

Control Instruments: 2006

Issued June 2007

MA334C(06)-1

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SUMMARY OF FINDINGS

During 2006, the total value of shipments of control instruments was nearly \$24.4 billion. The 2006 shipments include controls for monitoring residential and commercial environments valued at \$1,914.7 million, a decrease of almost 14 percent from 2005; process

control instruments, valued at \$7,383.6 million, a 5-percent increase from 2005; power circuit breakers, valued at \$561.7 million, a 6-percent decrease from 2005; low voltage panelboards, valued at \$2,615.1 million, an increase of 11 percent from 2005; fuses and fuse equipment, valued at \$364.5 million, a decrease of 11 percent from 2005; molded case circuit breakers, valued at \$1,046.0 million, an increase of 12 percent from 2005; ducts, valued at \$255.8 million, an increase of 15 percent from 2005; switchgear (except ducts), valued at \$2,787.7 million, an increase of almost 15 percent from 2005; general-purpose relays valued at \$671.4 million, an increase of 14 percent from 2005; specific-purpose industrial controls, valued at \$2,857.4 million, an increase of 11 percent from 2005; general-purpose industrial controls, valued at \$3,563.2 million, an increase of 2 percent from 2005; and motor controller accessories and parts for industrial controls, valued at \$353.1 million, an increase of 2 percent from 2005.

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 Michael D. Perkinson, 301-763-4828.

For mail or fax copies of this publication, please contact the Information Services Center, MCD, Washington, DC 20233-6900, or call 301-763-4673.

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

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Economics and Statistics Administration
U.S. CENSUS BUREAU

Table 1. Value of Shipments of Control Instruments: 2006
[Millions of dollars]

Product class code	Product description	2006	2005
3345120	Controls for monitoring residential and commercial environments.....	1,914.7	2,216.6
3345130	Process control instruments.....	7,383.6	7,002.5
3353131	Power circuit breakers.....	561.7	597.9
3353133	Low voltage panelboards, distribution boards, and other switching and interrupting devices.....	2,615.1	2,343.8
3353135	Fuses and fuse equipment.....	364.5	r/ 408.8
3353137	Molded case circuit breakers.....	1,046.0	930.1
3353139	Ducts, 1,000 volts and under.....	255.8	222.5
335313A	Switchgear (except ducts).....	2,787.7	2,429.0
3353141	Relays, general purpose.....	671.4	r/ 590.9
3353143	Specific-purpose industrial controls.....	2,857.4	r/ 2,572.8
3353146	General-purpose industrial controls.....	3,563.2	3,491.4
3353147	Motor controller accessories and parts for industrial controls.....	353.1	r/ 345.3

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

Table 2. Shipments of Control Instruments: 2006
[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2006		2005	
			Quantity	Value	Quantity	Value
3345120	Controls for monitoring residential and commercial environments.....	98	(X)	1,914,738	(X)	2,216,562
	Automatic controls of the type principally used as components of air-conditioning, refrigeration, and comfort heating, including pneumatic controls:					
3345120102	Temperature responsive (thermostats).....	37		27,538	31,562	455,324
3345120115	Igniters.....	8		21,470	24,270	171,884
3345120221	Computerized energy control systems for buildings.....	14		712,384	687,347	285,248
3345120224	Other automatic controls.....	54	(X)	570,741	(X)	789,759
3345120225	Temperature responsive control for major appliances.....	12		86,666	81,461	171,567
3345120227	All other controls for appliances.....	11		46,496	49,550	r/ 199,601
3345120229	Parts and components for controls monitoring residential and commercial environments.....	34	(X)	175,757	(X)	143,179
3345130	Process control instruments.....	384	(X)	7,383,609	(X)	7,002,533
	General-purpose control system instruments (commonly called receiver-type), operating from standardized transmission signals (electrical types a.c. or d.c. milliampere, millivolt, or telemetering signals; pneumatic types, 3 to 15 and 3 to 27 p.s.i. signals):					
	Electronic systems - unified architecture type:					
3345130101	Controllers (recording, indicating, or blind).....	28		507,354	504,678	713,201
3345130106	Other unified electronic systems.....	21		151,130	r/ 185,864	r/ 78,775
3345130107	Auxiliary stations and analog computing devices associated with the above, including manual loaders, auto-to-manual stations, ratio stations, adders, multipliers, integrators, etc.	6		34,715	27,246	190,447
3345130109	Electronic systems - nonunified architecture type.....	37	(X)	741,427	(X)	776,065
3345130111	Industrial multifunction process computers.....	36	(X)	377,962	(X)	361,114
	Pneumatic systems, including all system-type control, display and computing instruments actuated from standardized pneumatic transmission signals:					
3345130127	Pneumatic systems and annunciators.....	19	(X)	40,763	(X)	45,864
334513022G	Other industrial type instruments.....	58	(X)	662,275	(X)	652,978
334513021F	Continuous process instruments.....	75	(X)	871,255	(X)	801,713
334513021V	Instruments for all process variables not listed above.....	35	(X)	238,301	(X)	210,574
334513032S	Parts for process control instruments.....	67	(X)	306,526	(X)	271,290
3345130240	Temperature measuring instruments: electrical and electronic measuring types.....	65	(X)	315,743	(X)	262,949
3345130248	Other temperature measuring instruments.....	41	(X)	226,584	(X)	r/ 188,159
	Primary temperature sensors, excluding aircraft types:					
3345130249	Thermocouples and thermocouple lead wire.....	44	(X)	212,170	(X)	r/ 191,084
3345130251	All other types (resistance temperature detectors, radiation and optical sensors, thermistors, etc.).....	46	(X)	171,919	(X)	r/ 165,199
3345130264	Pressure and draft measuring instruments.....	51	(X)	500,072	(X)	457,872
3345130290	Flow and liquid level measuring instruments: differential pressure types.....	116	(X)	1,609,382	(X)	1,604,145
3345130293	Humidity instruments (controlling, recording, indicating and transmitting, and associated primary humidity elements, excluding home and general-purpose type).....	9		28,204	34,153	r/ 31,104
3353131	Power circuit breakers.....	40	(X)	561,748	(X)	597,878
3353131101	Power circuit breakers (sold separately) for use in metal-clad switchgear, oil and oilless, over 1,000 volts, (number of breakers).....	12		5,498	6,074	59,139
3353131103	All other power circuit breakers (sold separately).....	29	(D)	463,030	(D)	502,010
3353131129	Parts for all power circuit breakers.....	17	(X)	44,064	(X)	36,729
3353133	Low voltage panelboards, distribution boards, and other switching and interrupting devices, 1,000 volts and below.....	114	(X)	2,615,115	(X)	2,343,842
	Panelboards, including enclosing cabinets:					
3353133201	Fusible, including combination switch fuse.....	43	(D)	98,505	(D)	92,532
3353133104	Circuit breaker.....	75	(D)	931,313	(D)	r/ 819,022
	Distribution switchboards:					
3353133207	Fusible.....	25		24,016	r/ 23,637	r/ 95,075
3353133211	Circuit breaker.....	48		264,024	237,616	498,563
	Knife switches, enclosed:					
3353133216	Heavy duty.....	9		1,277,963	1,194,964	r/ 178,409
3353133225	Circuit breaker type.....	9	(D)	242,434	(D)	247,582
3353133227	Other.....	7		964,883	926,237	r/ 64,425
3353133233	Other switches.....	32	(X)	253,879	(X)	r/ 223,415
3353133237	Other low voltage switchgear apparatus.....	24	(X)	125,867	(X)	124,819
3353135	Fuses and fuse equipment, under 2,300 volts (except power distribution cutouts).....	19	(X)	364,454	(X)	r/ 408,835
3353135109	Nonrenewable plug and cartridge fuses.....	13	(X)	163,877	(X)	r/ 144,507
3353135113	Other fuses and open fuse material, including renewable, cutouts, clips, bases, etc.	14	(X)	200,577	(X)	r/ 264,328

Table 2. Shipments of Control Instruments: 2006
[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2006		2005	
			Quantity	Value	Quantity	Value
3353137	Molded case circuit breakers, 1,000 volts and under.....	40	(X)	1,046,045	(X)	930,053
3353137105	Industrial type.....	35	(X)	464,240	(X)	369,038
3353137112	Residential or light duty type.....	11	(X)	328,748	(X)	328,132
	Other molded case circuit breakers:					
3353137117	Marine, Navy, aircraft and aerospace type.....	10	(D)	118,474	(D)	116,071
3353137131	All other types, including automotive and electronic.....	12	(D)	134,583	(D)	116,812
3353139	Ducts, including plug-in units and accessories, 1,000 volts and under, consisting of enclosed sectionalized pre-fabricated bus bars rated 20 amperes or more and associated structures and fittings.....	15	(X)	255,804	(X)	222,545
335313A	Switchgear (except ducts).....	111	(X)	2,787,725	(X)	2,428,973
335313A101	Automatic and manual control panels (generators, transformers, feed-controls, etc.).....	53	(X)	435,001	(X)	r/ 373,959
335313A204	Metal-clad switchgear (using power circuit breakers, oil and oilless), all voltages above 1,000 volts, up to and including 38kV, excluding load interrupter switchgear.....	29	(X)	510,077	(X)	448,987
335313A307	Metal-enclosed load interrupter switchgear assemblies, all voltages, including parts.....	30	(X)	321,927	(X)	r/ 268,256
335313A311	Metal-enclosed low voltage power circuit breaker switchgear assemblies 1,000 volts and below, including parts and excluding load interrupter switchgear.....	27	(X)	288,414	(X)	268,678
335313A313	Metal-enclosed bus bars when sold separately, above 1,000 volts, including isolated, segregated, nonsegregated and cable bus bars.....	10	(X)	28,997	(X)	r/ 21,527
	Power switching equipment, 2,300 volts and over, including attachments, auxiliaries, bus supports and fittings, and accessories, but excluding power fuses, sold separately. Also includes single-phase circuit reclosers:					
335313A321	Indoor and outdoor, excluding structures.....	29	(X)	582,434	(X)	509,556
335313A332	Power and ground connectors, overhead transmission and distribution, all types.....	9	(X)	150,863	(X)	132,229
335313A335	Power fuses, fuse links, and distribution cutouts.....	11	(X)	343,400	(X)	306,757
335313A337	Other switchgear devices, including regulators and miscellaneous switchboard devices (for sale separately).....	20	(X)	126,612	(X)	r/ 99,024
3353141	General-purpose and other relays.....	78	(X)	671,412	(X)	r/ 590,926
3353141101	Industrial-control relays (all voltages), n.e.c.	48	(D)	239,746	(D)	r/ 235,218
	General-purpose electromechanical relays:					
3353141112	Over 100 MV and sealed.....	12	(X)	(D)	(X)	(D)
3353141117	Over 100 MV and NOT sealed.....	13	(X)	18,799	(X)	20,103
3353141153	High performance military/aerospace/aircraft relays and contactors (generally pertaining to Mil-\$5757, 6106, 19523, 25108, and 39016).....	5	(X)	114,774	(X)	103,649
3353141180	Timing relays (timers).....	29	2,562,459	(D)	2,520,356	(D)
3353141183	All other general-purpose and special-purpose relays, including parts.....	41	(X)	177,997	(X)	161,732
3353143	Specific-purpose industrial controls and power circuit devices.....	162	(X)	2,857,414	(X)	r/2,572,837
3353143301	U.S. Coast Guard, Navy, and Marine auxiliary controls and accessories.....	18	38,374	131,172	45,620	r/ 112,214
3353143307	Crane and hoist controls, constant and adjustable voltage, including operators' desks and stations.....	13	51,256	141,698	r/ 49,676	r/ 134,421
3353143311	Definite-purpose contactors and starters (600 volts and less).....	14	(D)	20,473	(D)	50,874
	Machine tool applications (motion controllers):					
	Stand-alone controls for numerically controlled machine tools:					
3353143317	Computer numerical controls (CNC).....	11	(X)	212,034	(X)	212,516
3353143323	Other stand-alone motion controls (include robotic controls).....	18	(X)	215,235	(X)	r/ 192,065
3353143328	Programmable controllers, sold separately.....	44	(D)	845,199	(D)	r/ 688,254
3353143333	Other specific- or special-purpose a.c. and d.c. controllers, other definite-purpose devices.....	109	(X)	1,291,603	(X)	1,182,493
3353146	General-purpose industrial controls and power circuit devices.....	197	(X)	3,563,239	(X)	3,491,396
	General-purpose controls:					
3353146101	A.c. full voltage noncombination magnetic starters, 1,000 volts or less.....	24	(D)	46,579	(D)	54,339
3353146109	A.c. full voltage combination magnetic starters, 1,000 volts or less.....	20	144,208	67,643	r/ 130,096	r/ 61,819
3353146111	Disconnect switches, 600 volts or less.....	28	(D)	96,214	(D)	83,455
3353146117	A.c. full voltage manual controllers, 1,000 volts or less.....	13	(X)	46,069	(X)	27,495

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[Quantity in thousands of units. Value in thousands of dollars]

Product code	Product description	No. of cos.	2006		2005	
			Quantity	Value	Quantity	Value
3353146123	A.c. contactors, 1,000 volts or less, excluding controls for packaged adjustable speed drives and synchronous motor controls.....	19	(X)	61,443	(X)	52,920
3353146131	Motor control centers, 1,000 volts or less.....	30	(X)	371,399	(X)	488,642
3353146137	Brakes and clutches.....	16	(X)	94,192	(X)	90,058
3353146142	Other general-purpose controls.....	31	(X)	193,497	(X)	128,247
	Limit switches (positioning sensors):					
3353146143	Electromechanical positioning sensors.....	17	(X)	51,811	(X)	80,554
3353146146	Movement sensors.....	19	(X)	49,127	(X)	49,350
	Solid-state positioning sensors:					
3353146149	Nonoptical proximity sensors.....	18	(X)	67,743	(X)	67,616
3353146152	Optical proximity sensors.....	20	(X)	185,857	(X)	183,803
3353146169	Pushbuttons, under 30mm.....	22	(X)	35,565	(X)	33,985
3353146171	Pushbuttons, 30 mm and larger.....	25	(X)	29,784	(X)	47,697
	Controls for adjustable speed drivers, including electronic and nonelectric and operators' desks and stations:					
3353146176	Controls for a.c. packaged drives.....	29	785,388	518,617	596,466	r/ 434,919
3353146179	Controls for d.c. packaged drives.....	19	68,453	33,176	r/ 82,738	r/ 39,534
3353146182	A.c. drives systems.....	34	54,912	301,762	r/ 50,025	274,195
3353146185	D.c. drives systems.....	22	721,381	64,905	r/ 733,223	r/ 65,405
3353146188	Solid-state motor controllers (all voltages).....	35	650,853	231,867	550,836	r/ 197,938
3353146192	All other general industry devices.....	90	(X)	1,015,989	(X)	1,029,425
3353147	Motor controller accessories and parts for industrial controls.....	92	(X)	353,078	(X)	r/ 345,256
3353147102	Motor controller accessories.....	41	(X)	176,600	(X)	r/ 168,082
3353147104	Parts for industrial controls.....	72	(X)	176,478	(X)	177,174

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

Table 3. Shipments, Exports, and Imports of Control Instruments: 2006
[Value in thousands of dollars]

Product code	Product description	Manufacturers' shipments (value f.o.b. plant)	Exports of domestic merchandise 1/ (value at port)	Imports for consumption 2/
3345120102, 225	Temperature responsive automatic controls (thermostats).....	537,748	123,707	548,961
3345120115, 221, 224, 227	Pressure responsive automatic, hydraulic automatic, pneumatic automatic, and automatic control, n.e.c.	1,201,203	994,575	1,791,195
3345120229	Parts and components for automatic controls, sold separately.....	175,757	590,182	589,454
3353131101, 103	Power circuit breakers.....	517,684	49,708	61,400
3353131129	Parts for power circuit breakers.....	44,064	230,928	149,452
3353133104, 207, 211	Low voltage panelboards and distribution boards.....	1,636,083	(NA)	166,621
3353133216, 225, 227	Knife switches.....	500,781	205,987	660,355
3353133237	Other low voltage switchgear apparatus.....	125,867	16,369	14,863
3353135109, 113	Fuses and fuse equipment, under 2,300 volts.....	364,454	137,159	191,975
3353137105, 112, 117, 131	Molded case circuit breakers, 1,000 volts to 2,300 volts.....	1,046,045	486,921	556,967
3353139100	Duct, including plug-in units and accessories.....	255,804	38,067	(NA)
335313A101, 204, 307, 311, 313, 321, 337	Switchgear and switchgear assemblies.....	2,293,462	65,254	(NA)
335313A332	Power and ground connectors and transmission and distribution connectors, all types.....	150,863	110,618	111,727
335313A335	Power fuses, fuse links, and distribution cutouts.....	343,400	19,709	26,780
3353141101, 112, 117, 153, 180, 183	Relays.....	671,412	515,083	906,789
3353143328	Programmable controllers.....	845,199	601,118	696,506
3353146131	Motor control centers, 1,000 volts or less.....	371,399	115,854	215,602
3353146137	Brakes and clutches.....	94,192	56,010	112,390
3353146143, 146	Limit switches.....	100,938	(NA)	(NA)

NA Not available. n.e.c. Not elsewhere classified.

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

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

Table 4. Comparison of North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2006

Product code	Product description	Export code 1/	Import code 2/
3345120102, 225	Temperature responsive automatic controls (thermostats).....	9032.10.0000	9032.10.0030 9032.10.0060 9032.10.0090
3345120115, 221, 224, 227	Pressure responsive automatic, hydraulic automatic, pneumatic automatic, and automatic controls, n.e.c.	9032.20.0000 9032.81.0080 9032.89.6020 9032.89.6085	9032.20.0000 9032.81.0080 9032.89.6015 9032.89.6025 9032.89.6085
3345120229	Parts and components for automatic controls, sold separately.....	9032.90.0000	9032.90.2000 9032.90.4000 9032.90.6020 9032.90.6040 9032.90.6060 9032.90.6080
3345130	Process control instruments.....	9032.81.0040 9032.81.0080 9032.89.6030 9032.89.6040 9032.89.6050 9032.89.6060 9032.89.6070 9032.89.6075	9032.81.0020 9032.81.0060 9032.89.6030 9032.89.6040 9032.89.6050 9032.89.6060 9032.89.6070 9032.89.6075
3353131101, 103	Power circuit breakers.....	8535.21.0000 8535.29.0020	8535.21.0000 8535.29.0020
3353131129	Parts for power circuit breakers.....	8535.29.0040 8536.20.0040	8535.29.0040 8536.20.0040
3353133104, 201, 207, 211	Low voltage panelboards and distribution boards.....	8538.90.8020	8538.90.8020
3353133216, 225, 227	Knife switches.....	8537.10.9050	8537.10.9050
3353133237	Other low voltage switchgear apparatus.....	8536.50.9045	8536.50.9045
3353135109, 113	Fuses and fuse equipment, under 2,300 volts.....	8535.10.0040 8536.10.0020 8536.10.0040	8535.10.0040 8536.10.0020 8536.10.0040
3353137105, 112, 117, 131	Molded case circuit breakers, 1,000 volts to 2,300 volts.....	8536.20.0020	8536.20.0020
3353139100	Duct, including plug-in units and accessories.....	8536.90.8010	8536.90.8010
335313A101, 204, 307, 311, 313, 321, 337	Switchgear and switchgear assemblies.....	8537.20.0020	8537.20.0020

Table 4. Comparison of North American Industry Classification System (NAICS)-Based Product Codes with Schedule B Export Codes, and HTSUSA Import Codes: 2006

Product code	Product description	Export code 1/	Import code 2/
335313A335	Power fuses, fuse links, and distribution cutouts.....	8535.10.0020	8535.10.0020
335313A332	Power and ground connectors and transmission and distribution connectors.....	8535.90.8040	8535.90.8040
3353141101, 112, 117, 153, 180, 183	Relays.....	8536.41.0005	8536.41.0005
		8536.41.0020	8536.41.0020
		8536.41.0030	8536.41.0030
		8536.41.0045	8536.41.0045
		8536.41.0050	8536.41.0050
		8536.41.0060	8536.41.0060
		8536.49.0050	8536.49.0050
		8536.49.0055	8536.49.0055
		8536.49.0065	8536.49.0065
		8536.49.0075	8536.49.0075
		8536.49.0080	8536.49.0080
3353143328	Programmable controllers.....	8537.10.9060	8537.10.9060
3353146131	Motor control centers, 1,000 volts or less.....	8537.10.6000	8537.10.6000
3353146137	Brakes and clutches.....	8505.20.0000	8505.20.0000
3353146143, 146	Limit switches.....	8536.50.9055	8536.50.9055

n.e.c. Not elsewhere classified.

1/Source: 2006 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 (2006).

Appendix.

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

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 Foodservices
- 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.)

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.

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 switchgear, switchboard apparatus, relays, and industrial controls have been collected by the Census Bureau since 1971 on survey MA335A.

Data on selected instruments and related products have been collected by the Census Bureau since 1961 on survey MA334B.

Beginning in 2005, data for MA335A, Switchgear, Switchboard Apparatus, Relays, and Industrial Controls, and a portion of MA334B, Selected Instruments and Related Products, will be published under the new survey MA334C, Control Instruments. Additional data for MA334B can be found on surveys MA334A, Analytical and Biomedical Instruments, MA334D, Defense, Navigational and Aerospace Electronics, and MA334T, Meters and Test Devices. Historical data may be obtained from Current Industrial Reports available at your local Federal Depository Library.