

# Metalworking Machinery: 2001

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## Summary

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Current  
Industrial  
Reports

Current data are released electronically on Internet for all individual surveys as they become available. Use: <http://www.census.gov/mcd/>.

Individual reports can be accessed by choosing "Current Industrial Reports (CIR)," clicking on "CIRs by Subsector;" then 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 on Internet through the U.S. Department of Commerce and STAT-USA by subscription. The Internet address is: [www.stat-usa.gov/](http://www.stat-usa.gov/). Follow the prompts to register. Also, you may call 202-482-1986 or 1-800-STAT-USA, for further information.

For general CIR information, explanation of general terms and historical note, see the appendix.

Address inquiries concerning these data to Investment Goods Industries Branch, Manufacturing and Construction Division (MCD), Washington, DC 20233-6900, or call Larry Blumberg, 301-763-4744.

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**U S C E N S U S B U R E A U**

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Table 1. Value of Shipments, Including Exports of Metalworking Machinery by Class of Product: 1992 to 2001  
[Thousands of dollars]

Product code	Product description	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992
	Metalworking machinery.....	2,987,581	3,632,410	3,783,336	4,817,066	5,010,262	4,607,757	4,547,133	3,780,074	3,222,456	3,073,862
	Metal cutting type 1/.....	2,163,666	2,552,370	2,512,638	3,481,754	3,583,298	3,141,128	3,036,592	2,463,001	2,084,864	1,999,668
333512A1	Boring machines.....	124,763	87,200	53,822	73,583	80,161	88,929	172,417	129,835	84,667	97,975
333512A1	Drilling machines 2/.....	22,576	23,694	50,649	102,930	89,219	99,453	78,936	51,987	37,076	37,472
33351211	Gear cutting machines 2/.....	137,232	180,616	132,046	197,672	213,507	164,258	137,121	100,612	87,662	79,600
33351220	Grinding and polishing machines (except gear-tooth grinding, lapping, polishing, buffing machines).....	367,715	454,313	477,132	535,508	595,014	541,277	549,580	443,262	360,894	335,121
33351230	Lathes 3/.....	262,020	287,021	297,398	472,943	480,672	451,115	478,003	390,407	305,488	258,885
33351240	Milling machines 4/.....	137,778	150,503	200,495	281,101	280,158	199,667	194,757	138,852	180,174	210,403
33351270	Machining centers (multi-function numerically controlled machines).....	435,493	629,717	597,862	897,331	931,566	779,433	698,780	552,358	485,375	377,941
33351280	Station type machines.....	347,948	401,772	407,136	571,038	551,870	498,592	477,021	455,138	374,772	434,705
33351290	Other metal cutting machine tools (except those designed primarily for home workshops, laboratories, etc.).....	276,354	333,204	291,742	344,562	358,299	315,977	246,237	200,114	166,248	166,535
3335126111	Remanufactured metal cutting machine tools.....	49,174	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
	Metal forming type.....	823,915	1,080,040	1,270,698	1,335,312	1,426,964	1,466,629	1,510,541	1,317,073	1,139,581	1,073,994
33351310 pt.	Punching and shearing machines.....	155,316	203,813	219,988	254,323	319,208	331,382	326,318	294,441	213,402	172,872
33351310 pt.	Bending and forming machines.....	202,586	262,372	265,754	262,748	258,479	283,020	256,882	253,219	255,299	270,044
33351330	Presses (except forging).....	180,347	303,146	433,736	399,489	422,396	401,990	379,203	376,398	345,653	288,248
33351350 pt.	Forging machines 5/.....	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
33351350 pt.	Other metal forming type machines 5/.....	275,785	310,709	351,220	418,752	426,881	450,237	548,138	393,015	325,227	342,830
3335137121	Remanufactured metal forming machine tools.....	9,881	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid disclosing data for individual companies. NA Not available. Pt. Part.

- 1/Data for "All lathes (turning machines)" and "All milling machines, valued at under \$3,025 each" are included in total "Metal cutting type" for 1995 through 2001.
- 2/Data for part of "Drilling machines" have been combined with "Gear cutting machines" for 2001 to avoid disclosing individual company data.
- 3/Product code 33351230, "Lathes," excludes the value for product code 3335123031, "All lathes valued under \$3,025 each."
- 4/Product code 33351240, "Milling machines," excludes the value for product code 3335124001, "All milling machines valued under \$3,025 each."
- 5/Data for "Forging machines" have been combined with "Other metal forming machines" to avoid disclosing individual company data.

Table 2. Total Shipments and Unfilled Orders: 2001 and 2000  
 [Quantity in units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2001			2000		
			Total shipments		Unfilled orders (value)	Total shipments		Unfilled orders (value)
			Quantity	Value		Quantity	Value	
	Metalworking machinery.....	(X)	144,662	2,987,581	990,841	171,283	3,632,410	1,588,257
	Total metal cutting type machine tools.....	(X)	80,855	2,163,666	684,203	99,957	2,552,370	1,110,423
	Total metal forming type machine tools.....	(X)	63,807	823,915	306,638	71,326	1,080,040	477,834
	Metal cutting type machine tools valued at \$3,025 each or more 1/.....	(X)	24,438	2,082,607	668,956	32,241	2,509,292	1,106,647
	Metal cutting type machine tools valued under \$3,025 2/ 3/ 4/.....	(X)	55,842	31,885	222	67,716	43,078	3,776
333512A1	Boring and drilling machines 2/5/.....	35	2,803	147,339	78,094	4,277	110,894	95,791
333512A101	All boring machines valued under \$3,025 each.....	-	(X)	(X)	(X)	(X)	(X)	(X)
333512A103	Boring machines valued at \$3,025 each or more: Horizontal boring, drilling, and milling machines, including floor, table, rail mounted, and all other nonprecision boring machines (except boring lathes) 6/.....	6	(D)	(D)	(D)	(D)	(D)	(D)
333512A105	Precision and jig boring machines, including horizontal and vertical machines 6/.....	7 b/	987 b/	124,763 b/	76,882 c/	1,239 b/	87,200 b/	93,455
333512A111	All drilling machines valued under \$3,025 each 2/.....	12 b/	1,639 a/	3,743	(D) b/	2,740	5,660	141
333512A113	Drilling machines valued at \$3,025 each or more: Vertical upright drilling machines, including plain upright and heavy duty 7/.....	3	(D)	(D)	(D)	221	957	(D)
333512A117	Deep hole drilling machines 7/.....	3 c/	177 c/	18,833 c/	1,212 b/	77 c/	17,077 c/	1,258
333512A119	Multiple spindle drilling machines: Adjustable joint and fixed center types 5/.....	6	(D)	(D)	(D)	(D)	(D)	(D)
333512A121	All other automatic multiple spindle drilling machines 5/.....	3	(D)	(D)	(D)	(D)	(D)	(D)
333512A123	All other drilling machines, n.e.c. 5/.....	6	(D)	(D)	(D)	(D)	(D) b/	937
3335121100	Gear cutting machines, including gear hobbers, shapers, teeth finishing, bevel gear generators, and all other gear cutting machines 5/.....	6 b/	646	137,232	69,021 a/	730	180,616	105,307
33351220	Grinding, polishing, buffing, honing, and lapping machines.....	73	44,140	367,715	197,228	50,938	454,313	227,414
3335122001	All grinding, polishing, buffing, honing, and lapping machines valued under \$3,025 each.....	15	40,236	15,302	55	45,882	17,954	59
3335122008	All grinding, polishing, buffing, honing, and lapping machines valued at \$3,025 each or more: External cylindrical grinding machines: Plain and universal, including angular wheel types 8/.....	4	(D)	(D)	(D)	(D)	(D)	(D)
3335122016	Roll, chucking, centerless, and other cylindrical grinding machines 8/.....	10 b/	553	119,265 a/	83,759 b/	726	172,092	115,333
3335122020	Internal cylindrical grinding machines 9/.....	1	(D)	(D)	(X)	(NA)	(NA)	(NA)
3335122022	Surface grinding machines 9/10/.....	9	(D)	(D)	(D)	(NA)	(NA)	(NA)
3335122036	All other disc grinders, including bench, floor, snag, double spindle grinders, and abrasive belt grinders 9/10/.....	4 b/	1,154 b/	36,983 c/	7,663 b/	474 a/	25,777 c/	7,372
3335122042	Tool, cutter, and drill point grinding machines 11/.....	12 b/	420	72,116	11,710	(NA)	(NA)	(NA)
3335122051	All other grinding machines, n.e.c., including planer type, and thread grinding machines 9/11/.....	14	641 b/	34,316 c/	21,139	966 a/	58,750	25,927
3335122056	Honing and lapping machines (except flat surface lapping machines), internal, including combination bore, hone, and external 12/13/.....	6	(D)	(D)	(D)	778 a/	46,219	(D)
3335122061	Flat surface lapping machines (except gear lapping) 12/13/.....	4 a/	836 b/	55,550	(D) a/	340 a/	8,437 c/	25,611
3335122066	Polishing and buffing machines, including speed lathes and multistation type 13/.....	15	300	34,183 b/	72,902	407 a/	27,515 c/	39,260
33351230	Lathes 1/3/.....	(X)	2,949	262,020 r/	20,087	3,278	287,021	67,899
3335123001	Numerically controlled: Horizontal.....	7	2,465	203,538	11,800	2,605	221,132	35,013
3335123007	Multiple spindle NC turning machines 14/.....	2	(D)	(D)	(D)	(D)	(D)	(D)
3335123016	Chuck sizes less than 10 inches but less than 15 inches 14/.....	6	1,556	117,265	8,676	1,734	136,559	23,231
3335123021	Chuck sizes 15 inches and over 14/.....	1	(D)	(D)	(D)	(D)	(D)	(D)
3335123026	Vertical NC turning machines.....	5	909	86,273	3,124	871	84,573	11,782
3335123031	All lathes (turning machines) valued under \$3,025 each 3/.....	2	(D)	(D)	(X)	(D)	(D)	(X)
3335123034	All nonnumerically controlled lathes (turning machines) valued at \$3,025 each or more 1/.....	8 a/	330 b/	8,352	(D)	566	19,248	6,120

Table 2. Total Shipments and Unfilled Orders: 2001 and 2000  
 [Quantity in units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2001			2000			Unfilled orders (value)
			Total shipments		Unfilled orders (value)	Total shipments			
			Quantity	Value		Quantity	Value		
33351240	Milling machines 4/.....	18	1,990	137,778	24,658	3,545	150,503	46,134	
3335124001	All milling machines valued under \$3,025 each 4/.....	3	(D)	(D)	(X)	(D)	(D)	(D)	
	All milling machines valued at \$3,025 or more:								
3335124006	General-purpose, knee milling machines, all types 15/.....	7	(D)	(D)	(D)	(D)	(D)	(D)	
	Automatic:								
3335124011	Single spindle, multiple spindle and special-purpose machines 15/.....	3	(D)	(D)	(D)	(D)	(D)	(D)	
3335124021	All other milling machines, n.e.c., including planer type and thread milling machines 15/.....	9 b/	1,990 b/	137,778 a/	24,658 a/	3,545 a/	150,503	46,134	
33351270	Machining centers.....	21	7,430	435,493	87,289	9,054	629,717	160,916	
	Drill, mill, and bore, vertical (automatic tool change):								
3335127001	Y-axis travel less than 20 inches .....	7	2,845	109,988	4,029	3,394	161,858	19,431	
3335127006	Y-axis travel 20 inches through 26 inches .....	7	1,910	140,630	11,287	2,900	213,228	(D)	
3335127011	Y-axis travel over 26 inches .....	9	466	63,915	7,383	600	77,520	40,981	
	Drill, mill, and bore, horizontal (automatic tool change):								
3335127012	Under 500mm pallet and smaller 16/17/.....	4	(D)	(D)	(D)	(D)	(D)	(NA)	
3335127013	500 to 800mm pallet and smaller 16/17/18/.....	3	(D)	(D)	(D)	(D)	(D)	(NA)	
3335127014	Over 800mm pallet 16/18/.....	2 a/	257	55,665	16,522	417	127,886	(NA)	
3335127046	All other machining centers, including special machining, special adapting of standard machining and machining centers with indexing turret 18/.....	6	1,952 a/	65,295 c/	48,068	1,743	49,225	88,553	
33351280	Station type machines.....	13	151	347,948	140,363	288	401,772	345,999	
3335128001	Dial or rotary, trunnion, and center column 19/.....	9	(D)	(D)	(D)	(D)	(D)	146,881	
3335128006	Transfer 19/.....	5	(D)	(D)	(D)	(D)	(D)	187,453	
3335128011	Other station type, n.e.c. 19/.....	4	151	347,948	140,363	288	401,772 b/	11,665	
33351290	Other metal cutting machine tools 2/.....	56	17,060	276,354	50,998	22,409	333,204	57,387	
3335129001	Other metal cutting machine tools, n.e.c. valued under \$3,025 2/.....	14 c/	10,856 c/	10,227	(D) b/	13,656 c/	15,134	(D)	
	Other metal cutting machine tools, n.e.c. valued at \$3,025 each or more:								
3335129006	Broaching machines 20/.....	7 a/	(D)	(D) a/	9,376 b/	68 b/	16,181 c/	9,957	
	Sawing and cutoff machines:								
	Band saws:								
3335129022	Horizontal 21/22/.....	8 c/	2,206 b/	25,243	(D)	(NA)	(NA)	(NA)	
3335129023	Vertical 21/22/.....	7	1,023	12,729 b/	2,347	(NA)	(NA)	(NA)	
3335129026	All other sawing and cutoff machines.....	12	487	26,370	5,205	656	31,983 a/	6,830	
3335129031	Spark erosion, ultrasonic, and electrolytic machines, all types.....	6	798	51,810	4,859	981	66,106	7,332	
3335129036	Miscellaneous metal cutting machine tools 20/.....	21	1,690	149,975	29,211 b/	2,466	150,831 c/	30,148	
3335126111	Remanufactured metal cutting machine tools .....	21	575	49,174	15,025	(NA)	(NA)	(NA)	
	Metal forming type machine tools valued at \$3,025 or more.....	(X)	14,671	770,874	301,230	19,391	1,035,185	476,124	
	Metal forming type machine tools valued under \$3,025 \$3,025 23/.....	(X)	49,040	43,160	1,745	51,935	44,855	1,710	
33351310	Punching, shearing, bending, and forming machines.....	71	11,307	357,902	139,333	14,953	466,185	185,232	
3335131001	All punching and shearing machines valued under \$3,025 each .....	9 c/	639 c/	1,187	40 b/	698 b/	1,318 b/	32	
	All punching and shearing machines valued at \$3,025 each or more:								
	Power operated only:								
3335131006	Punches, including combination punching and shearing machines .....	13 b/	3,500 b/	31,192 a/	4,085 b/	4,153 b/	39,310	2,887	
3335131011	Punching machines fixed position and two axes positioning table 24/25/.....	5	(D)	(D)	(D)	(D)	(D)	(D)	
	Plate shearing machines:								
3335131016	Mechanical 24/25/.....	5 a/	341	91,842	(D) a/	536	119,725	34,615	
3335131021	Hydraulic 26/.....	9 a/	821	16,035 a/	733 a/	1,141	23,969	(D)	
3335131026	Other power-operated punching and shearing machines 24/26/.....	9	1,016	15,060	25,723	1,298	19,491	7,180	
3335131031	All bending and forming machines, power operated valued at under \$3,025 each .....	7	1,631	2,283	178	2,027	3,028	220	
	All bending and forming machines, power operated valued at \$3,025 each or more:								
3335131036	Press brakes, all types .....	7	561	42,134	4,420 a/	932	74,673	9,661	
3335131042	Roll bending machines, including sheet, plate, angles, bars, shapes, and tubes 27/28/.....	9 b/	(D)	(D)	(D)	(NA)	(NA)	(NA)	
3335131051	Rotary bending and forming machines, including rotary head 27/.....	10 a/	945	57,009	21,731 b/	764 a/	67,956 a/	45,106	
3335131061	Other bending and forming machines, including folders and slide bending machines....	23 b/	1,853	101,160	82,423 a/	3,033	111,657	84,379	
33351330	Presses (except forging) 23/.....	38	10,059	180,347	91,711	11,079	303,146	139,119	
3335133001	All presses valued under \$3,025 each 23/.....	6	7,195	3,962	(D)	7,579 a/	6,241 c/	19	
	All presses valued at \$3,025 each or more:								
	Mechanical presses:								
	Gap or C-frame:								
3335133006	50 tons and under 29/.....	6 c/	(D) c/	(D)	(D) b/	322 c/	7,742 c/	1,844	
3335133013	Over 50 tons 29/30/.....	3 c/	272 c/	6,684 c/	569	(NA)	(NA)	(NA)	

Continued

Table 2. Total Shipments and Unfilled Orders: 2001 and 2000  
 [Quantity in units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2001		Unfilled orders (value)	2000		Unfilled orders (value)
			Quantity	Value		Quantity	Value	
	Vertical straight sided and arch frame single action:							
3335133021	Single point 31/32/33/.....	3	(D)	(D)	(D)	(D)	(D)	(D)
	Two point:							
3335133028	150 tons and under 31/33/.....	3	(D)	(D) c/	1,292	(NA)	(NA)	(NA)
3335133033	151 tons and over 33/.....	-	(X)	(X)	(X)	(NA)	(NA)	(NA)
3335133036	Automatic presses, strip or coil fed 32/.....	7	250	60,599	32,500	(D)	(D)	(D)
3335133041	All other mechanical presses 30/31/32/.....	3 c/	166 a/	28,593	9,652	443	161,924	72,872
	Hydraulic presses:							
	Vertical single action, all tonnages:							
3335133046	Housing or straight side type 34/.....	4	(D)	(D)	(D)	(D)	(D)	(D)
3335133051	Column type (open rod) 34/.....	7	107	35,743	20,673 a/	241	35,976 b/	39,524
	Gap or C-frame:							
3335133056	15 tons and under 35/.....	7	414	6,725	(D)	788	12,890	2,043
3335133061	16 tons to 35 tons 35/.....	5	63	2,423	(D)	141	5,422	(D)
3335133066	Over 35 tons 35/.....	7	142	9,258 b/	4,776	165	10,872 b/	5,115
3335133071	Other hydraulic and pneumatic presses, including horizontal .....	8 b/	1,450 a/	26,360 b/	22,249 b/	1,164 a/	37,892 b/	11,002
3335135076	Forging machines, including forging presses and die stamping presses 36/.....	6	(D)	(D)	(D)	(D)	(D)	(D)
33351350	All other metal forming type machine tools 23/.....	39	42,345	275,785	70,404	45,294	310,709	153,483
3335135001	All other metal forming type machine tools valued under \$3,025 each 23/.....	7 b/	39,575 a/	35,728	(D) b/	41,631 a/	34,268 b/	1,439
	All other metal forming type machine tools valued at \$3,025 each or more:							
3335135006	Thread rolling machinery 36/.....	5	56	9,042	(D)	93	13,859	6,180
3335135011	Metal container-making machinery.....	5	63	18,201	10,063	96	24,625	13,087
3335135016	Die casting machines, all types 36/.....	4	(D)	(D)	(D)	(D)	(D)	(D)
3335135021	Riveting machines.....	8 b/	668	25,575 b/	3,107 b/	1,038 a/	16,230	6,834
3335135026	All other metal forming type machine tools, n.e.c. 36/.....	20 b/	1,983	187,239	57,234 b/	2,436	221,727	125,943
3335137121	Remanufactured metal forming machine tools .....	14	96	9,881 a/	3,663	(NA)	(NA)	(NA)

- Represents zero. D Withheld to avoid disclosing data for individual companies. NA Not available. n.e.c. Not elsewhere classified. r/Revised by 5 percent or more from previously published data. X Not applicable.

- 1/"Unfilled orders (value)" for product code 3335123034 is included in the total for "Metal cutting type machine tools valued at \$3,025 each or more" for 2001, but excluded from product class 33351230.
- 2/"Unfilled orders (value)" for product codes 333512A111 and 3335129001 are included in the total for "Metal cutting type machine tools valued under \$3,025 excluded from product classes 333512A1 and 3335129001 for 2001 and 3338129001 for 2000.
- 3/Product code 3335123031 is included in the total for "Metal cutting type machine tools valued under \$3,025" but excluded from product class 33351230.
- 4/Product code 3335124001 is included in the total for "Metal cutting type machine tools valued under \$3,025" but excluded from product class 33351240.
- 5/Product codes 333512A119, 333512A121, 333512A123, and 3335121100 were combined to avoid disclosing individual company data. Product codes 333512A119, 333512A21, and 333512A123 were not included with 333512A1 "Boring and drilling machines."
- 6/Product codes 333512A103 and 333512A105 were combined to avoid disclosing individual company data.
- 7/Product codes 333512A113 and 333512A117 were combined for 2001 and for "Unfilled orders (value)" for 2000 to avoid disclosing individual company data.
- 8/Product codes 3335122008 and 3335122016 for 2001 were combined to avoid disclosing individual company data.
- 9/Product codes 3335122020, 3335122022, and 3335122036 were combined to avoid disclosing individual company data. Product code 3335122020 was included in 3335122051 in 2000.
- 10/Part of product code 3335122022 was included in 3335122036 in 2000.
- 11/Part of product code 3335122042 was included in 3335122051 in 2000.
- 12/Product codes 3335122056 and 3335122061 for "Total shipments" for 2001 were combined to avoid disclosing individual company data.
- 13/"Unfilled orders (value)" for product codes 3335122056, 3335122061, and 3335122066 for 2001, and 3335122056 and 3335122066 for 2000 were combined to avoid disclosing individual company data.
- 14/Product codes 3335123001 and 3335123016 were combined with 3335123021 to avoid disclosing individual company data.
- 15/Product codes 3335124006 and 3335124011 were combined with 3335124021 to avoid disclosing individual company data.
- 16/Product codes 33351247012, 35127013, and 3335127014 for 2001, and "Total shipments" for 2000 were combined to avoid disclosing individual company data.
- 17/"Unfilled orders (value)" for parts of product codes 3335127012 and 3335127013 were combined for 2000 to avoid disclosing individual company data.
- 18/"Unfilled orders (value)" for parts of product codes 3335127013, 3335127014, and 3335127046 were combined for 2000 to avoid disclosing individual company data.
- 19/Product codes 3335128001, 3335128006, and 3335128011 for 2001 and "Total shipments" for 2000 were combined to avoid disclosing individual company data.
- 20/"Total shipments" for product codes 3335129006 and 3335129036 for 2001 were combined to avoid disclosing individual company data.
- 21/"Unfilled orders (value)" for product codes 3335129022 and 3335129023 for 2001 were combined to avoid disclosing data for individual companies.
- 22/Product codes 3335129022 and 3335129023 in 2000 were split out from 2000 product code 3335129021. In 2000 product code 3335129012 had the following data: quantity, 4,582, value, 52,969, and unfilled orders, 3,120.
- 23/"Unfilled orders (value)" for product codes 3335133001 and 3335135001 for 2001 are included in the total for "Metal forming type machine tools valued under \$3,025," but excluded from product classes 33351330 and 33351350.
- 24/"Total shipments" for product codes 3335131011 and 3335131016 for 2001, and "Unfilled orders (value)" for product codes 3335131011, 3335131016, and 3335131026 for 2001 were combined to avoid disclosing individual company data.
- 25/"Total shipments" for codes 3335131011 and 3335131016 for 2000 were combined to avoid disclosing individual company data.
- 26/"Unfilled orders (value)" for product codes 3335131021 and 3335131026 for 2000 were combined to avoid disclosing individual company data.
- 27/Product codes 3335131042 and 3335131051 for 2001 were combined to avoid disclosing individual company data.
- 28/Part of product code 3335131042 was included in 33351301051 for 2000.
- 29/Product codes 3335133006 and 3335133013 for 2001 were combined to avoid disclosing individual company data.
- 30/Part of product code 3335133013 was included in 333513041 for 2000.
- 31/"Total shipments" for product codes 3335133021, 3335133028, and 3335133041 and "Unfilled orders (value)" for product code 3335133021 and 3335133041 for 2001 were combined to avoid disclosing individual company data.
- 32/Product codes 3335133021, 3335133036 and 333513041 for 2000 were combined to avoid disclosing individual company data.
- 33/Product code 3335133026 was split into products 3335133028 and 3335133033 for 2001. Product code 3335133021 was included in 3335133026 for 2000. Product code 3335133026 had the following data in 2000: quantity, 170, value, 20,792, and unfilled orders, 5,984.
- 34/Product codes 333513046 and 333513051 were combined to avoid disclosing individual company data.
- 35/"Unfilled orders (value)" for product codes 3335133056, 3335133061 and 3335133066 for 2001 and "Unfilled orders (value)" for product codes 3335133061 and 3335133066 for 2000 were combined to avoid disclosing individual company data.
- 36/Product codes 3335135076, 3335135016, and 3335135026, and "Unfilled orders (value)" for product codes 3335135006 and 3335135026 for 2001 were combined to avoid disclosing individual company data.

Note: Percent of estimation of each item is indicated as follows: a/16 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 of Numerically Controlled Machines and Exports: 2001 and 2000  
 [Quantity in units. Value in thousands of dollars]

Product description	2001			2000		
	Shipments of numerically controlled machines		Export shipments (value) 1/	Shipments of numerically controlled machines		Export shipments (value) 1/
	Quantity	Value		Quantity	Value	
Metalworking machinery.....	14,382	1,610,073	503,710	15,940	1,944,133	505,675
Metal cutting type machine tools 2/3/.....	12,566	1,402,909	372,653	14,489	1,675,202	345,240
Boring and drilling machines 2/.....	(D)	(D)	(D)	(D)	(D)	(D)
Gear cutting machines 2/.....	(D)	(D)	(D)	(D)	(D)	(D)
Grinding, polishing, buffing, and lapping machines .....	589	202,359	(D)	772	244,764	(D)
Valued under \$3,025 each, external cylindrical grinding machines (plain and universal), and surface grinding machines, all types .....	521	197,330	(D)	681	239,471	(D)
Honing, lapping, polishing and buffing machines .....	68	5,029	(D)	91	5,293	(D)
Horizontal NC turning machines, valued at \$3,025 each or more.....	2,465	203,538	50,401	2,605	221,132	41,774
Single spindle NC turning machines:						
Chuck sizes less than 10 inches 4/.....	1,556	117,265	33,991	1,734	136,559	(D)
Chuck sizes over 10 inches but less than 15 inches 5/.....	(D)	(D)	(D)	(D)	(D)	(D)
Chuck sizes 15 inches and over and multiple spindle 4/5/.....	909	86,273	16,410	79	12,561	6,787
Vertical NC turning machines, valued at \$3,025 each or more .....	154	50,130	(D)	107	46,641	(D)
Nonnumerically controlled turning machines, valued at \$3,025 or more .....	(X)	(X)	(D)	(X)	(X)	(D)
Milling machines .....	512	114,811	15,690	856	116,393	15,545
Machining centers 3/.....	7,430	435,493	92,401	9,054	629,717	106,105
Drill, mill and bore, vertical (automatic tool change) 6/.....	5,221	314,533	81,136	6,894	452,606	88,884
Y-axis travel less than 20 inches 6/.....	2,845	109,988	(D)	3,394	161,858	36,442
Y-axis travel 20 inches through 26 inches 6/.....	1,910	140,630	36,659	2,900	213,228	(D)
Y-axis travel over 26 inches 6/.....	466	63,915	(D)	600	77,520	(D)
Drill, mill and bore, horizontal (automatic tool change) 7/8/.....	257	55,665	11,265	417	127,886	17,221
Under 500mm pallet 7/8/9/.....	(D)	(D)	(D)	(D)	(D)	(D)
500mm-800mm pallet 7/8/9/.....	(D)	(D)	(D)	(D)	(D)	(D)
Over 800mm pallet 9/.....	257	55,665	(X)	59	57,331	(X)
All other machining centers 3/.....	1,952	65,295	(D)	1,743	49,225	(D)
Station type machines, and other metal cutting machine tools, n.e.c. ....	669	186,480	84,301	718	251,625	85,166
Remanufactured metal cutting machines .....	401	36,375	2,121	(NA)	(NA)	(NA)
Metal forming type machine tools.....	1,816	207,164	131,057	1,451	268,931	160,435
Punching, shearing, bending, and forming machines.....	453	80,166	43,404	868	152,610	64,844
Punching and shearing machines.....	257	55,469	13,908	438	95,725	21,494
All bending and forming machines, power operated.....	196	24,697	29,496	430	56,885	43,350
Presses (except forgings).....	1,056	38,881	32,047	178	43,877	30,013
Forging machines, and all other metal forming type machine tools 10/.....	307	88,117	55,606	405	72,444	65,578
Remanufactured metal forming machines 10/.....	(D)	(D)	(X)	(NA)	(NA)	(NA)

D Withheld to avoid disclosing data for individual companies. NA Not available. n.e.c. Not elsewhere classified.  
 X Not applicable.

1/Data includes the value of all types of machines exported, as reported by MQ333W survey panel.  
 2/Data were included in total "Metal cutting type machine tools."  
 3/Data for export shipments were included in total "Metal cutting type machine tools," but not included in "Machining centers."  
 4/Part of data for export shipments were included in "Chuck sizes 15 inches and over and multiple spindle" for 2000. All data were included in "Horizontal NC turning machines, valued at \$3,025 each or more" for 2000.  
 5/Data included in "Chuck sizes 15 inches and over and multiple spindle."  
 6/Data for export shipments included in "Drill, mill and bore, vertical (automatic tool change)."  
 7/Data for export shipments included in "Drill, mill and bore, horizontal (automatic tool change)."  
 8/Data for shipments of numerically controlled machines included in "Drill, mill and bore horizontal (automatic tool change)" for 2000.  
 9/Data for shipments of numerically controlled machines included in "Over 800mm pallet" for 2001.  
 10/Data for "Remanufactured metal forming machines" included in "Forging machines, and all other metal forming type machine tools."

Table 4a. Shipments, Exports, and Imports of Metalworking Machinery: 2001  
[Quantity in units. Value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise 1/ 2/		Imports for consumption 1/ 3/	
	Quantity	Value	Quantity	Value at port	Quantity	Value 4/
Boring and drilling machines, excluding multi-function NC machines, machining centers:						
Boring machines:						
Valued under \$3,025 each.....	(X)	(X)	817	566	436	412
Valued at \$3,025 each or more .....	987	124,763	221	14,884	793	75,239
Drilling machines:						
Valued under \$3,025 each .....	1,639	3,743	5,857	3,803	242,833	19,439
Valued at \$3,025 each or more 5/.....	177	18,833	1,142	41,096	1,009	42,996
Gear cutting machines 5/.....	646	137,232	6,413	36,372	397	52,975
Grinding, polishing, buffing, honing, and lapping machinery (except gear tooth grinding, lapping, polishing, and buffing machines):						
Valued under \$3,025 each.....	40,236	15,302	41,448	9,361	868,424	30,143
Valued at \$3,025 each or more .....	3,904	352,413	3,505	121,968	7,437	283,327
Lathes (turning machines) under \$3,025.....	(D)	(D)	1,908	1,422	16,026	11,337
Horizontal NC turning machines.....	2,465	203,538	676	74,391	5,224	512,750
Vertical NC turning machines.....	154	50,130	54	6,204	555	87,629
Nonnumerically controlled turning machines.....	330	8,352	811	15,055	3,803	72,935
Milling machines:						
Valued under \$3,025 each.....	(D)	(D)	2,323	3,337	8,831	8,043
Valued at \$3,025 each or more.....	1,990	137,778	1,046	43,521	5,254	108,621
Machining centers (multifunction NC machines):						
Drill, mill, and bore, vertical (automatic tool change):						
Y-axis travel less than 20 inches and 20 inches through 26 inches.....	4,755	250,618	686	76,593	2,637	216,370
Y-axis travel 26 inches and over.....	466	63,915	31	11,703	861	108,318
Drill, mill, and bore, horizontal (automatic tool change).....	257	55,665	35	10,429	1,567	457,334
Other machining centers.....	1,952	65,295	356	28,851	118	27,142
Station type machines.....	151	347,948	103	56,632	592	217,838
Other metal cutting machine tools:						
Valued under \$3,025 each.....	10,856	10,227	(NA)	(NA)	(NA)	(NA)
Valued at \$3,025 each or more.....	6,204	266,127	4,521	134,717	7,850	236,036
Punching and shearing machines:						
Valued under \$3,025 each.....	639	1,187	15,808	3,033	14,681	3,619
Valued at \$3,025 each or more.....	5,678	154,129	2,073	81,426	2,131	144,030
Bending and forming machines:						
Valued under \$3,025 each.....	1,631	2,283	8,200	3,046	66,205	6,476
Valued at \$3,025 each or more.....	3,359	200,303	1,990	70,018	8,877	290,874
Presses (except forging presses).....	10,059	180,347	11,958	77,757	17,972	362,928
Forging machines, including presses 6/.....	(D)	(D)	327	48,904	1,936	120,563
All other metal forming type machine tools:						
Valued under \$3,025 each.....	39,575	35,728	(NA)	(NA)	(NA)	(NA)
Machines valued at \$3,025 each or more:						
Die casting machines 6/.....	(D)	(D)	985	17,236	1,456	72,780
Thread rolling machines .....	56	9,042	34	1,933	98	10,093
Other metal forming machines 6/.....	1,983	187,239	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid disclosing data for individual companies. NA Not available. X Not applicable.

1/For a comparison of North American Industry Classification System (NAICS)-based product codes, Schedule B export numbers, and HTSUSA import numbers, see Table 5.

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

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

4/Dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus import duties.

5/Manufacturing shipments' data for part of "Drilling machines valued at \$3,025 each or more" have been combined with "Gear cutting machines" to avoid disclosing individual company data.

6/Data included with "Other metal forming machines."

Table 4b. Shipments, Exports, and Imports of Metalworking Machinery: 2000  
[Quantity in units. Value in thousands of dollars]

Product description	Manufacturers' shipments		Exports of domestic merchandise 1/ 2/		Imports for consumption 1/ 3/	
	Quantity	Value	Quantity	Value at port	Quantity	Value 4/
Boring and drilling machines, excluding multifunction NC machines, machining centers:						
Boring machines:						
Valued under \$3,025 each.....	(X)	(X)	17,781	682	1,628	653
Valued at \$3,025 each or more .....	1,239	87,200	292	14,372	873	94,657
Drilling machines:						
Valued under \$3,025 each.....	2,740	5,660	12,015	6,178	214,179	19,772
Valued at \$3,025 each or more.....	298	18,034	1,029	30,050	1,577	59,387
Gear cutting machines.....	730	180,616	923	24,307	612	64,640
Grinding, polishing, buffing, honing, and lapping machinery (except gear tooth grinding, lapping, polishing, and buffing machines):						
Valued under \$3,025 each.....	45,882	17,954	46,948	8,186	991,586	34,618
Valued at \$3,025 each or more.....	5,056	436,359	3,984	110,689	9,669	352,298
Lathes (turning machines) under \$3,025.....	(D)	(D)	2,140	2,439	22,948	16,186
Horizontal NC turning machines.....	2,605	221,132	460	47,266	6,830	713,708
Vertical NC turning machines.....	107	46,641	56	11,878	548	91,774
Nonnumerically controlled turning machines:						
Engine or toolroom lathes, all types 5/.....	(D)	(D)	67	931	4,903	42,762
Single spindle automatic lathes .....	(X)	(X)	14	265	149	3,210
Multiple spindle automatic lathes 5/.....	(D)	(D)	32	2,078	281	31,150
All other horizontal turning machines .....	(X)	(X)	468	7,490	416	10,726
All vertical lathes and vertical boring machines 5/.....	566	19,248	355	6,753	393	24,232
Milling machines:						
Valued under \$3,025 each.....	(D)	(D)	4,114	6,037	13,301	11,162
Valued at \$3,025 each or more.....	3,545	150,503	1,106	36,347	6,844	110,698
Machining centers (multifunction NC machines):						
Drill, mill, and bore, vertical (automatic tool change):						
Y-axis travel less than 20 inches and 20 inches through 26 inches.....	6,294	375,086	497	53,598	3,793	355,250
Y-axis travel 26 inches and over.....	600	77,520	31	5,613	681	94,409
Drill, mill, and bore, horizontal (automatic tool change).....	417	127,886	43	9,456	2,088	538,259
Other machining centers.....	1,743	49,225	501	43,218	96	29,806
Station type machines.....	288	401,772	70	29,264	572	239,975
Other metal cutting machine tools:						
Valued under \$3,025 each.....	13,656	15,134	(NA)	(NA)	(NA)	(NA)
Valued at \$3,025 each or more.....	8,753	318,070	6,161	144,045	11,651	396,538
Punching and shearing machines:						
Valued under \$3,025 each.....	698	1,318	2,649	2,182	11,952	3,818
Valued at \$3,025 each or more.....	7,128	202,495	2,711	110,310	2,686	197,430
Bending and forming machines:						
Valued under \$3,025 each.....	2,027	3,028	8,324	5,723	62,149	6,927
Valued at \$3,025 each or more.....	5,100	259,344	2,645	83,671	7,705	328,070
Presses (except forging presses).....	11,079	303,146	8,635	92,979	19,167	382,024
Forging machines, including presses 6/.....	(D)	(D)	315	58,310	2,575	153,425
All other metal forming type machine tools:						
Valued under \$3,025 each.....	41,631	34,268	(NA)	(NA)	(NA)	(NA)
Machines valued at \$3,025 each or more:						
Die casting machines 6/.....	(D)	(D)	906	19,805	1,502	70,147
Thread rolling machines .....	93	13,859	141	3,487	110	9,995
Other metal forming machines 6/.....	2,436	221,727	(NA)	(NA)	(NA)	(NA)

D Withheld to avoid disclosing data for individual companies. NA Not available. X Not applicable.

1/For a comparison of North American Industry Classification System (NAICS)-based product codes, Schedule B export numbers, and HTSUSA imports numbers, see Table 5.

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

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

4/Dollar value represents the c.i.f. (cost, insurance, and freight) value at first port of entry in the United States plus import duties.

5/Data included with "All vertical lathes and vertical boring machines."

6/Data included with "Other metal forming machines."



Table 5. Comparison of North American Industry Classification System-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 2001

Product code	Product description	Export number 1/	Import number 2/
	<b>Boring machines, excluding multifunction NC machines, machining centers:</b>		
333512A101	All boring machines valued under \$3,025 each	8459.39.0020 8459.40.0020	8459.39.0020 8459.40.0020
	<b>Machines valued at \$3,025 each or more:</b>		
333512A103	Horizontal boring, drilling, and milling machines, including floor, table and rail mounted, and all other boring machines (except boring lathes)	8459.31.0010 8459.31.0040 8459.39.0040 8459.31.0070 8459.39.0050 8459.40.0040 8459.40.0050 8459.40.0070 8459.40.0080	8459.31.0010 8459.31.0040 8459.39.0040 8459.31.0070 8459.39.0050 8459.40.0040 8459.40.0050 8459.40.0070 8459.40.0080
333512A105	Precision and jig boring machines, including horizontal, vertical, and all other precision boring machines	8459.10.0000	8459.10.0000
	<b>Drilling machines, excluding machining centers:</b>		
333512A111	All drilling machines valued under \$3,025 each	8459.29.0020	8459.29.0020
	<b>Machines valued at \$3,025 each or more:</b>		
333512A113	Vertical, upright drilling machines, including plain upright and heavy duty	8459.29.0070	8459.29.0070
	<b>Multiple spindle drilling machines (cluster of spindles driven from one central power unit):</b>		
333512A119	Adjustable joint and fixed center type	8459.29.0040	8459.29.0040
333512A121	All other automatic multiple spindle drilling machines, including indexing turret head (fixed column and table		
333512A117	Deep hole drilling machines	8459.21.0080	8459.21.0080
333512A123	All other drilling machines, n.e.c., including bench type sensitive, vertical n.e.c., and radial	8459.29.0050 8459.29.0090 8461.40.1050	8459.29.0050 8459.29.0090 8461.40.1020
3335121100	Gear cutting machines, including gear hobbers, shapers, teeth finishing, bevel gear generators, and all other gear cutting machines	8461.40.1070 8461.40.1090 8461.40.5040 8461.40.5060	8461.40.1030 8461.40.1040 8461.40.1060 8461.40.5040 8461.40.5050 8461.40.5070
	<b>Grinding, polishing, buffing, honing, and lapping machinery (except gear tooth grinding, lapping, polishing, and buffing machines):</b>		
3335122001	All grinding, polishing, buffing, honing, and lapping machines valued under \$3,025 each	8460.39.0020 8460.40.0020 8460.90.0020	8460.39.0020 8460.40.8020 8460.90.8020
	<b>Machines valued at \$3,025 each or more:</b>		
	<b>External cylindrical grinding machines:</b>		
3335122008	Plain and universal, including angular wheel types	8460.21.0080	8460.21.0080
3335122016	Roll, chucking, centerless, and other cylindrical grinding machines	8460.29.0010 8460.29.0030	8460.29.0010 8460.29.0030
3335122036	All other disc grinders, includes bench, floor, snag, double spindle grinders, and abrasive belt grinders		
3335122051	All other grinding machines n.e.c., including planer type, and thread grinding machines	8460.29.0050	8460.29.0050
3335122022	Surface grinding machines	8460.11.0080 8460.19.0010 8460.19.0050	8460.11.0080 8460.19.0010 8460.19.0050

Table 5. Comparison of North American Industry Classification System-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 2001

Product code	Product description	Export number 1/	Import number 2/
3335122042	Tool, cutter, and drill point grinding machines, including universal and special	8460.31.0080	8460.31.0080
	Honing and lapping machines (except gear honing and lapping):		
3335122056	Internal, including combination bore, hone, and external (except flat surface lapping machines)	8460.40.0060 8460.40.0080	8460.40.4060 8460.40.8080
3335122061	Flat surface lapping machines (except gear lapping)	8460.90.0060	8460.90.4060
3335122066	Polishing and buffing machines, including speed lathes and multistation type	8460.90.0080	8460.90.8080
	Lathes (turning machines):		
3335123031	All lathes valued under \$3,025 each	8458.19.0020 8458.99.5060	8458.19.0020 8458.99.5060
	Machines valued at \$3,025 each or more:		
	Horizontal spindle:		
3335123001	Multiple spindle NC turning machine	8458.11.0010	8458.11.0010
	Single spindle NC turning machine:		
3335123007	Chuck sizes less than 10 inches	8458.11.0050	8458.11.0050
3335123016	Chuck sizes from 10 inches but less than 15 inches	8458.11.0090	8458.11.0090
3335123021	Chuck sizes 15 inches and over		
3335123026	Vertical spindle	8458.91.1060 8458.91.1080 8458.91.5050 8458.91.5070	8458.91.1060 8458.91.1080 8458.91.5050 8458.91.5070
	Nonnumerically controlled turning machines valued at \$3,025 each or more		
3335123034		8458.19.0030 8458.19.0050 8458.19.0070 8458.19.0090 8458.99.1050 8458.99.5090	8458.19.0030 8458.19.0050 8458.19.0070 8458.19.0090 8458.99.1050 8458.99.5090
	Milling machines, excluding machining centers:		
3335124001	All milling machines valued under \$3,025 each	8459.59.0020 8459.69.0020	8459.59.0020 8459.69.0020
	Machines valued at \$3,025 each or more:		
3335124006	General-purpose, knee milling machines, all types	8459.51.0080 8459.59.0030	8459.51.0080 8459.59.0030
	Automatic and manufacturing bed type:		
3335124011	Single spindle, multiple spindle and special-purpose machines	8459.61.0080	8459.61.0080
3335124021	All other milling machines, n.e.c., including planer type and thread milling machines	8459.69.0050 8459.69.0070 8459.69.0090	8459.69.0050 8459.69.0070 8459.69.0090
	Machining centers (multifunctions NC machines):		
	Drill, mill, and bore, vertical (automatic tool change):		
333512700	Y-axis travel less than 20 inches	8457.10.0015	8457.10.0015
3335127006	Y-axis travel 20 inches through 26 inches		
3335127011	Y-axis travel over 26 inches	8457.10.0025	8457.10.0025
	Drill, mill, and bore, horizontal (automatic tool change):		
3335127012	Under 500mm pallet	8457.10.0035	8457.10.0055
3335127013	500mm-800mm pallet		8457.10.0060
3335127014	Over 800mm pallet		8457.10.0065 8457.10.0070
3335127046	All other machining centers, including special machining centers, special adapting of standard machining centers, and machining centers with indexing turret	8457.10.0045	8457.10.0075

Continued

Table 5. Comparison of North American Industry Classification System-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 2001

Product code	Product description	Export number 1/	Import number 2/
	Station type machines:		
3335128001	Dial or rotary, trunnion, and center column	8457.20.0010	8457.20.0010
3335128006	Transfer (free, palletized shuttle)	8457.20.0090	8457.20.0090
3335128011	Other station type, n.e.c.	8457.30.0010	8457.30.0010
		8457.30.0090	8457.30.0090
	Other metal cutting machine tools:		
		8459.70.0060	8459.70.8060
3335129001	Other metal cutting machine tools, n.e.c. valued under \$3,025	8461.19.6020	8461.19.6020
		8461.20.0070	8461.20.8070
		8461.30.0040	8461.30.8040
		8461.50.0020	8461.50.8020
		8461.90.6050	8461.90.6050
	Machines valued at \$3,025 each or more:		
3335129006	Broaching machines, including internal surface and all other broaching machines	8461.30.0060	8461.30.4060
		8461.30.0080	8461.30.8080
	Sawing and cutoff machines:		
3335129022	Band saws, vertical	8461.50.0050	8461.50.4050
3335129023	Band saws, horizontal	8461.50.0090	8461.50.8090
3335129026	All other sawing and cutoff machines		
	Spark erosion, ultrasonic and electrolytic machines, all types	8456.20.0000	8456.20.1010
3335129031		8456.30.0000	8456.20.1050
		8456.99.3005	8456.30.1020
		8456.99.3040	8456.30.1050
		8456.99.3060	8456.30.1070
		8456.99.3080	8456.99.3005
			8456.99.3040
			8456.99.3060
			8456.99.3080
3335129036	Miscellaneous metal cutting machine tools, including rifling, centering, keyseating, pointing, chemfering, facing, shaving, grooving, countersinking, burring, reaming, screw and nut slotting machines, threading planers, and shapers	8459.70.0020	8459.70.4000
		8459.70.0080	8459.70.8080
		8461.90.3040	8461.90.3040
		8461.90.6030	8461.90.6030
		8461.20.0010	8461.20.4000
		8461.20.0010	8461.20.8090
		8461.90.3080	8461.90.3080
		8461.90.6090	8461.90.6090
	Punching and shearing machines:		
3335131001	All punching and shearing machines valued under \$3,025 each	8462.39.0020	8462.39.0020
		8462.49.0020	8462.49.0020
	Machines valued at \$3,025 or more:		
	Power operated only:		
	Plate shearing machines (squaring, slitting, etc.):		
3335131016	Mechanical		
3335131021	Hydraulic	8462.31.0080	8462.31.0080
3335131006	Punches, including combination punching and shearing machines	8462.39.0050	8462.39.0050
		8462.41.0080	8462.41.0080
3335131011	Punching machines fixed position and two axes positioning table	8462.49.0050	8462.49.0050
3335131026	Other power-operated punching and shearing machines		
	Bending and forming machines:		
3335131031	All bending and forming machines valued under \$3,025	8462.29.0020	8462.29.8025
	Machines valued at \$3,025 each or more:		
3335131036	Press brakes, all types	8462.21.0080	8462.21.4085
3335131042	Roll bending machines, including sheet, plate, angles, bars, shapes, and tubes	8462.29.0030	8462.21.8085
		8462.29.0040	8462.29.4085
3335131051	Rotary bending and forming machines, including rotary head	8462.29.0050	8462.29.8035
			8462.29.8045
3335131061	Other bending and forming machines, including folders		8462.29.8055

Continued

Table 5. Comparison of North American Industry Classification System-Based Product Codes with Schedule B Export Numbers, and HTSUSA Import Numbers: 2001

Product code	Product description	Export number 1/	Import number 2/
3335133001	Presses (except forging presses): All presses valued under \$3,025 each	8462.99.0020	8462.99.8020
	Machines valued at \$3,025 each or more: Mechanical		
3335133006	Open back inclinable (gap type): 50 tons and under	8462.99.0030	8462.99.4030
3335133013	Over 50 tons	8462.99.0040	8462.99.8035 8462.99.8045
	Vertical straight sided and arch frame, excluding knuckle joint, including cam and crank:		
	Single action:		
3335133021	Single point	8462.99.0060	8462.99.8060
	Two point:		
3335133028	150 tons and under		
3335133033	Over 150 tons		
3335133036	Automatic presses, strip or coil field		
3335133041	Other mechanical presses, including end wheel type bulldozer, double and triple action, and transfer fed presses, four point and knuckle joint, excluding automated lines of standard equipment		
	Hydraulic presses (metalworking only)		
	Vertical single action, all tonnages		
3335133046	Housing or straight side type		
3335133051	Column type (open rod)		
	Gap or C-frame:		
3335133056	15 tons and under	8462.91.0060	8462.91.4060
3335133061	16 tons to 35 tons	8462.91.0090	8462.91.8090
3335133066	Over 35 tons		
3335133071	Other hydraulic and pneumatic presses, including horizontal		
3335135076	Forging machines, including forging presses and die stamping presses	8462.10.0030 8462.10.0050	8462.10.0030 8462.10.0050
	All other metal forming type machine tools:		
3335135001	All other metal forming type machine tools valued under \$3,025 each	8463.20.0060 8463.90.0060	8463.20.0060 8463.90.0060
	Machines valued at \$3,025 each or more:		
3335135016	Die casting machines, all types	8454.30.0010	8454.30.0010
3335135006	Thread rolling machinery	8463.20.0080	8463.20.0080
3335135011	Metal container-making machinery		
3335135021	Riveting machines (except hand held portable types)	8463.90.0080	8463.90.0080
3335135026	All other metal forming type machine tools, n.e.c.		

n.e.c. Not elsewhere classified.

1/Source: 2001 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 (2001).

# Appendix.

## General CIR Survey Information, Explanation of General Terms and Historical Note

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### GENERAL

The CIR program has been providing monthly, quarterly, and annual measures of industrial activity for many years. Since 1904, with its cotton and fats and oils surveys, the CIR program has formed an essential part of an integrated statistical system involving the quinquennial economic census, manufacturing sector, and the annual survey of manufactures. The CIR surveys, however, provide current statistics at a more detailed product level than either of the other two statistical programs.

The primary objective of the CIR program is to produce timely, accurate data on production and shipments of selected products. The data are used to satisfy economic policy needs and for market analysis, forecasting, and decision making in the private sector. The product-level data generated by these surveys are used extensively by individual firms, trade associations, and market analysts in planning or recommending marketing and legislative strategies, particularly if their industry is significantly affected by foreign trade. Although production and shipments information are the two most common data items collected, the CIR program collects other measures also such as inventories, orders, and consumption. These surveys measure manufacturing activity in important commodity areas such as textiles and apparel, chemicals, primary metals, computer and electronic components, industrial equipment, aerospace equipment, and consumer goods.

The CIR program uses a unified data collection, processing, and publication system. The U.S. Census Bureau updates the survey panels for most reports annually and reconciles the estimates to the results of the broader-based annual survey of manufactures and the economic census, manufacturing sector. The manufacturing sector provides a complete list of all producers of the products covered by the CIR program and serves as the primary source for CIR sampling. Where a small number of producers exist, CIR surveys cover all known producers of a product. However, when the number of producers is too large, cutoff and random sampling techniques are used. Surveys are continually reviewed and modified to provide the most up-to-date information on products produced. The CIR program includes a group of mandatory and voluntary surveys. Typically the monthly and quarterly surveys are conducted on a voluntary basis. Those companies that choose not to respond to the voluntary surveys are required to submit a mandatory annual counterpart corresponding to the more frequent survey.

### NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (NAICS), 1997

The adoption of the North American Industry Classification System (NAICS) in the 1997 Economic Census has had a major impact on the comparability of current and historic data. Approximately half of the industries in the manufacturing sector of NAICS do not have comparable industries in the Standard Industrial Classification (SIC) system that was used in the past.

While most of the change affecting the manufacturing sector was change within the sector, some industries left manufacturing and others came into manufacturing. Prominent among those that left manufacturing are logging and portions of publishing. Prominent among the industries that came into the manufacturing sector are bakeries, candy stores where candy is made on the premises, custom tailors, makers of custom draperies, and tire retreading. The net effect of the classification changes are such that if the 1997 value of shipments data for all manufacturers were tabulated on an SIC basis, it would be approximately 3 percent higher.

Listed below are the NAICS sectors:

- 21 Mining
- 22 Utilities
- 23 Construction
- 31-33 Manufacturing
- 42 Wholesale Trade
- 44-45 Retail Trade
- 48-49 Transportation and Warehousing
- 51 Information
- 52 Finance and Insurance
- 53 Real Estate and Rental and Leasing
- 54 Professional, Scientific, and Technical Services
- 55 Management of Companies and Enterprises
- 56 Administrative and Support and Waste Management and Remediation Services
- 61 Educational Services
- 62 Health Care and Social Assistance
- 71 Arts, Entertainment, and Recreation
- 72 Accommodation and Food Services
- 81 Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

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The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

## FUNDING

The Census Bureau funds most of the surveys. However, a number of surveys are paid for either fully or partially by other Federal Government agencies or private trade associations. A few surveys are mandated, but all are authorized by Title 13 of the United States Code.

## RELIABILITY OF DATA

Survey error may result from several sources including the inability to obtain information about all cases in the survey, response errors, definitional difficulties, differences in the interpretation of questions, mistakes in recording or coding the reported data, and other errors of collection, response, coverage, and estimation. These nonsampling errors also occur in complete censuses. Although no direct measurement of the biases due to these nonsampling errors has been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data in an effort to minimize their influence.

A major source of bias in the published estimates is the imputing of data for nonrespondents, for late reporters, and for data that fail logic edits. Missing figures are imputed based on period-to-period movements shown by reporting firms. A figure is considered to be an impute if the value was not directly reported on the questionnaire, directly derived from other reported items, directly available from supplemental sources, or obtained from the respondent during the analytical review phase. Imputation generally is limited to a maximum of 10 percent for any one data cell. Figures with imputation rates greater than 10 percent are suppressed or footnoted. The imputation rate is not an explicit indicator of the potential error in published figures due to nonresponse, because the actual yearly movements for nonrespondents may or may not closely agree with the imputed movements. The range of difference between the actual and imputed figures is assumed to be small. The degree of uncertainty regarding the accuracy of the published data increases as the percentage of imputation increases. Figures with imputation rates above 10 percent should be used with caution.

## DATA REVISIONS

Statistics for previous years may be revised as the result of corrected figures from respondents, late reports for which imputations were originally made, or other corrections. Data that have been revised by more than 5 percent from previously published data are indicated by footnotes.

## DISCLOSURE

The Census Bureau collects the CIR data under the authority of Title 13, United States Code, which specifies that the information can only be used for statistical purposes and cannot be published or released in any manner that would identify a person, household, or establishment. "D" indicates that data in the cell have been suppressed to avoid disclosure of information pertaining to individual companies.

## EXPLANATION OF GENERAL TERMS

**Capacity.** The maximum quantity of a product that can be produced in a plant in 1 day if operating for 24 hours. Includes the capacity of idle plants until the plant is reported to be destroyed, dismantled, or abandoned.

**Consumption.** Materials used in producing or processing a product or otherwise removing the product from the inventory.

**Exports.** Includes all types of products shipped to foreign countries, or to agents or exporters for reshipment to foreign countries.

**Gross shipments.** The quantity or value of physical shipments from domestic establishments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale or use. Shipments of products purchased for resale are omitted. Shipments of products made under toll arrangements are included.

**Interplant transfers.** Shipments to other domestic plants within a company for further assembly, fabrication, or manufacture.

**Inventories.** The quantity or value of finished goods, work in progress, and materials on hand.

**Machinery in place.** The number of machines of a particular type in place as of a particular date whether the machinery was used for production, prototype, or sampling, or was idle. Machinery in place includes all machinery set up in operating positions.

**Net receipts.** Derived by subtracting the materials held at the end of the previous month from the sum of materials used during the current month.

**Production.** The total volume of products produced, including: products sold; products transferred or added to inventory after adjustments for breakage, shrinkage, and obsolescence, plus any other inventory adjustment; and products that undergo further manufacture at the same establishment.

**Quantities produced and consumed.** Quantities of each type of product produced by a company for internal consumption within that same company.

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**Quantity and value of new orders.** The sales value of orders received during the current reporting period for products and services to be delivered immediately or at some future date. Also represents the net sales value of contract change documents that increase or decrease the sales value of the orders to which they are related, when the parties concerned are in substantial agreement as to the amount involved. Included as orders are only those that are supported by binding legal documents such as signed contracts or letter contracts.

**Quantity and value of shipments.** The figures on quantity and value of shipments represent physical shipments of all products sold, transferred to other establishments of the same company, or shipped on consignment, whether for domestic or export sale. The value represents the net sales price, f.o.b. plant, to the customer or branch to which the products are shipped, net of discounts, allowances, freight charges, and

returns. Shipments to a company's own branches are assigned the same value as comparable appropriate allocation of company overhead and profit. Products bought and resold without further manufacture are excluded.

**Stocks.** Total quantity of ending finished inventory.

**Unfilled orders (backlog).** Calculated by adding net new orders and subtracting net sales from the backlog at the end of the preceding year.

#### **HISTORICAL NOTE**

Data on metalworking machinery have been collected by the Census Bureau since 1942. Historical data may be obtained from Current Industrial Reports (called Facts for Industry before 1959) available at your local Federal Depository Library.