal.) ↴ 	331528 0221 2						

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22 DETAIL OF SALES, SHIPMENTS, RECEIPTS, OR REVENUE - Continued							
Line No.	Products and services	Census product code	Unit of measure for quantities	Products shipped and other receipts			
				Quantity	Value, f.o.b. plant		
					\$ Bil.	Mil.	Thou.
0734		0730	0736	0732	0731		
	Steel investment castings						
28	Carbon (including low alloy)	331512 0101 0					
29	Alloy (excluding stainless)	331512 0106 9					
30	Stainless steel	331512 0311 5					
31	Hi-temp metal castings (iron, nickel, or cobalt-base alloys)	331512 0216 6	pounds				
32	Other carbon steel castings, except investment Cast steel railroad car wheels and railway specialties	331513 1101 7					
33	Other carbon steel castings (including rolls for rolling mills)	331513 1211 4					
34	High alloy steel castings (except investment) High manganese steel castings	331513 3101 5	↑ short tons ↓				
35	Other high alloy steel castings	331513 3106 4					
36	Other alloy steel castings (except investment) Railway specialties	331513 5101 3	↑ short tons ↓				
37	Rolls for rolling mills	331513 5106 2					
38	All other alloy steel castings	331513 5111 2					
39	Industrial molds billed to customers separately (Include only those molds whose cost was borne directly by the company for whom the mold was made, whether delivered to that company or kept in your own plant.) (Do not report elsewhere in item the value of molds reported here.) Molds for metal or metal carbides (except ingot molds) Die-casting dies For low-pressure casting	333511 0101 0					
40	For high-pressure casting	333511 0106 9					
41	Permanent molds (for gravity casting)	333511 0211 7					
42	Other types (Specify kind.) ↴ 	333511 0216 6					
43	Molds for wax	333511 0221 6					

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

Line No.	Products and services	Census product code	Unit of measure for quantities	Products shipped and other receipts				
				Quantity	Value, f.o.b. plant			
					\$ Bil.	Mil.	Thou.	
0734		0730	0736	0732	0731			
44	Industrial molds and mold boxes, nsk (excluding molds for metal, metal carbides, or wax) (Specify kind.) ↴	333511 0YWW 4						
45	Foundry patterns (billed to customers separately) (Include only those patterns whose cost was borne directly by the company for whom the pattern was made, whether delivered to that company or kept in your own plant.)	332997 0101 2						
46	Receipts for machine shop job work and job order repairs	332710 0100 1						
47	Magnetos, magneto-dynamos, and magnetic flywheels	336322 9304 0						
48	All other products made in this establishment - 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.	18						
49		26						
50		34						
51		42						
52		59						
53		67						
54	Contract work - Receipts for work done for others on their materials (Specify products worked on and kind of work.) ↴	000930 0000 8						
55	Miscellaneous receipts							
56	Sales of scrap and refuse	000999 8013 8						
57	Receipts for repair work	000999 8061 7						
57	Other miscellaneous receipts	000999 8098 9						
58	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						
59	TOTAL (Should equal 4, line A)	770000 0000 8						

33122136

23-25 Not Applicable.

26 SPECIAL INQUIRIES

SELECTED PRODUCTS PRODUCED AND CONSUMED

- Report below the quantity of each listed item produced in this establishment and used in manufacturing other products made in this establishment.
- Purchases or receipts of the items specified below should be reported only in 16.
- Materials used to produce the items specified below should be reported in 16.
- Quantities produced for sale as such and not for incorporation in other products should be reported in 2.
- Report quantities in the unit of measure specified.

Mark "X" if not performed at this establishment

- | | | |
|--|------|--------------------------|
| 1. Ferrous foundries | 8301 | <input type="checkbox"/> |
| 2. Nonferrous foundries, excluding die-casting | | |
| a. Aluminum | 8302 | <input type="checkbox"/> |
| b. Copper | 8303 | <input type="checkbox"/> |
| c. Zinc | 8304 | <input type="checkbox"/> |
| d. Other | 8305 | <input type="checkbox"/> |
| 3. Nonferrous die-casting foundries | 8306 | <input type="checkbox"/> |

Unit of measure for quantities	Quantities produced in this establishment and used in manufacturing other products made in this establishment
short tons	
1000 lb	
1000 lb	
1000 lb	
1000 lb	
1000 lb	

4. Did this establishment produce precision turned products (on screw machines, turning centers, and CNC equipment)?
- 8308 Yes 8309 No

27 Not Applicable.



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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"/>
1. Product design/engineering			
2. Order fulfillment			
0923 <input type="checkbox"/>	8072 <input type="checkbox"/>	0943 <input type="checkbox"/>	0963 <input type="checkbox"/>
a. 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. 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"/>
c. Warehousing of finished products			
0926 <input type="checkbox"/>	8075 <input type="checkbox"/>	0946 <input type="checkbox"/>	0966 <input type="checkbox"/>
d. 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"/>
e. 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"/>
f. 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"/>
g. 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

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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	Month	Day
		0015 <input type="checkbox"/>	Sold or leased to another operator - Give date at right AND enter new name and mailing address below ↴			Year

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.

33122169