

Manufacturing: Production and sales

December 2003

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Key figures as at the end of December 2003

Actual estimates

	December 2003	% change between December 2002 and December 2003	% change between November 2003 and December 2003	% change between October 2002 to December 2002 and October 2003 to December 2003	% change between January 2002 to December 2002 and January 2003 to December 2003
Physical volume of manufacturing production index (2000=100)	91,3	-1,4	-20,8	-3,0	-2,3
Total value of sales of manufactured products (R million)	47 872,1	+1,1	-13,8	-3,5	0,0

Seasonally adjusted estimates

	December 2003	% change between December 2002 and December 2003	% change between November 2003 and December 2003	% change between July 2003 to September 2003 and October 2003 to December 2003
Physical volume of manufacturing production index (2000=100)	104,9	-2,0	+1,2	-0,8
Total value of sales of manufactured products (R million)	51 657,2	+0,9	+3,5	-1,3

Key findings for the year 2003

Manufacturing production decreases

Manufacturing production for the year 2003 reflected a decrease of 2,3% compared with the year 2002. Lower production was reported by 19 of the 27 manufacturing divisions.

The major contributor to the annual decrease of 2,3% was the basic chemicals division (contributing -0,5 of percentage points to total manufacturing production), followed by the textiles (-0,4 of a percentage point), other chemical products (-0,3 of a percentage point), fabricated metal products (-0,3 of a percentage point) and paper and paper products (-0,2 of a percentage point) divisions. However, these decreases were partially counteracted by an increase reported by the basic iron and steel products division (contributing +0,2 of a percentage point).

Sales of manufactured products remain unchanged

The total value of sales of manufactured products at current prices for the year 2003 compared with the year 2002 remained unchanged. Increases in manufacturing sales were reported by 10 of the 27 manufacturing divisions.

The largest increases were reported by the beverage (+11,5% or +R3 094 million), publishing and printing (+9,4% or +R1 304 million), basic iron and steel products (+7,8 % or +R3 781 million), machinery and equipment (+6,1% or +R1 655 million) and fabricated metal products (+3,0% or +R1 017 million) divisions. However, these increases were counteracted by large decreases reported by the coke and refined petroleum products (-18,1% or -R8 215 million), basic precious and non-ferrous metal products (-12,6% or -R2 743 million), basic chemicals (-5,7% or -R1 796 million) and motor vehicles, trailers and parts and accessories (-2,4% or -R1 891 million) divisions.

Key findings as at the end of December 2003

Manufacturing production decreases

Manufacturing production for the fourth quarter of 2003 reflected a decrease of 0,8%, after seasonal adjustment, compared with the third quarter of 2003. Lower production was reported by 14 of the 27 manufacturing divisions.

The major contributor to the decrease of 0,8% in the total manufacturing production, after seasonal adjustment, was the food and food products (contributing -0,7 of a percentage point to total manufacturing production), motor vehicles, trailers and parts and accessories (contributing -0,6 of a percentage point), machinery and equipment (contributing -0,3 of a percentage point) and 'other' manufacturing industries (contributing -0,3 of a percentage point) divisions. However, these decreases were partially counteracted by a large increase reported by the basic iron and steel products (contributing +0,8 of a percentage point) division (see table A).

Figure 1 – Index of the physical volume of manufacturing production

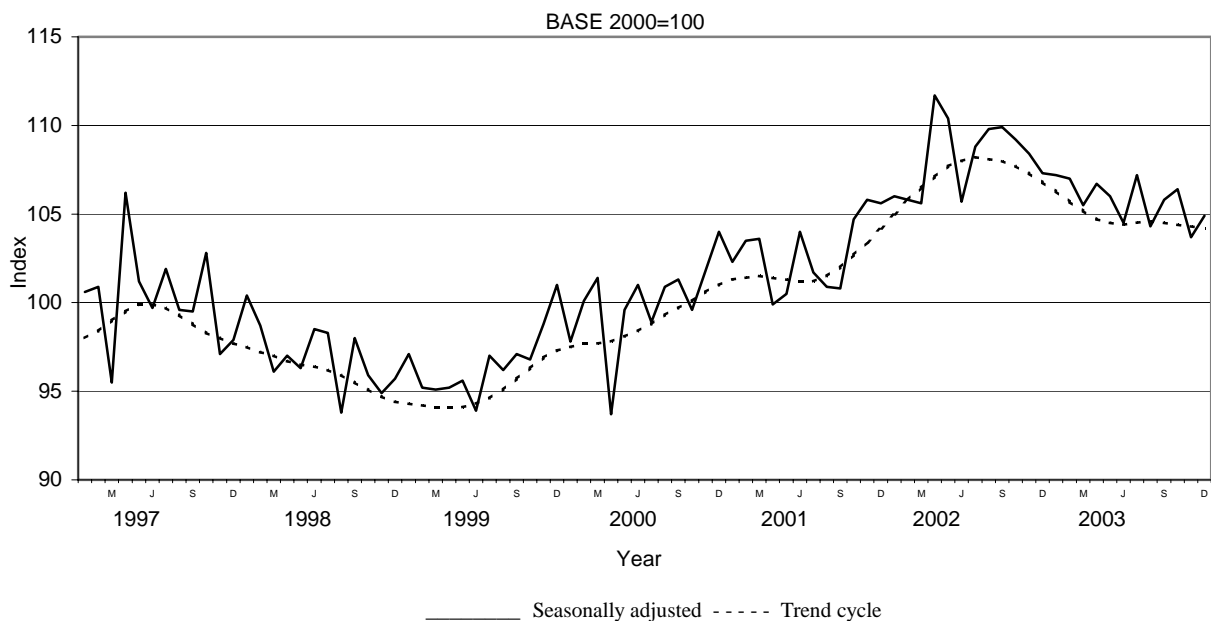


Table A - Contribution of the production by the different manufacturing divisions to the total manufacturing production (Base 2000=100)

Manufacturing divisions	Percentage contribution to the total manufacturing production using the weights according to 1996 Census of Manufacturing	Average seasonally adjusted production index for the three months October 2003 to December 2003	Quarterly percentage change of October 2003 to December 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	98,7	-6,2	-0,7
Beverages	4,6	115,9	-0,7	-0,1
Total textiles	2,9	89,6	-2,5	-0,1
Total wearing apparel	3,6	97,9	-0,1	-0,0
Tanning and dressing of leather	0,4	94,4	-3,2	-0,0
Footwear	0,9	75,3	-4,9	-0,1
Wood and products of wood	1,9	110,1	+4,7	+0,1
Paper and paper products	5,3	101,9	+3,9	+0,2
Total publishing and printing	4,1	104,5	+4,7	+0,2
Coke and refined petroleum products	4,2	102,4	-3,4	-0,1
Basic chemicals	4,5	103,0	-1,4	-0,1
Other chemical products	6,2	107,4	+1,1	+0,1
Rubber products	1,4	94,7	-3,3	-0,1
Plastic products	3,1	123,1	+3,2	+0,1
Glass and glass products	1,0	120,3	+0,1	+0,0
Other non-metallic mineral products	3,5	101,3	+6,0	+0,2
Basic iron and steel products	7,6	112,6	+10,6	+0,8
Basic precious and non-ferrous metal products	3,2	102,4	+2,1	+0,1
Fabricated metal products	7,0	110,1	-1,9	-0,1
Total machinery and equipment	5,8	117,1	-5,5	-0,3
Electrical machinery, apparatus	3,4	102,3	-3,4	-0,1
Radio, television and communication apparatus	1,0	91,2	+15,4	+0,1
Professional equipment	0,5	125,3	+8,7	+0,0
Motor vehicles; trailers; parts and accessories	8,0	105,1	-7,7	-0,6
Other transport equipment	1,0	103,1	+0,3	+0,0
Furniture	1,6	108,1	+0,4	+0,0
Other manufacturing divisions	2,6	82,3	-10,5	-0,3
Total	100,0	105,0	-0,8	-0,8

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.

Sales of manufactured products decrease

The total value of sales of manufactured products at current prices for the fourth quarter of 2003 reflected a decrease of 1,3% (-R1 940 million), after seasonal adjustment, compared with the third quarter of 2003. Lower manufacturing sales were reported by 12 of the 27 manufacturing divisions during this period (see table B). Furthermore, the actual value of sales of manufactured products at current prices for fourth quarter 2003 reflected a decrease of 3,5% compared with the fourth quarter of 2002. Lower manufacturing sales were reported by 17 of the 27 manufacturing divisions during this period (see table C).

The increase of 1,3% after seasonal adjustment in the total value of sales of manufactured products at current prices for the fourth quarter of 2003 compared with the third quarter of 2003 was mainly due to large decreases reported by the basic iron and steel products (-7,9% or -R1 051 million), basic precious and non-ferrous metal products (-7,5% or -R366 million), motor vehicles, trailers and parts and accessories (-3,7% or -R746 million) and food and food products (-2,5% or -R528 million) divisions (see table B).

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

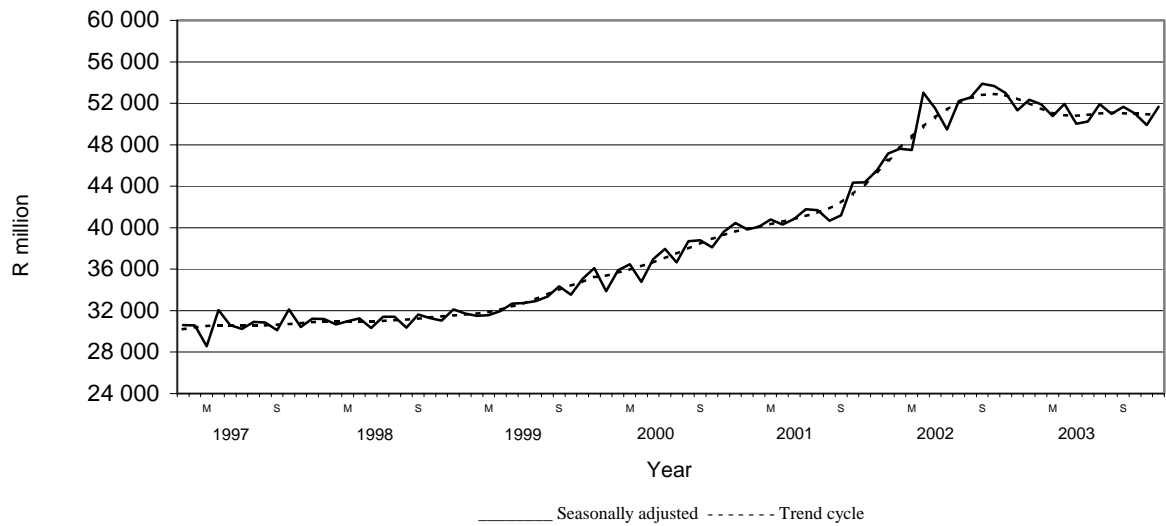
Manufacturing divisions	Seasonally adjusted sales October 2003 to December 2003	Percentage change between July 2003 to September 2003 and October 2003 to December 2003	Difference in seasonally adjusted sales of manufacturing divisions between July 2003 to September 2003 and October 2003 to December 2003
	R '000		R '000
Food and food products	20 392 647	-2,5	-527 631
Beverages	7 839 344	+3,4	254 407
Total textiles	2 949 819	-2,5	-75 925
Total wearing apparel	3 268 313	+0,3	9 789
Tanning and dressing of leather	713 545	-11,0	-88 509
Footwear	559 906	+5,7	30 254
Wood and products of wood	3 294 714	-0,8	-25 197
Paper and paper products	7 575 737	+3,0	219 749
Total publishing and printing	3 942 249	+1,7	65 995
Coke and refined petroleum products	8 720 196	-3,2	-287 698
Basic chemicals	7 222 497	-3,2	-239 875
Other chemical products	9 190 112	+0,3	23 750
Rubber products	1 721 236	+2,8	46 321
Plastic products	4 101 372	+4,0	156 318
Glass and glass products	828 585	-6,6	-58 715
Other non-metallic mineral products	3 984 815	+7,8	289 310
Basic iron and steel products	12 292 341	-7,9	-1 050 534
Basic precious and non-ferrous metal products	4 527 874	-7,5	-366 075
Fabricated metal products	8 710 936	-1,5	-131 480
Total machinery and equipment	7 404 548	+1,6	118 320
Electrical machinery, apparatus	4 320 572	-1,8	-81 104
Radio, television and communication apparatus	1 466 618	+23,4	278 109
Professional equipment	547 547	+9,1	45 590
Motor vehicles; trailers; parts and accessories	19 463 705	-3,7	-745 905
Other transport equipment	992 243	+2,6	25 345
Furniture	1 910 051	+1,7	31 811
Other manufacturing industries	4 634 384	+3,2	143 764
Total	152 575 907	-1,3	-1 939 817

The major contributors to the decrease of 3,5% in the actual value of sales of manufactured products at current prices for the fourth quarter of 2003 compared with the fourth quarter of 2002 were the coke and refined petroleum products (-1,7 percentage points or -R2 774 million), food and food products (-0,7 of a percentage point or -R1 190 million), basic precious and non-ferrous metal products (-0,7 of a percentage point or -R1 123 million) and motor vehicles, trailers, parts and accessories (-0,5 of a percentage point or -R865 million) divisions. However, these decreases were partially counteracted by an increase reported by the beverage division (+0,6 of a percentage point or +R980 million) (see table C).

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

Manufacturing divisions	Percentage contribution to total value of sales of manufactured products October 2002 to December 2002	Percentage change between October 2002 to December 2002 and October 2003 to December 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 October 2002 to December 2002 and October 2003 to December 2003
				R'000
Food and food products	13,9	-5,2	-0,7	-1 189 723
Beverages	5,1	11,6	0,6	980 483
Total textiles	2,1	-14,6	-0,3	-502 654
Total wearing apparel	2,2	-1,6	-0,0	-56 199
Tanning and dressing of leather	0,5	-12,3	-0,1	-103 045
Footwear	0,4	-6,9	-0,0	-44 148
Wood and products of wood	2,1	-2,5	-0,1	-87 415
Paper and paper products	4,5	2,7	0,1	198 291
Total publishing and printing	2,4	8,9	0,2	346 330
Coke and refined petroleum products	7,1	-23,5	-1,7	-2 773 668
Basic chemicals	5,0	-7,0	-0,4	-583 033
Other chemical products	5,8	0,8	0,0	76 319
Rubber products	1,1	-4,6	-0,1	-81 178
Plastic products	2,5	2,6	0,1	108 799
Glass and glass products	0,6	-1,1	-0,0	-10 551
Other non-metallic mineral products	2,3	4,3	0,1	164 065
Basic iron and steel products	7,8	-1,8	-0,1	-228 839
Basic precious and non-ferrous metal products	3,7	-18,5	-0,7	-1 123 465
Fabricated metal products	5,6	-4,1	-0,2	-378 604
Total machinery and equipment	4,4	4,3	0,2	311 981
Electrical machinery, apparatus	2,7	-2,9	-0,1	-130 217
Radio, television and communication apparatus	0,7	15,1	0,1	183 007
Professional equipment	0,3	2,1	0,0	11 118
Motor vehicles; trailers; parts and accessories	12,3	-4,3	-0,5	-865 228
Other transport equipment	0,7	-11,3	-0,1	-124 094
Furniture	1,3	-1,6	-0,0	-34 288
Other manufacturing divisions	2,9	2,3	0,1	110 331
Total	100,0	-3,5	-3,5	-5 825 625

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 value of sales of manufactured products at current prices

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Forthcoming issues	Issue	Expected release date
	January 2004	9 March 2004
	February 2004	6 April 2004
	March 2004	11 May 2004
	April 2004	8 June 2004
	May 2004	6 July 2004
	June 2004	10 August 2004
Purpose of the survey	<p>The monthly Manufacturing Production and Sales survey is a 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.</p>	
Response rates	<p>The response rate for the survey on manufacturing production and sales for November 2003 was 75,1% and for December 2003 it was 70,1 %.</p>	

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	93,6
F	99,1	97,2	93,7	98,7	102,0	104,5	105,5
M	98,4	98,9	97,9	104,8	107,3	109,6	109,4
A	100,9	92,3	90,7	89,0	94,6	105,3	100,7
M	101,7	96,8	95,9	99,9	100,8	110,7	106,0
J	100,9	99,6	94,8	102,1	105,0	106,7	105,6
J	103,9	99,9	98,3	100,1	102,7	109,9	107,9
A	101,9	95,6	97,7	102,5	102,6	111,9	106,3
S	104,3	102,3	100,9	104,8	104,0	113,1	108,8
O	115,2	106,9	107,3	109,8	115,5	120,6	117,7*
N	107,9	105,5	109,9	113,6	118,1	121,1	115,3
D	83,5	81,8	86,3	89,5	91,3	92,6	91,3 1/
Year	100,3	96,9	96,4	100,0	102,8	108,2	105,7
Seasonally adjusted indices							
J	100,6	100,4	97,1	97,8	102,3	106,0	107,3
F	100,9	98,7	95,2	100,1	103,5	105,8	107,0
M	95,5	96,1	95,1	101,4	103,6	105,6	105,5
A	106,2	97,0	95,2	93,7	99,9	111,8	106,7
M	101,2	96,4	95,6	99,6	100,5	110,5	106,0
J	99,7	98,5	94,0	101,1	104,2	106,0	104,8
J	101,9	98,3	97,0	98,9	101,7	108,8	107,2
A	99,6	93,8	96,2	101,0	100,9	109,8	104,4
S	99,5	98,0	97,0	101,2	100,7	109,8	105,8
O	102,8	95,9	96,7	99,4	104,5	109,0	106,4
N	97,1	94,8	98,7	101,9	105,7	108,4	103,7
D	97,8	95,6	100,9	103,9	105,4	107,0	104,9

* 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	Year 2003	Actual indices			Seasonally adjusted indices		
			December	November	December/1/	December	November	December
			2002		2003	2002		2003
Food and food products	10,7	101,6	100,3	108,7	93,3	100,9	98,2	93,9
Meat, fish, fruit etc.	2,8	115,5	115,1	119,7	111,8	114,6	114,1	111,7
Dairy products	1,4	96,6	112,1	105,6	104,5	103,8	95,5	96,9
Grain mill products	2,1	108,2	107,3	106,4	106,3	109,3	101,2	108,4
Other food products	4,4	91,1	83,9	103,8	71,7	87,3	87,3	74,6
Beverages	4,6	115,8	140,1	133,4	146,1	109,9	116,2	115,0
Total textiles	2,9	95,7	70,1	98,6	55,7	107,0	84,2	84,4
Textiles	1,7	91,7	70,3	84,2	46,0	111,0	75,1	72,7
Other textile products	1,2	101,4	69,9	118,9	69,4	101,3	97,0	100,9
Total wearing apparel	3,6	99,0	79,0	109,6	77,1	103,0	89,1	99,8
Knitted, crocheted articles	0,6	100,4	85,2	112,3	65,5	122,9	96,8	94,5
Wearing apparel	3,0	98,7	77,8	109,1	79,4	99,0	87,6	100,9
Tanning and dressing of leather	0,4	91,3	71,9	102,2	71,8	91,4	92,7	90,9
Footwear	0,9	75,3	65,0	86,3	61,1	82,0	72,3	76,3
Wood and products of wood	1,9	109,2	85,6	115,6	88,6	115,6	101,7	119,8
Sawmilling and planing of wood	0,8	112,2	80,5	119,1	94,3	113,8	111,2	133,3
Products of wood	1,2	107,3	89,0	113,3	84,8	116,7	95,5	110,9
Paper and paper products	5,3	99,1	86,5	107,0	98,5	92,1	101,5	105,3
Total publishing and printing	4,1	99,9	81,0	120,1	94,0	90,9	103,0	106,3
Publishing	1,5	95,7	89,7	119,6	95,4	92,2	102,5	98,1
Printing, recorded media	2,6	102,2	76,1	120,4	93,2	90,2	103,2	110,9
Coke and refined petroleum products	4,2	102,1	105,6	108,9	106,9	99,4	105,9	100,1
Basic chemicals	4,5	105,7	107,2	108,1	101,9	112,1	96,5	107,2
Other chemical products	6,2	106,8	95,0	119,4	92,5	110,8	105,6	107,7
Rubber products	1,4	98,3	56,2	105,0	54,3	96,6	93,1	95,1
Plastic products	3,1	121,4	97,0	136,8	101,6	121,0	119,9	126,5
Glass and glass products	1,0	117,9	109,5	132,3	116,9	118,2	117,3	125,2
Other non-metallic mineral products	3,5	99,5	89,4	109,1	78,8	116,1	98,0	102,4
Basic iron and steel products	7,6	109,4	103,7	116,0	105,0	115,1	111,0	115,8
Basic precious and non-ferrous metal products	3,2	100,9	88,2	107,3	94,1	92,7	104,4	99,4
Fabricated metal products	7,0	113,9	95,2	126,7	83,0	121,1	111,6	106,1
Structural metal products	2,4	108,3	97,3	118,0	70,6	121,8	101,7	89,0
Other fabricated metal product	4,6	116,9	94,1	131,2	89,3	120,8	116,7	114,9
Total machinery and equipment	5,8	118,4	106,7	122,7	102,3	121,6	118,2	116,7
General purpose machinery	2,5	105,3	94,1	111,6	90,0	107,6	110,3	102,4
Special purpose machinery	2,9	131,8	121,0	132,9	117,7	134,4	127,9	131,9
Household appliances	0,4	104,2	81,5	118,8	66,8	117,0	96,4	96,4
Electrical machinery, apparatus	3,4	104,3	83,4	117,6	80,3	105,0	105,2	100,9
Radio, television and communication apparatus	1,0	83,8	73,3	90,7	91,7	81,0	91,3	100,5
Professional equipment	0,5	122,9	109,6	120,7	111,5	129,4	119,6	130,8
Motor vehicles; trailers; parts and accessories	8,0	108,3	69,6	116,4	70,6	103,4	103,3	104,9
Motor vehicles	4,5	101,5	68,6	111,2	61,8	101,0	97,3	91,2
Bodies for motor vehicles; trailers and semi-trailers	0,5	105,6	82,7	118,8	89,5	104,2	98,4	110,9
Parts and accessories	3,0	119,2	68,8	123,9	80,4	106,8	113,2	124,5
Other transport equipment	1,0	100,8	96,9	103,3	80,1	117,4	105,3	97,7
Furniture	1,6	103,8	72,0	135,9	83,9	106,9	98,7	123,9
Other manufacturing divisions	2,6	95,5	63,4	109,0	48,7	99,2	86,1	69,7
Total	100,0	105,7	92,6	115,3	91,3	107,0	103,7	104,9

* 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	40 286 441	44 443 867
F	29 866 793	29 901 544	30 551 283	34 961 840	39 187 078	46 552 386	50 811 316
M	29 866 272	32 190 538	32 737 212	38 039 203	42 683 525	49 232 865	52 681 625
A	30 438 604	29 758 879	30 447 208	32 651 220	37 828 090	49 747 946	49 112 612
M	30 626 091	30 352 835	32 680 898	37 038 716	41 146 142	51 664 008	50 198 782
J	30 575 542	31 723 893	33 054 424	38 710 074	42 743 527	50 265 064	50 924 204
J	31 169 707	31 732 667	33 262 293	36 234 329	41 174 318	51 869 128	51 417 699*
A	31 400 042	30 810 619	33 586 437	38 992 758	41 164 534	53 370 193	51 726 854*
S	31 344 644	32 896 327	35 703 435	39 916 972	42 295 572	55 277 787	52 953 083*
O	35 902 602	34 970 472	37 386 689	41 775 594	48 601 886	58 802 690	55 976 104*
N	33 709 581	34 300 610	38 843 424	43 881 507	49 478 825	59 010 832	55 512 082
D	28 128 922	29 016 347	32 992 528	37 256 576	42 207 610	47 372 378	47 872 089 1/
Year	368 283 280	373 568 657	397 608 593	448 106 023	502 499 271	613 451 718	613 630 317
Seasonally adjusted values							
J	30 489 454	31 039 575	31 387 394	33 821 013	39 672 854	47 142 156	52 267 997
F	30 509 898	30 605 689	31 328 810	35 766 888	40 036 593	47 589 519	51 838 382
M	28 718 606	30 980 388	31 563 295	36 573 297	41 118 447	47 529 371	50 829 722
A	32 086 310	31 467 850	32 267 199	34 663 422	40 177 042	53 027 425	52 203 074
M	30 715 816	30 392 991	32 709 620	36 965 225	40 999 143	51 482 469	49 978 155
J	30 220 408	31 259 865	32 569 877	38 056 123	42 079 464	49 594 055	50 344 199
J	31 169 595	31 856 001	33 511 094	36 558 826	41 544 594	52 289 671	51 921 701
A	30 753 486	30 342 308	33 192 472	38 517 416	40 585 730	52 532 684	50 937 258
S	30 161 547	31 762 259	34 605 786	38 709 574	41 117 088	53 816 873	51 656 764
O	32 173 162	31 393 197	33 764 219	38 042 077	44 304 043	53 641 345	51 015 295
N	30 323 048	30 805 392	34 832 353	39 505 120	44 364 449	53 024 704	49 903 458
D	30 817 770	31 424 070	35 768 360	40 293 826	45 268 989	51 172 992	51 657 153

* 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				
		December	November	December 1/	December	November	December		
		2002		2003		2002		2003	
		2003		2003		2002		2003	
Food and food products	83 231 425	7 378 923	7 274 926	7 221 651	7 133 285	6 622 156	6 957 847		
Meat, fish, fruit etc.	26 899 051	2 419 253	2 306 195	2 369 050	2 291 556	2 129 377	2 235 776		
Dairy products	9 792 782	884 728	859 174	909 458	820 763	775 309	839 089		
Grain mill products	23 473 410	2 168 179	1 925 957	1 928 516	2 134 666	1 878 637	1 899 263		
Other food products	23 066 182	1 906 763	2 183 600	2 014 627	1 886 300	1 838 833	1 983 719		
Beverages	30 006 536	3 276 966	2 898 935	3 813 962	2 260 896	2 588 281	2 633 585		
Total textiles	12 433 132	827 051	1 098 496	679 403	1 171 232	949 946	954 896		
Textiles	7 892 173	518 071	637 409	379 591	782 095	572 016	574 314		
Other textile products	4 540 959	308 980	461 087	299 812	389 137	377 930	380 582		
Total wearing apparel	12 991 350	921 945	1 271 326	917 668	1 120 167	1 024 754	1 106 983		
Knitted, crocheted articles	2 239 497	165 454	209 044	129 867	231 913	182 082	181 331		
Wearing apparel	10 751 853	756 491	1 062 282	787 801	888 254	842 672	925 652		
Tanning and dressing of leather	3 068 673	174 586	257 203	187 708	213 525	227 244	228 220		
Footwear	2 133 070	146 680	212 017	155 186	201 707	169 234	211 580		
Wood and products of wood	13 530 443	856 574	1 185 261	946 865	1 050 014	1 031 389	1 165 917		
Sawmilling and planing of wood	3 872 369	234 524	354 431	287 080	308 852	318 491	379 629		
Products of wood	9 658 074	622 050	830 830	659 785	741 162	712 898	786 288		
Paper and paper products	29 655 690	2 259 360	2 692 672	2 524 185	2 389 191	2 499 003	2 677 205		
Total publishing and printing	15 206 528	1 062 348	1 528 829	1 225 768	1 189 049	1 249 429	1 384 872		
Publishing	5 846 583	445 858	611 166	472 348	464 503	520 170	492 914		
Printing, recorded media	9 359 945	616 490	917 663	753 420	724 546	729 259	891 958		
Coke and refined petroleum products	37 193 193	3 489 165	3 003 038	2 992 288	3 548 746	2 875 719	3 059 146		
Basic chemicals	29 439 116	2 326 499	2 656 367	2 141 043	2 596 223	2 334 204	2 408 256		
Other chemical products	36 426 459	2 533 491	3 394 988	2 796 709	2 789 109	3 005 732	3 102 620		
Rubber products	6 733 271	469 785	599 183	497 715	584 545	550 609	619 448		
Plastic products	15 979 459	1 111 879	1 542 281	1 205 098	1 308 648	1 332 610	1 413 298		
Glass and glass products	3 389 768	252 617	340 742	264 804	278 751	277 592	291 027		
Other non-metallic mineral products	15 053 394	1 041 037	1 430 236	1 056 319	1 336 696	1 287 373	1 344 934		
Basic iron and steel products	52 352 603	3 588 724	4 263 811	3 957 099	3 622 632	4 128 733	3 969 449		
Basic precious and non-ferrous metal products	18 982 167	2 145 931	1 630 097	1 664 651	1 830 445	1 520 447	1 416 095		
Fabricated metal products	35 249 267	2 439 878	3 312 376	2 271 391	3 117 705	2 859 993	2 904 332		
Structural metal products	10 742 423	746 033	959 879	653 312	954 103	836 406	837 263		
Other fabricated metal product	24 506 844	1 693 845	2 352 497	1 618 079	2 163 602	2 023 587	2 067 069		
Total machinery and equipment	28 628 984	2 382 970	2 552 481	2 345 489	2 440 447	2 459 634	2 390 716		
General purpose machinery	12 150 380	1 052 362	1 123 958	1 000 201	1 033 578	1 047 111	975 261		
Special purpose machinery	13 724 749	1 142 002	1 151 224	1 189 409	1 150 862	1 193 095	1 201 798		
Household appliances	2 753 855	188 606	277 299	155 879	256 007	219 427	213 657		
Electrical machinery, apparatus	17 322 009	1 195 855	1 602 519	1 222 115	1 461 311	1 417 661	1 482 845		
Radio, television and communication apparatus	5 198 485	403 469	434 251	481 394	429 843	470 991	507 539		
Professional equipment	2 111 248	149 478	184 410	162 958	173 042	179 755	187 840		
Motor vehicles; trailers; parts and accessories	78 244 464	4 838 462	7 354 413	4 877 831	6 531 499	6 435 728	6 647 892		
Motor vehicles	53 859 403	3 434 156	5 192 292	3 263 453	4 451 406	4 519 490	4 255 642		
Bodies for motor vehicles; trailers and semi-trailers	2 381 906	124 739	225 604	180 951	164 649	201 107	238 637		
Parts and accessories	22 003 155	1 279 567	1 936 517	1 433 427	1 915 444	1 715 131	2 153 613		
Other transport equipment	3 871 607	308 180	329 182	255 529	386 975	332 413	323 674		
Furniture	7 433 943	401 915	807 995	538 692	536 953	594 593	721 791		
Other manufacturing divisions	17 764 033	1 388 610	1 654 047	1 468 568	1 470 357	1 478 235	1 545 146		
Total	613 630 317	47 372 378	55 512 082	47 872 089	51 172 992	49 903 458	51 657 153		

* Revised

1/ Preliminary

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

Selected manufacturing subgroups	Actual values			Seasonally adjusted values		
	December	November	December 1/	December	November	December
	2002	2003		2002	2003	
Spinning, weaving and finishing of textiles	311 628	256 315	274 211	368 503	262 741	325 583
Tents, tarpaulins, sails and other canvas goods and automotive textile goods	40 714	33 241	37 729	40 418	42 181	37 298
Other textile articles	79 058	90 971	94 768	83 853	87 259	99 702
Knitted and crocheted fabrics and articles	130 241	99 638	94 042	136 541	100 124	98 828
Wearing apparel	740 882	635 067	577 034	822 616	629 968	641 230
Sawmilling and preserving of timber	22 825	24 940	24 983	24 364	24 375	26 768
Veneer sheets, plywood, laminboard, etc.	31 846	32 550	22 636	33 425	29 935	23 588
Builders' carpentry and joinery	36 442	42 984	46 443	37 180	40 105	47 370
Pulp, paper and paperboard	227 142	269 842	255 253	228 702	210 880	258 014
Corrugated paper and paperboard and containers	353 475	397 225	376 220	355 965	377 180	380 527
Paints, varnishes and coatings	21 210	29 207	19 552	23 344	25 625	21 661
Basic iron and steel products	4 695 368	5 557 053	5 679 168	4 920 776	5 644 133	5 984 956
Steel pipe and tube mills	412 543	283 757	207 034	447 429	290 786	227 727
Basic precious and non-ferrous metal products	1 836 040	1 429 726	1 509 584	1 923 749	1 534 659	1 573 600
Metal structures, parts	1 393 857	974 024	999 909	1 459 661	978 674	1 047 416
Cutlery, hand tools and general hardware	29 404	29 828	20 911	22 180	30 062	15 408
Metal containers, e.g. cans and tins	64 516	64 823	66 518	64 999	64 862	67 032
Cables, wire products, springs	61 636	78 941	56 450	80 563	78 167	74 102
Metal fasteners	84 475	72 506	68 268	88 117	70 669	71 458
All other metal products	849 925	826 813	848 896	849 208	735 371	845 944
Domestic appliances	30 411	32 184	30 760	28 072	29 594	28 331
Electric motors, generators and transformers	561 329	478 727	482 357	573 321	486 133	491 976
Insulated wire and cables	375 886	305 325	335 776	387 960	327 645	345 219
Accumulators, primary cells and primary batteries	5 888	3 894	5 006	5 936	3 887	5 039
Television, radio and communication apparatus	1 839 353	2 216 353	2 286 187	2 076 747	2 465 966	2 577 824
Motor vehicles	2 728 181	3 056 348	3 223 103	2 763 615	3 147 171	3 260 509
Parts and accessories for motor vehicles	370 857	283 703	348 069	372 689	320 850	350 432
Furniture	244 515	335 298	290 849	282 851	297 418	335 708

* Revised

Explanatory notes

- Introduction**
- 1 Statistics South Africa (Stats SA) conducts a monthly survey of the manufacturing industry covering private manufacturing establishments, 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 (December 2003) have been estimated due to late response. These estimates will be revised in 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 .
- 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 (see 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 (see table D for the fixed weights which were used for the three periods 1990 to 1992, 1993 to 1995 and 1996 to 2003).
- 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 the 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 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 9 was followed in 36 of the 45 major groups. On account of certain considerations more appropriate indicators were used for the nine 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, motor vehicles, bodies for motor vehicles and parts and accessories for motor vehicles and other transport equipment. 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, motor vehicles, bodies for motor vehicles and parts and accessories for motor vehicles and other transport equipment 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 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 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 total manufacturing industry** **15** In order to calculate a production index for the total manufacturing industry, the 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 -
- 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** **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

Glossary

Enterprise	An enterprise 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, 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 <i>System of National Accounts (SNA)</i> in the same way as in the <i>Standard Industrial Classification of all Economic Activities, Fifth Edition, Report No. 09-90-02 of January 1993 (SIC)</i> .
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. <p>Output includes -</p> <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 –

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 D - 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	1996-2003	
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 planning 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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