

Manufacturing: production and sales

January 2003

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Key figures as at the end of January 2003

Actual estimates		January 2003	% change between January 2001 and January 2002	% change between November 2001 to January 2002 and November 2002 to January 2003
of	Physical volume			
	manufacturing production index (2000=100)	94,1	+1,5	+1,9
sales	Total value of			
	of manufactured products (R million)	45 178,7	+12,2	+15,1

Seasonally adjusted estimates		January 2003	% change between December 2002 and January 2003	% change between August 2002 to October 2002 and November 2002 to January 2003
	Physical volume of manufacturing production index (2000=100)	108,4	+0,9	-1,6
	Total value of sales of manufactured products (R million)	53 209,2	+2,8	-1,5

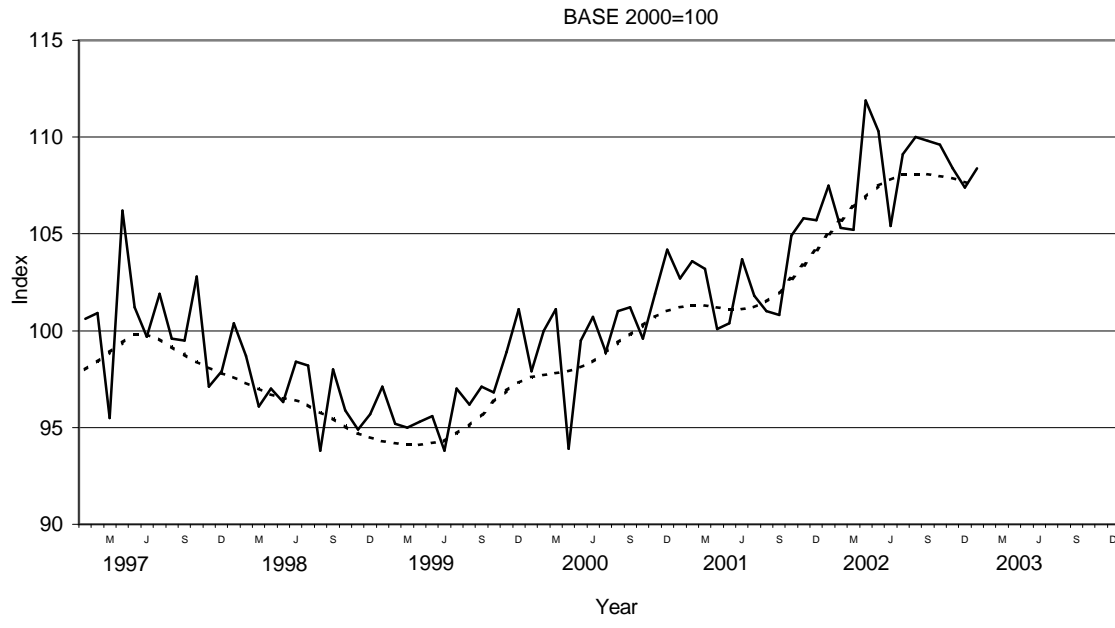
Key findings as at the end of January 2003

MANUFACTURING PRODUCTION DECREASES

Manufacturing production for the three months ended January 2003 reflected a decrease of 1,6% after seasonal adjustment compared with the previous three months. Lower production was reported by 15 of the 27 manufacturing divisions.

The major contributors to the decrease of 1,6% after seasonal adjustment in the total manufacturing production were the coke and refined petroleum products and fabricated metal products divisions (each contributing -0,4 of a percentage point to total manufacturing production), followed by the paper and paper products (-0,3 of a percentage point), basic chemicals (-0,3 of a percentage point) and food and food products (-0,2 of a percentage point) divisions (cf. table A).

Figure 1 - Index of the physical volume of manufacturing production



Source: Stats SA

Table A - Contribution of the production by the different manufacturing divisions to the total manufacturing production (Base 2000=100)

Manufacturing Divisions	Percentage contribution to the total manufacturing production in the base year 2000 (Weights)	Average seasonally adjusted production index for the three months November 2003 to January 2003	Quarterly percentage change (November 2003 to January 2003 compared with the preceding three months)	Contribution (percentage points) to the seasonally adjusted quarterly percentage change in total manufacturing production 1/
Food and food products	10,7	99,2	-1,6	-0,2
Beverages	4,6	111,7	-2,3	-0,1
Total textiles	2,9	114,0	+1,1	+0,0
Total wearing apparel	3,6	106,8	+4,1	+0,2
Tanning and dressing of leather	0,4	93,5	-10,7	-0,0
Footwear	0,9	86,6	+2,7	+0,0
Wood and products of wood	1,9	117,8	+5,2	+0,1
Paper and paper products	5,3	98,8	-6,1	-0,3
Total publishing and printing	4,1	94,5	-0,6	-0,0
Coke and refined petroleum products	4,2	94,1	-8,7	-0,4
Basic chemicals	4,5	112,2	-5,9	-0,3
Other chemical products	6,2	110,6	+0,3	+0,0
Rubber products	1,4	111,0	+3,8	+0,1
Plastic products	3,1	123,2	-2,8	-0,1
Glass and glass products	1,0	110,1	-8,2	-0,1
Other non-metallic mineral products	3,5	108,4	+2,0	+0,1
Basic iron and steel products	7,6	114,2	+1,8	+0,1
Basic precious and non-ferrous metal products	3,2	99,7	-3,2	-0,1
Fabricated metal products	7,0	118,1	-5,6	-0,4
Total machinery and equipment	5,8	121,3	-2,0	-0,1
Electrical machinery, apparatus	3,4	104,9	+2,1	+0,1
Radio, television and communication apparatus	1,0	77,4	+0,7	+0,0
Professional equipment	0,5	121,2	-2,1	-0,0
Motor vehicles; trailers; parts and accessories	8,0	109,3	+0,2	+0,0
Other transport equipment	1,0	114,6	-11,5	-0,1
Furniture	1,6	117,3	+7,3	+0,1
Other manufacturing divisions	2,6	103,5	-1,1	-0,0
Total	100,0	108,1	-1,6	-1,6

1/ The contribution is calculated by multiplying the quarterly percentage change of each manufacturing division with its corresponding weight in the base year, divided by 100.

Adjustment of the base period of the index of physical volume of manufacturing production from 1995=100 to 2000=100

Following international practice of re-basing indices every five years, the base year of the index of physical volume of manufacturing production has been changed from 1995=100 to 2000=100 with effect from the December 2002 statistical release P3041.2.

The base period is the reference point of an index and is usually set at 100. Base periods have to be chosen carefully because different results can be obtained with different base periods. The following are important criteria for selecting base periods:

- The base period must be recent to ensure that as many as possible of the components of the index are included in both the base period and the current period. The more recent the base period, the more comparable the current indices are with those of the base period.
- Due to a large number of indices being published regularly, it is useful if they all have a common base period. The internationally accepted current base period is 2000.

To compare different indices or to compare the movements in a specific index over a period, it often becomes necessary to shift the base period of an index.

Each index was transformed to the new base period by dividing each monthly index (base 1995=100) from January 1990, by the average annual index for the year 2000 and multiplying the result by 100.

The re-basing of indices was done on all the major groups of manufacturing, retaining the current weights based on the 1996 Census of Manufacturing. The average indices of the major groups for the year 2000 (cf. table E) were equated to 100. The obtained conversion factor of each major group was implemented to re-base the monthly indices since January 1990 per major group.

SALES OF MANUFACTURED PRODUCTS DECREASE

The total value of sales of manufactured products at current prices for the three months ended January 2003 reflected a decrease of 1,5% (+R2 403 million) after seasonal adjustment compared with the previous three months. Lower manufacturing sales were reported by 15 of the 27 manufacturing divisions during this period. However, the actual total value of sales of manufactured products at current prices for the three months ended January 2003 reflected an increase of 15,1% (+R19 922 million) compared with the three months ended January 2002. Higher manufacturing sales were reported by all 27 manufacturing divisions during this period.

The decrease of 1,5% after seasonal adjustment in the total value of sales of manufactured products at current prices for the three months ended January 2003 compared with the previous three months was mainly due to large decreases reported by the basic chemicals (-9,9% or -R819 million), basic iron and steel products (-9,0% or -R1 244 million), coke and refined petroleum products (-5,6% or -R648 million), paper and paper products (-5,4% or -R419 million) and motor vehicles, trailers, parts and accessories (-1,9% or -R409 million) divisions (cf. table B).

Table B - Contribution of the manufacturing divisions to the total value of seasonally adjusted sales of manufactured products

Manufacturing Divisions	Seasonally adjusted sales		Percentage change between August 2002 to October 2002 and November 2002 to January 2003	Difference in seasonally adjusted sales of manufacturing divisions between August 2002 to October 2002 and November 2002 to January 2003
	November 2002 to January 2003	R'000		
Food and food products	21 409 529		-0,8	176 996
Beverages	6 891 003		-1,7	120 546
Total textiles	3 645 272		+5,1	176 676
Total Wearing apparel	3 548 220		+10,9	348 960
Tanning and dressing of leather	812 622		-12,0	110 382
Footwear	643 167		+12,5	71 294
Wood and products of wood	3 462 318		+2,4	82 023
Paper and paper products	7 370 202		-5,4	418 802
Total publishing and printing	3 598 819		-0,3	11 515
Coke and refined petroleum products	11 002 752		-5,6	647 782
Basic chemicals	7 488 585		-9,9	818 891
Other chemical products	8 974 087		-2,1	196 333
Rubber products	1 844 578		+9,9	166 306
Plastic products	3 935 504		-0,4	16 120
Glass and glass products	840 879		-1,2	10 410
Other non-metallic mineral products	3 936 958		+5,0	185 859
Basic iron and steel products	12 618 802		-9,0	1 243 771
Basic precious and non-ferrous metal products	5 488 231		+1,4	76 059
Fabricated metal products	9 075 063		+0,1	8 360
Total machinery and equipment	6 963 703		+4,9	324 536
Electrical machinery, apparatus	4 501 217		+6,2	262 748
Radio, television and communication apparatus	1 260 612		+6,4	76 220
Professional equipment	505 493		-6,8	37 077
Motor vehicles; trailers; parts and accessories	20 624 258		-1,9	409 140
Other transport equipment	1 130 732		-2,3	26 111
Furniture	2 054 532		+10,9	202 581
Other manufacturing industries	4 503 947		-3,0	140 437
Total	158 131 086		-1,5	2 402 689

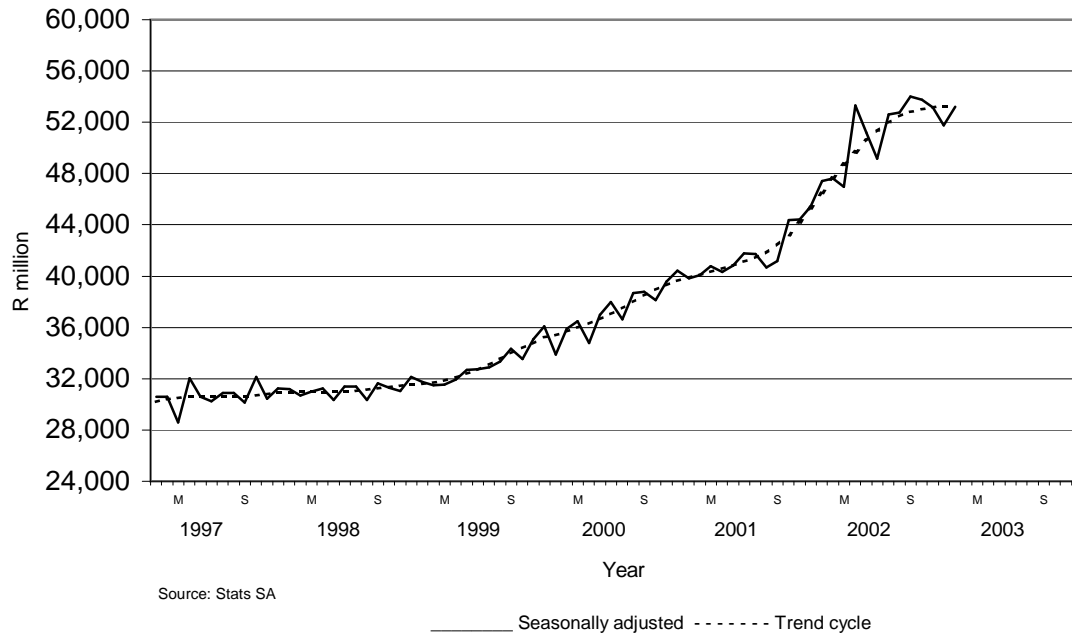
The major contributors to the increase of 15,1% in the actual value of sales of manufactured products at current prices for the three months ended January 2003 compared with the three months ended January 2002 were the food and food products (+2,2 percentage points or +R2 912 million), basic iron and steel products (+1,7 percentage points or +R2 211 million), motor vehicles, trailers, parts and accessories (+1,6 percentage points or +R2 131 million), coke and refined petroleum products (+1,1 percentage points or +R1 405 million), fabricated metal products (+1,1 percentage points or +R1 455 million) and machinery and equipment (+0,8 of a percentage points or +R1 080 million) divisions (cf. table C).

Table C - Contribution of the manufacturing divisions to total value of sales of manufactured products

Manufacturing	Percentage contribution to total value of sales of manufactured products November 2002 to January 2003	Percentage change between November 2001 to January 2002 and November 2002 to January 2003	Contribution (percentage points) to the percentage change in the total value of sales of manufactured products 1/	Difference in sales of manufacturing divisions between November 2001 to January 2002 and November 2002 to January 2003
				R'000
Food and food products	14,2	15,5	2,2	2 912 362
Beverages	5,4	13,5	0,7	959 600
Total textiles	1,9	20,3	0,4	513 329
Total Wearing apparel	2,0	18,7	0,4	482 472
Tanning and dressing of leather	0,5	12,5	0,1	84 881
Footwear	0,3	20,0	0,1	86 367
Wood and products of wood	2,0	19,2	0,4	504 731
Paper and paper products	5,0	10,5	0,5	687 624
Total publishing and printing	2,4	13,7	0,3	432 333
Coke and refined petroleum products	7,2	14,8	1,1	1 404 808
Basic chemicals	5,4	8,3	0,4	590 085
Other chemical products	6,0	9,4	0,6	752 542
Rubber products	1,0	25,9	0,3	328 773
Plastic products	2,4	16,5	0,4	522 785
Glass and glass products	0,6	7,1	0,0	54 138
Other non-metallic mineral products	2,2	20,6	0,5	595 148
Basic iron and steel products	7,7	21,8	1,7	2 210 669
Basic precious and non-ferrous metal products	4,1	4,0	0,2	213 558
Fabricated metal products	5,2	21,3	1,1	1 454 683
Total machinery and equipment	4,1	20,2	0,8	1 079 590
Electrical machinery, apparatus	2,5	21,6	0,5	724 798
Radio, television and communication apparatus	0,7	23,6	0,2	218 650
Professional equipment	0,3	6,4	0,0	28 781
Motor vehicles; trailers; parts and accessories	12,2	13,2	1,6	2 131 363
Other transport equipment	0,6	18,1	0,1	143 452
Furniture	1,2	27,3	0,3	416 811
Other manufacturing divisions	3,1	9,5	0,3	387 479
Total	100,0	15,1	15,1	19 921 812

1/ The contribution (percentage points) is calculated by multiplying the percentage change of each manufacturing division with the percentage contribution of the same division during corresponding period, divided by 100.

Figure 2 - Total of sales of manufactured products at current prices



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Forthcoming issues

Issue

Expected release date

February 2003

8 April 2003

March 2003

13 May 2003

April 2003

10 June 2003

May 2003

8 July 2003

June 2003

12 August 2003

Purpose of the survey

The monthly Manufacturing Production and Sales Survey is a country-wide sample survey covering a sample of private establishments, public corporations and government establishments operating in the manufacturing industry in the South African economy. The results of this survey are used to calculate physical volume of manufacturing production indices in order to estimate the Gross Domestic Product (GDP) to monitor and develop government policy.

Table 1 - Indices of the physical volume of manufacturing production: Total

Base 2000 = 100							
Month	1997	1998	1999	2000	2001	2002 *	2003
Actual indices							
J	85,3	85,8	83,6	85,2	89,5	92,7	94,1 1/
F	99,1	97,2	93,7	98,7	102,0	104,2	
M	98,4	98,9	97,9	104,8	107,3	109,8	
A	100,9	92,3	90,7	89,0	94,6	105,3	
M	101,7	96,8	95,9	99,9	100,8	110,7	
J	100,9	99,6	94,8	102,1	105,0	106,7	
J	103,9	99,9	98,3	100,1	102,7	109,9	
A	101,9	95,6	97,7	102,5	102,6	111,9	
S	104,3	102,3	100,9	104,8	104,0	113,1	
O	115,2	106,9	107,3	109,8	115,5	120,6	
N	107,9	105,5	109,9	113,6	118,1	121,0	
D	83,5	81,8	86,3	89,5	91,3	92,6	
Year	100,3	96,9	96,4	100,0	102,8	108,2	
Seasonally adjusted indices							
J	100,7	100,4	97,2	97,9	102,5	106,3	108,4
F	100,9	98,7	95,2	100,1	103,6	105,4	
M	95,5	96,1	95,0	101,1	103,2	105,2	
A	106,2	97,0	95,3	93,8	100,0	111,9	
M	101,2	96,4	95,6	99,5	100,5	110,4	
J	99,6	98,4	93,8	100,8	103,8	105,5	
J	101,9	98,2	97,0	99,0	101,8	109,1	
A	99,5	93,8	96,2	101,0	101,0	110,0	
S	99,5	98,0	97,1	101,2	100,8	109,8	
O	102,8	95,9	96,8	99,6	104,8	109,6	
N	97,1	94,9	98,9	102,0	105,8	108,4	
D	97,9	95,6	101,1	104,1	105,7	107,4	

* Revised

1/ Preliminary

Table 2 - Indices of the physical volume of manufacturing production according to manufacturing divisions and major groups

Base 2000 = 100

Manufacturing divisions and major groups	Weights	Actual indices						Seasonally adjusted indices			
		Year	2002			2003			January	December	January
			January	December	January 1/	January	December	January			
Food and food products	10,7	101,6	103,1	100,8	94,1	107,8	99,9	98,1			
Meat, fish, fruit etc.	2,8	113,1	103,7	115,1	110,3	108,8	113,3	115,7			
Dairy products	1,4	100,7	107,4	112,1	100,0	106,8	102,0	99,5			
Grain mill products	2,1	113,6	118,8	107,3	102,4	128,3	109,7	110,8			
Other food products	4,4	88,7	94,0	85,0		78,0	97,8	85,9			
Beverages	4,6	112,3	100,4	140,1	101,2	108,2	108,4	109,7			
Total textiles	2,9	111,6	77,4	70,1	86,0	107,2	108,7	119,1			
Textiles	1,7	110,4	71,9	70,3	89,1	101,1	113,7	125,8			
Other textile products	1,2	113,3	85,2	69,9	81,5	115,9	101,7	109,7			
Total wearing apparel	3,6	101,8	63,9	77,7		75,0	97,3	103,9			
Knitted, crocheted articles	0,6	111,3	69,7	87,4	75,0	105,6	125,5	115,3			
Wearing apparel	3,0	99,9	62,7	75,7	75,0	95,6	99,6	114,4			
Tanning and dressing of leather	0,4	96,9	86,8	71,9	83,6	98,5	92,1	93,3			
Footwear	0,9	82,0	60,2	68,2	55,6	92,5	89,0	85,1			
Wood and products of wood	1,9	110,6	79,7	85,6	95,5	100,1	118,0	119,6			
Sawmilling and planing of wood	0,8	108,3	79,0	80,5	93,6	102,4	115,0	120,5			
Products of wood	1,2	112,1	80,1	89,0	96,8	98,6	119,9	119,0			
Paper and paper products	5,3	103,1	99,2	86,5	102,2	99,4	94,0	101,9			
Total publishing and printing	4,1	94,8	81,0	80,3	86,4	93,3	90,7	99,5			
Publishing	1,5	91,1	75,1	87,7	79,1	82,1	89,9	86,8			
Printing, recorded media	2,6	96,8	84,3	76,1	90,5	99,6	91,1	106,6			
Coke and refined petroleum products	4,2	102,5	112,9	105,6	92,0	106,3	99,9	86,8			
Basic chemicals	4,5	119,3	118,9	109,3	110,6	121,2	114,3	112,9			
Other chemical products	6,2	111,5	100,6	95,0	97,0	115,6	111,4	110,9			
Rubber products	1,4	109,9	97,9	60,7	101,5	113,3	101,1	116,3			
Plastic products	3,1	124,3	97,4	97,0	97,5	124,2	121,3	124,6			
Glass and glass products	1,0	118,9	105,8	98,4	92,0	123,3	110,9	107,2			
Other non-metallic mineral products	3,5	104,5	82,6	89,4	83,3	99,7	119,8	100,8			
Basic iron and steel products	7,6	106,0	94,4	103,7	110,1	97,9	117,5	114,1			
Basic precious and non-ferrous metal products	3,2	100,8	94,7	88,2	102,0	97,2	90,2	104,7			
Fabricated metal products	7,0	119,6	89,9	95,2	95,8	108,9	119,1	116,0			
Structural metal products	2,4	116,8	92,0	97,3	83,0	112,7	112,2	101,6			
Other fabricated metal products	4,6	121,1	88,8	94,1	102,3	107,0	122,7	123,4			
Total machinery and equipment	5,8	121,3	93,8	104,5	93,5	114,0	119,7	115,0			
General purpose machinery	2,5	109,3	83,9	94,1	99,0	104,2	110,5	123,7			
Special purpose machinery	2,9	133,4	105,3	116,7	90,9	123,7	128,3	107,5			
Household appliances	0,4	109,4	71,5	81,5	77,2	105,8	115,1	114,0			
Electrical machinery, apparatus	3,4	103,7	83,6	85,4	82,2	101,7	105,9	100,6			
Radio, television and communication apparatus	1,0	73,7	78,0	73,3	71,7	78,8	83,6	71,3			
Professional equipment	0,5	120,8	103,7	104,6	107,2	120,8	127,2	125,2			
Motor vehicles; trailers; parts and accessories	8,0	108,8	83,5	69,6	92,3	103,7	104,4	114,1			
Motor vehicles	4,5	105,5	79,2	68,6	82,2	104,2	100,9	108,4			
Bodies for motor vehicles; trailers and semi-trailers	0,5	102,8	54,4	82,7	60,2	84,8	109,9	96,2			
Parts and accessories	3,0	114,9	95,4	68,8	113,4	106,4	108,7	126,1			
Other transport equipment	1,0	118,2	89,1	96,9	88,1	109,4	116,9	110,9			
Furniture	1,6	107,3	87,0	72,0	86,8	129,8	111,0	129,1			
Other manufacturing divisions	2,6	103,7	71,4	64,9	78,4	99,9	98,2	109,4			
Total	100,0	108,2	92,7	92,6	94,1	106,3	107,4	108,4			

* Revised

1/ Preliminary

Table 3 - Value of sales of the manufacturing industry: Total (R'000)

Month	1997	1998	1999	2000	2001	2002 *	2003
Actual values							
J	25 254 480	25 913 926	26 362 762	28 647 234	33 988 164	40 272 591	45 178 728 1/
F	29 866 793	29 901 544	30 551 283	34 961 840	39 187 078	46 539 563	
M	29 866 272	32 190 538	32 737 212	38 039 203	42 683 525	49 227 081	
A	30 438 604	29 758 879	30 447 208	32 651 220	37 828 090	49 699 795	
M	30 626 091	30 352 835	32 680 898	37 038 716	41 146 142	51 640 018	
J	30 575 542	31 723 893	33 054 424	38 710 074	42 743 527	50 375 218	
J	31 169 707	31 732 667	33 262 293	36 234 329	41 174 318	51 790 716	
A	31 400 042	30 810 619	33 586 437	38 992 758	41 164 534	53 396 224	
S	31 344 644	32 896 327	35 703 435	39 916 972	42 295 572	55 322 640	
O	35 902 602	34 970 472	37 386 689	41 775 594	48 601 886	58 797 197	
N	33 709 581	34 300 610	38 843 424	43 881 507	49 478 825	59 130 243	
D	28 128 922	29 016 347	32 992 528	37 256 576	42 207 610	47 571 867	
Year	368 283 280	373 568 657	397 608 593	448 106 023	502 499 271	613 763 153	
Seasonally adjusted values							
J	30 490 206	31 043 197	31 392 363	33 858 952	39 728 548	47 153 903	53 209 168
F	30 498 782	30 608 355	31 339 305	35 782 040	40 133 293	47 666 403	
M	28 709 784	30 953 306	31 492 331	36 380 762	40 824 613	47 038 441	
A	32 096 244	31 478 945	32 276 834	34 703 059	40 320 372	53 346 894	
M	30 698 764	30 366 100	32 667 944	36 859 225	40 829 232	51 176 512	
J	30 218 156	31 243 359	32 515 276	37 876 954	41 772 221	49 170 290	
J	31 167 014	31 854 639	33 513 450	36 624 925	41 730 977	52 606 210	
A	30 752 786	30 353 113	33 220 888	38 572 776	40 673 307	52 763 506	
S	30 170 283	31 784 644	34 649 344	38 764 572	41 202 477	53 993 665	
O	32 179 772	31 409 709	33 795 841	38 055 955	44 362 873	53 776 605	
N	30 317 583	30 801 358	34 858 476	39 504 515	44 402 717	53 140 200	
D	30 851 240	31 485 907	35 891 924	40 441 519	45 539 668	51 781 719	

* Revised

1/ Preliminary

Table 4 - Value of sales of manufactured products according to manufacturing divisions and major groups (R'000)

Manufacturing divisions and major groups	Year	Actual values			Seasonally adjusted values				
		January	December	January 1/	January	December	January		
		2002		2003		2002		2003	
		2002	2003	2003	2002	2003	2003		
Food and food products	82 710 062	5 965 117	7 372 610	6 402 527	6 488 837	7 243 354	7 048 568		
Meat, fish, fruit etc.	26 344 971	1 754 511	2 417 801	2 002 653	2 018 321	2 320 985	2 298 475		
Dairy products	9 221 497	678 396	884 728	772 727	717 505	820 523	810 089		
Grain mill products	24 465 379	1 754 606	2 168 179	2 017 289	1 925 668	2 169 619	2 210 644		
Other food products	22 678 215	1 777 604	1 901 902	1 609 858	1 827 343	1 932 227	1 729 360		
Beverages	26 831 889	1 856 833	3 271 575	2 011 113	1 980 844	2 212 141	2 170 876		
Total textiles	13 425 652	686 782	827 051	853 060	1 014 648	1 181 193	1 264 903		
Textiles	8 654 162	428 855	518 071	572 681	630 258	793 710	846 642		
Other textile products	4 771 490	257 927	308 980	280 379	384 390	387 483	418 261		
Total wearing apparel	12 415 359	566 348	930 351	753 995	956 269	1 152 753	1 276 529		
Knitted, crocheted articles	2 206 052	95 605	171 385	137 511	161 320	242 495	233 615		
Wearing apparel	10 209 307	470 743	758 966	616 484	794 949	910 258	1 042 914		
Tanning and dressing of leather	3 310 031	207 891	174 586	259 546	244 177	220 696	299 085		
Footwear	2 185 578	93 949	146 680	128 052	170 909	214 676	232 550		
Wood and products of wood	12 673 228	731 520	853 576	976 237	908 416	1 126 656	1 226 202		
Sawmilling and planing of wood	3 496 221	194 768	234 524	268 119	262 723	309 622	360 955		
Products of wood	9 177 007	536 752	619 052	708 118	645 693	817 034	865 247		
Paper and paper products	29 808 091	2 146 140	2 269 074	2 305 823	2 323 376	2 410 146	2 492 327		
Total publishing and printing	13 890 537	916 253	1 050 115	1 095 346	1 033 530	1 158 076	1 237 025		
Publishing	5 299 352	365 132	435 668	406 061	384 307	447 615	428 051		
Printing, recorded media	8 591 185	551 121	614 447	689 285	649 223	710 461	808 974		
Coke and refined petroleum products	45 408 316	3 252 638	3 489 165	3 330 582	3 404 370	3 584 838	3 476 170		
Basic chemicals	31 234 205	2 390 644	2 328 191	2 445 393	2 460 084	2 513 433	2 499 906		
Other chemical products	35 476 240	2 427 427	2 604 312	2 628 775	2 801 003	2 883 780	3 029 451		
Rubber products	6 678 589	379 912	469 785	469 960	506 955	609 505	627 947		
Plastic products	15 130 141	937 223	1 109 540	1 048 937	1 161 241	1 322 171	1 297 067		
Glass and glass products	3 291 669	204 164	252 617	222 794	263 122	283 680	286 340		
Other non-metallic mineral products	14 499 041	872 555	1 048 170	1 037 820	1 089 780	1 380 108	1 303 860		
Basic iron and steel products	48 571 369	3 306 618	3 588 724	4 129 512	3 643 136	3 652 418	4 526 045		
Basic precious and non-ferrous metal products	21 725 348	1 511 031	2 145 931	1 439 688	1 862 457	1 839 930	1 769 542		
Fabricated metal products	34 240 844	2 142 056	2 444 824	2 397 744	2 642 466	3 132 848	2 979 138		
Structural metal products	10 589 122	654 178	750 979	648 995	884 864	959 766	879 650		
Other fabricated metal product	23 651 722	1 487 878	1 693 845	1 748 749	1 757 602	2 173 082	2 099 488		
Total machinery and equipment	26 913 411	1 450 468	2 342 665	1 596 452	1 977 084	2 376 282	2 198 254		
General purpose machinery	11 624 865	678 229	1 052 405	772 847	919 678	1 033 092	1 051 855		
Special purpose machinery	12 556 524	641 848	1 101 654	669 194	843 286	1 095 579	890 958		
Household appliances	2 732 022	130 391	188 606	154 411	214 121	247 611	255 441		
Electrical machinery, apparatus	16 926 563	975 951	1 195 855	1 140 289	1 254 658	1 483 609	1 470 480		
Radio, television and communication apparatus	4 499 395	285 542	403 649	355 845	323 282	445 049	400 236		
Professional equipment	2 028 504	146 452	149 121	157 620	160 682	173 442	171 729		
Motor vehicles; trailers; parts and accessories	80 378 770	4 954 544	4 939 500	5 836 947	6 184 624	6 696 685	7 276 367		
Motor vehicles	56 373 234	3 442 951	3 529 803	4 012 310	4 414 811	4 584 857	5 133 426		
Bodies for motor vehicles; trailers and semi-trailers	2 115 216	96 119	124 739	145 456	141 573	166 856	212 234		
Parts and accessories	21 890 320	1 415 474	1 284 958	1 679 181	1 628 239	1 944 972	1 930 706		
Other transport equipment	4 370 041	255 890	308 180	280 049	327 747	401 775	358 637		
Furniture	7 394 109	387 889	455 779	469 244	593 240	622 650	713 901		
Other manufacturing divisions	17 746 171	1 220 754	1 400 241	1 405 378	1 376 965	1 459 825	1 576 032		
Total	613 763 153	40 272 591	47 571 867	45 178 728	47 153 903	51 781 719	53 209 168		

* Revised

1/ Preliminary

Table 5 - Value of unfilled orders according to selected manufacturing subgroups (R'000)

Selected manufacturing subgroups	Actual values			Seasonally adjusted values		
	January	December	January 1/	January	December	January
	2002	2003		2002	2003	
Spinning, weaving and finishing of textiles	229 747	311 628	376 911	234 372	365 197	383 566
Tents, tarpaulins, sails and other canvas goods and automotive textile goods	36 885	40 714	59 952	33 011	39 781	53 703
Other textile articles	86 053	79 058	99 188	82 075	88 050	93 315
Knitted and crotcheted fabrics and articles	109 435	133 443	140 516	112 574	141 326	144 360
Wearing apparel	669 891	736 995	760 956	710 872	820 517	808 592
Sawmilling and preserving of timber	16 903	22 825	22 716	17 100	23 379	23 166
Veneer sheets, plywood, laminboard, etc.	21 390	31 846	37 233	22 122	34 174	38 603
Builders' carpentry and joinery	45 832	36 442	38 395	45 058	36 391	37 710
Pulp, paper and paperboard	342 909	227 142	319 295	347 424	255 750	316 712
Corrugated paper and paperboard and containers	325 926	354 516	332 107	329 643	352 666	337 335
Paints, varnishes and coatings	29 283	21 210	25 422	26 888	22 097	22 875
Basic iron and steel products	3 472 237	4 695 368	4 747 652	3 549 890	4 880 819	4 877 816
Steel pipe and tube mills	212 391	412 543	397 751	226 829	429 340	428 528
Basic precious and non-ferrous metal products	1 615 658	1 836 040	1 799 801	1 749 919	1 994 295	1 949 011
Metal structures, parts	1 076 273	1 392 130	1 435 952	1 140 120	1 505 985	1 524 862
Cutlery, hand tools and general hardware	42 651	29 404	26 394	35 831	23 662	21 812
Metal containers, e.g. cans and tins	97 705	64 516	65 645	92 647	64 716	62 568
Cables, wire products, springs	45 296	61 636	71 416	48 915	79 194	77 115
Metal fasteners	80 128	84 475	92 243	73 837	85 904	85 880
All other metal products	716 992	849 925	905 788	733 415	842 263	917 823
Domestic appliances	28 135	30 411	26 667	29 412	28 405	28 002
Electric motors, generators and transformers	386 287	561 329	552 983	412 823	578 771	593 111
Insulated wire and cables	299 776	374 692	367 776	297 099	388 802	367 941
Accumulators, primary cells and primary batteries	9 373	5 888	6 219	9 752	6 140	6 484
Television, radio and communication apparatus	1 823 625	1 855 525	1 792 531	2 209 113	2 166 493	2 180 182
Motor vehicles	2 603 433	2 647 753	3 104 891	2 536 438	2 614 588	3 025 861
Parts and accessories for motor vehicles	339 697	370 857	361 068	336 203	375 084	356 805
Furniture	212 557	261 905	261 197	241 859	311 841	296 921

* Revised

1/ Preliminary

Additional information

Explanatory notes

- Introduction**
- 1 Statistics South Africa (Stats SA) conducts a monthly sample survey of the manufacturing industry covering private manufacturing establishments (branches), public corporations and government establishments. This statistical release contains historical information regarding indices of the physical volume of manufacturing production, the total value of sales of manufactured products and unfilled orders, according to manufacturing divisions and major groups on a monthly basis.
 - 2 In accordance with international practice, the indices have to be re-based every five years to a new base year. The indices in this statistical release have been calculated on the basis of 2000=100. Both actual and seasonally adjusted figures are presented.
 - 3 In order to improve timeliness, some information for the current month (January 2003) have been estimated due to late response. These estimates will be revised in the future statistical release(s) as soon as more up-to-date information is available.
- Scope of the survey**
- 4 This survey covers manufacturing establishments conducting activities regarding -
 - the manufacturing, processing, making or packing of products;
 - the slaughtering of animals, including poultry; and
 - installation, assembly, completion, repair and related work.
- Classification**
- 5 The 1993 edition of the Standard Industrial Classification of all Economic Activities (SIC), Fifth Edition, Report No. 09-90-02, was used to classify the statistical units in the survey. The SIC is based on the 1990 International Standard Industrial Classification of all Economic Activities (ISIC) with suitable adaptations for local conditions. Statistics in this publication are presented at SIC division and major group level. Each statistical unit is classified to an industry which reflects the predominant activity of the establishment (branch).
- Statistical unit**
- 6 The basic statistical unit for the collection of information is the manufacturing establishment. An establishment is the smallest economic unit that functions as a separate entity. Each statistical unit is classified to an industry (cf. paragraph 5).
- Weighting**
- 7 A weight is calculated for every major group according to the value added of the relevant major group compared with the value added of the total manufacturing industry based on the 1991, 1993 and 1996 Censuses of Manufacturing. Weights between census years are fixed and are based on the results of the most recent Census of Manufacturing. The production indices of all the major groups are multiplied by the applicable weights and aggregated to reflect the total physical volume of manufacturing production index (cf. Table E for the fixed weights which were used for the three periods 1990 to 1992, 1993 to 1995 and 1996 to 2002.).
- Re-basing**
- 8 In accordance with international practice, the indices have to be re-based every five years to a new base year. The indices in this statistical release have been calculated on the basis of 2000=100. The first results on this basis were published in December 2002 statistical release. Both actual and seasonally adjusted figures are presented.
- Survey methodology and design**
- 9 The calculation of the monthly production indices is based on the value of products and articles manufactured, after the effect of price changes has been eliminated through deflation by using appropriate sub-indices of the Production Price Index (PPI). The value of the manufactured products is obtained from a monthly sample survey of manufacturing establishments in the private and public sectors.
 - 10 The survey is collected by mail each month from a sample of approximately 2 400 manufacturing establishments.

11 The above-mentioned measurement method in paragraph 8 was followed in 39 of the 45 major groups. On account of certain considerations more appropriate indicators were used for the six remaining major groups namely grain mill products, tobacco products, coke and refined petroleum products, basic iron and steel products, basic precious and non-ferrous metal products and bodies for motor vehicles. The volume indices for the major groups grain mill products, tobacco products, coke and refined petroleum products, basic iron and steel products, basic precious and non-ferrous metal products and bodies for motor vehicles are calculated on the basis of physical quantities. This method based on physical quantities is applied by other international statistical agencies for petroleum products due to the results being more satisfactory (mainly due to these commodities being relatively homogeneous and the nature of the industry). For publication purposes, the major group tobacco products is included under 'Other' manufacturing industries.

Sample design

12 The 1988 Census of Manufacturing provided the sampling frame for the selection of the monthly sample regarding manufacturing production and sales which was implemented as from January 1995. A stratified systematic sample design based on gross output was used. All statistical units were stratified by type of economic activity according to the Standard Industrial Classification of all Economic Activities (SIC) and measure of size, where measure of size was the total manufacturing gross output of the establishment. All large establishments (size category one cases) are completely enumerated. A sample was drawn from medium and small size establishments by systematically selecting establishments with equal probability.

Benchmarking

13 The index of physical volume of manufacturing production as well as the total value of sales of manufactured products should provide an accurate reflection of the trend of activities of the relevant industry. The level of activities as measured by the monthly Manufacturing Production and Sales sample survey is based on information received from a sample of manufacturing establishments which is weighted according to the original sample design in order to represent the population of manufacturing establishments. It is necessary to adjust the level of activities as measured by the monthly sample survey to the level of activities as measured periodically by the Census of Manufacturing. This procedure, whereby the latest results of an economic census are used to compile more accurate level estimates for a certain year, is known as benchmarking. The results, due to benchmarking, were published in statistical releases P3041.3 (entitled Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 1995=100, January 1990 to September 1999) on 21 December 1999 and P3041.4 (entitled Manufacturing statistics: Value of sales, January 1990 to September 1999) on 8 December 1999.

14 The results of the 1991, 1993 and 1996 Censuses of Manufacturing and information obtained from the former TBVC states were used to adjust the level of the manufacturing production indices and the value of sales of manufactured products. The total value of output of the manufacturing major groups (which represents the total value of work done by the establishments in these major groups) as obtained from the manufacturing censuses, was deflated with appropriate sub-indices of the Production Price Index in order to calculate the real output. The latter served as benchmarks to verify or adjust the level of the monthly physical volume of manufacturing production indices. The level adjustments were done on the volume indices for January of the relevant census year (e.g. the 1996 census year covers the period 1 July 1995 to 30 June 1996 and therefore the benchmarking was done using the index of January 1996 as reference point). The motor vehicle major group is the only exception where the financial year for most of the establishments covered the period 1 January 1995 to 31 December 1995. The benchmarking was done using the physical volume of manufacturing production index for July 1995 as reference point.

Production index for the

15 In order to calculate a production index for the total manufacturing industry, the

total industry	manufacturing	production indices for the major groups are combined as follows:
		A weight is calculated for every major group according to the value added of the relevant major group compared with the value added of the total manufacturing industry based on the 1991, 1993 and 1996 Censuses of Manufacturing. Weights between census years are fixed and are based on the results of the most recent Census of Manufacturing. The production indices of all the major groups are multiplied by the applicable weights and aggregated to reflect the total physical volume of manufacturing production index.
Seasonal adjustment	16	Seasonally adjusted estimates of all major groups are generated each month, using the X-11 Seasonal Adjustment Program developed by US Bureau of the Census Economic Research and Analyses Division, 1968. Seasonal adjustment is a means of removing the estimated effects of normal seasonal variation from the series so that the effects of other influences on the series can be more clearly recognised. Seasonal adjustment does not aim to remove irregular or non-seasonal influences which may be present in any particular month. Influences that are volatile or unsystematic can still make it difficult to interpret the movement of the series even after adjustment for seasonal variations. This means the month-to-month movements of seasonally adjusted estimates may not be reliable indicators of trend behaviour.
Trend cycle	17	The trend is the long-term pattern or movement of a time series. The X-11 Seasonal Adjustment Program is used for smoothing seasonally adjusted estimates.
Reliability of estimates	18	Estimates are subject to sampling and non-sampling errors. Figures for the latest month are preliminary.
Historical data	19	More comprehensive detail on the method of calculation and historical data in respect of the production indices according to manufacturing major groups for the period January 1990 to November 2002 is available in statistical release P3041.3 (entitled Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 2000=100, January 1990 to November 2002.
	20	More comprehensive detail on the method of calculation and historical data in respect of the value of sales for the period January 1990 to September 1999 was published on 8 December 1999 in statistical release P3041.4.
Related publications	21	Users may also wish to refer to the following publications which are available from Stats SA - <ul style="list-style-type: none"> • P3041.3 - Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 2000=100, January 1990 to November 2002. • P3041.4 - Manufacturing statistics: Value of sales (divisions, major groups and subgroups), January 1990 to September 1999. • Bulletin of Statistics. • SA Statistics. • P0441 - Gross Domestic Product.

- Unpublished statistics** 22 In some cases Stats SA can also make available statistics which are not published. The statistics can be made available as a computer printout, diskette or CD. Generally a charge is made for providing unpublished statistics.
- Rounding-off of figures** 23 The figures in the tables have, where necessary, been rounded off to the nearest final digit shown. There may, therefore, be slight discrepancies between the sums of the constituent items and the totals shown.
- Pre-release policy** 24 Stats SA has adopted the confidential pre-release policy in respect of selected economic indicators and specific government departments. The policy accords with practice among leading statistical agencies. The statistical integrity of the indices and strict observance of the release time has been assured by the following procedure:
in respect of this statistical release, an official representative from the Office of the President, the Office of the Deputy President, the Department of Trade and Industry, the Department of Finance and the South African Reserve Bank receive a copy of the release on a strictly confidential basis two hours in advance of the public issue.
- 25 Stats SA's pre-release policy may be inspected at its Website, www.statssa.gov.za.

Symbols and abbreviations

GDP	Gross Domestic Product
ISIC	International Standard Classification of all Economic Activities
PPI	Production Price Index
SIC	Standard Industrial Classification of all Economic Activities
SNA	System of National Accounts
Stats SA	Statistics South Africa
TBVC states	Relates to the former Transkei, Bophuthatswana, Venda and Ciskei states
1/	Preliminary figures
*	Revised figures

Technical notes

Response rates The response rate for the survey on manufacturing production and sales for January 2003 is 79,6%.
The response rates by manufacturing major division are tabulated in table D.

Table D - Response rates for January 2003

Manufacturing major divisions	Sample No. of establishments	% response
Food and food products	308	72,9
Beverages	62	91,9
Textile	105	91,5
Total wearing apparel	126	80,2
Tanning and dressing of leather	24	87,5
Footwear	21	85,7
Wood and products of wood	118	75,4
Paper and paper products	92	75,0
Total publishing and printing	86	68,6
Coke and refined petroleum products	28	82,1
Basic chemicals	73	85,9
Other chemical products	107	80,4
Rubber products	21	81,0
Plastic products	92	78,3
Glass and glass products	12	100,0
Other non-metallic mineral products	129	80,6
Basic iron and steel products	40	92,5
Basic precious and non-ferrous metal products	22	81,8
Fabricated metal products	224	78,6
Total machinery and equipment	182	76,4
Electrical machinery, apparatus	80	80,0
Radio, television and communication apparatus	22	68,2
Professional equipment	25	64,0
Motor vehicles; trailers; parts and accessories	130	73,8
Other transport equipment	36	83,3
Furniture	70	64,3
Other manufacturing industries	79	67,1
Total	2 314	79,6

Glossary

Enterprise	An enterprise (firm) is a legal entity consisting of one or more establishments. The establishments need not necessarily all be manufacturing establishments, but some may be classifiable as other industries of the economy, such as wholesale trade, retail trade, motor trade and construction.
Establishment	An establishment is defined as an enterprise (firm), or part of an enterprise, that is situated at a single location and in which only a single (non-ancillary) productive activity is carried out or in which the principal productive activity accounts for most of the value added.
Index of physical volume of manufacturing production	The index of physical volume of manufacturing production or a production index is a statistical measure of the change in the volume of production. The production index of a major group is the ratio between the volume of production of a major group in a given period and the volume of production of the same major group in the base period. The base period is 2000. The production in the base period is set at 100.
Industry	An industry consists of a group of establishments engaged in the same or similar kinds of economic activity. Industries are defined in the System of National Accounts (SNA) in the same way as in the Standard Industrial Classification of all Economic Activities, Fifth Edition, Report No. 09-90-02 of January 1993 (SIC).
Intercensal period	Intercensal period is the period between January of the one census year and January of the next census year.
Intermediate consumption	Intermediate consumption includes - <ul style="list-style-type: none">• purchases and transfers-in of materials;• payments to other establishments for work done;• other direct factory costs;• rent and leasing paid;• head office charges;• royalties, copyright, trade names and patent rights paid;• advertising;• insurance premiums;• services; and• secretarial and administrative fees.
Output	Output is the aggregate value of goods manufactured and work done. Output includes - <ul style="list-style-type: none">• sales and transfers-out of own manufactures, factory waste and stocks of factored goods;• repairs;• installation, erection and assembly;• sundry trading revenue;• sales of factored goods minus purchases of factored goods;• rent and leasing received;• royalties received;• difference between opening value and closing value of work in progress, stocks of own manufactures and stocks of factored goods;• head office charges; and• other revenue. Output excludes – <ul style="list-style-type: none">• excise and customs duty paid.

Value added	Value added is the value of output less intermediate consumption. It represents the value added to the cost of the materials used in the process of production.
Sales	Sales are the total value of sales and transfers-out of all own manufactured products/articles and the amounts received for installation, erection or assembly or other services rendered.
Weight	The weight of a major group is the ratio of the value added of a major group (i.e. output of a major group minus intermediate consumption) to the total value added of the manufacturing industry. The weight of a major group reflects the importance of the major group in the total manufacturing industry. The weights change over time due to quality changes, changes in relative prices, and changes in preference, etc. New weights need to be calculated from time to time.

Table E - Weights and the average indices of physical volume of manufacturing production according to manufacturing divisions and major groups before re-basing

Manufacturing divisions and major groups	Weights			Average indices for the year 2000 before re-basing
	1990-1992	1993-1995	1996-2002	
Food and food products	10,97	12,33	10,71	99,1
Meat, fish, fruit etc.	2,93	3,20	2,83	111,7
Dairy products	1,40	1,68	1,36	89,4
Grain mill products	2,13	2,80	2,10	91,3
Other food products	4,52	4,65	4,41	97,6
Beverages	4,83	5,26	4,60	92,6
Total textiles	3,33	3,33	2,88	93,5
Textiles	2,09	2,03	1,69	84,6
Other textile products	1,24	1,30	1,19	106,2
Total wearing apparel	3,94	3,81	3,60	82,8
Knitted, crocheted articles	0,67	0,64	0,60	73,9
Wearing apparel	3,27	3,17	3,00	84,5
Tanning and dressing of leather	0,41	0,34	0,41	125,2
Footwear	1,15	1,10	0,93	65,6
Wood and products of wood	1,96	1,81	1,95	119,3
Sawmilling and planing of wood	0,98	0,82	0,77	104,8
Products of wood	0,97	0,99	1,17	128,8
Paper and paper products	4,58	4,73	5,32	105,3
Total publishing and printing	3,57	3,95	4,11	87,8
Publishing	1,15	1,41	1,48	97,8
Printing, recorded media	2,42	2,54	2,63	82,3
Coke and refined petroleum products	6,45	6,41	4,17	104,5
Basic chemicals	4,57	3,19	4,47	132,0
Other chemical products	5,97	6,61	6,17	101,8
Rubber products	1,59	1,52	1,36	98,7
Plastic products	2,58	2,85	3,08	89,7
Glass and glass products	1,15	0,99	1,00	88,5
Other non-metallic mineral products	3,67	3,58	3,50	97,6
Basic iron and steel products	6,90	6,49	7,56	116,3
Basic precious and non-ferrous metal products	2,15	2,19	3,25	175,6
Fabricated metal products	7,53	6,84	7,03	103,4
Structural metal products	2,84	2,04	2,39	90,5
Other fabricated metal products	4,69	4,80	4,65	110,0
Total machinery and equipment	6,31	6,06	5,78	99,7
General purpose machinery	2,58	2,59	2,50	110,6
Special purpose machinery	3,14	2,82	2,89	87,8
Household appliances	0,60	0,65	0,39	117,0
Electrical machinery, apparatus	3,36	3,49	3,45	102,1
Electric motors	0,31	0,37	0,57	106,9
Electricity distribution	0,32	0,46	0,52	135,2
Insulated wire and cables	0,71	0,79	0,77	91,1
Accumulators	0,43	0,47	0,33	82,3
Electric lamps	0,30	0,25	0,22	90,5
Other electrical equipment	1,28	1,15	1,04	99,9
Radio, television and communication apparatus	1,59	1,20	0,97	123,8
Professional equipment	0,41	0,54	0,51	80,9
Motor vehicles; trailers; parts and accessories	6,40	6,77	8,05	119,6
Motor vehicles	3,30	3,62	4,50	114,9
Bodies for motor vehicles; trailers and semi-trailers	0,61	0,52	0,55	63,3
Parts and accessories	2,49	2,62	3,00	137,0
Other transport equipment	1,16	1,10	1,01	118,3
Furniture	1,69	1,62	1,56	98,9
Other manufacturing divisions	1,79	1,88	2,58	111,5
TOTAL	100,0	100,0	100,0	106,0

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