

# Manufacturing: production and sales P3041.2

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<b>Actual estimates</b>	<b>April 2001</b>	<b>% change between April 2000 and April 2001</b>	<b>% change between February 2000 to April 2000 and February 2001 to April 2001</b>	<b>% change between January 2000 to April 2000 and January 2001 to April 2001</b>
Physical volume of manufacturing production index (1995=100)	100,0	+7,3	+4,0	+4,6
Total value of sales of manufactured products (R million)	37 758,8	+15,5	+13,4	+14,7

Seasonally adjusted estimates	April 2001	% change between March 2001 and April 2001	% change between November 2000 to January 2001 and February 2001 to April 2001
Physical volume of manufacturing production index (1995=100)	106,9	-2,7	-1,7
Total value of sales of manufactured products (R million)	40 164,9	-2,7	+0,9

### Key findings as at the end of April 2001

#### MANUFACTURING PRODUCTION DECREASES

*Manufacturing production for the three months ended April 2001 reflected a decrease of 1,7% after seasonal adjustment compared with the previous three months. Lower production was*

reported by 19 of the 27 manufacturing divisions.

The major contributor to the decrease of 1,7% after seasonal adjustment in the total manufacturing production was the basic iron and steel products division (-0,5 of a percentage point), followed by motor vehicle (-0,4 of a percentage point), wearing apparel (-0,3 of a percentage point), other non-metallic mineral products (-0,3 of a percentage point) and fabricated metal products (-0,3 of a percentage point) divisions (cf. table A).

Table A - Contribution of the production by the different manufacturing divisions to the total manufacturing production (Base 1995=100)

Manufacturing Divisions	Percentage contribution to the total manufacturing production in the base year 1995 (Weights)	Average seasonally adjusted production index for the three months February 2001 to April 2001	Quarterly percentage change (February 2001 to April 2001 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	109,5	+7,7	+0,8
Beverages	4,6	97,1	+10,0	+0,5
Total textiles	2,9	94,4	+1,7	+0,1
Total wearing apparel	3,6	76,2	-6,7	-0,3
Tanning and dressing of leather	0,4	130,3	-4,5	-0,0
Footwear	0,9	54,7	-15,6	-0,2
Wood and products of wood	1,9	118,0	-0,8	-0,0
Paper and paper products	5,3	105,4	-2,4	-0,1
Total publishing and printing	4,1	82,9	-5,3	-0,2
Coke and refined petroleum products	4,2	107,8	+2,0	+0,1
Basic chemicals	4,5	138,3	-2,8	-0,1
Other chemical products	6,2	103,7	-0,7	-0,1
Rubber products	1,4	98,5	-7,2	-0,1
Plastic products	3,1	96,3	+1,5	+0,0
Glass and glass products	1,0	97,8	+4,3	+0,0
Other non-metallic mineral products	3,5	85,7	-7,4	-0,3
Basic iron and steel products	7,6	109,3	-7,1	-0,5
Basic precious and non-ferrous metal products	3,2	165,7	-0,7	-0,0
Fabricated metal products	7,0	103,8	-4,7	-0,3
Total machinery and equipment	5,8	108,6	-3,6	-0,2
Electrical machinery, apparatus	3,4	102,0	-4,0	-0,1
Radio, television and communication apparatus	1,0	117,0	+1,4	+0,0
Professional equipment	0,5	90,4	-1,4	-0,0
Motor vehicles; trailers; parts and accessories	8,0	135,9	-4,3	-0,4
Other transport equipment	1,0	116,7	-4,1	-0,1
Furniture	1,6	92,2	-11,2	-0,2
Other manufacturing divisions	2,6	112,1	+0,8	+0,0
<b>Total</b>	<b>100,0</b>	<b>108,2</b>	<b>-1,7</b>	<b>-1,7</b>

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

## SALES OF MANUFACTURED PRODUCTS INCREASE

*The total value of sales of manufactured products at current prices for the three months ended April 2001 reflected an increase of 0,9% (+R1 135 million) after seasonal adjustment compared with the previous three months. Higher manufacturing sales were reported by 14 of the 27 manufacturing divisions during this period. Furthermore, the actual total value of sales of manufactured products at current prices for the three months ended April 2001 reflected an increase of 13,4% (+R14 145 million) compared with three months ended April 2000. Higher manufacturing sales were reported by 21 of the 27 manufacturing divisions during the latter period.*

The increase of 0,9% after seasonal adjustment in the total value of sales of manufactured products at current prices for the three months ended April 2001 compared with the previous three months was mainly due to large increases reported by the beverage (+11,8% or +R615 million), food and food products (+9,0% or +R1 429 million) and coke and refined petroleum products (+3,8% or +R352 million) divisions.

The major contributors to the increase of 13,4% in the actual value of sales of manufactured products at current prices for the three months ended April 2001 compared with the three months ended April 2000 were the motor vehicle (+2,8 percentage points or +R2 963 million), food and food products (+2,4 percentage points or R2 508 million), coke and refined petroleum products (+2,1 percentage points or +R2 254 million), basic chemicals (+0,8 of a percentage points or

+R815 million) and basic precious and non-ferrous metal products (+0,7 of a percentage point or +R737 million) divisions.

## Notes

Forthcoming issues	Issue	Expected release date
	May 2001	10 July 2001
	June 2001	7 August 2001
	July 2001	11 September 2001

	August 2001	9 October 2001
	September 2001	6 November 2001
	October 2001	11 December 2001
	November 2001	8 January 2002
	December 2001	12 February 2002
<b>Purpose of the survey</b>		
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 1995 = 100							
Month	1995	1996	1997	1998	1999	2000	2001
Actual indices							
J	80,6	83,6	89,8	89,6	86,7	88,8	94,7
F	97,6	96,7	103,1	101,1	98,0	103,2	105,8
M	104,2	102,6	102,5	102,7	101,4	109,0	111,8
A	91,0	96,4	105,5	96,3	94,8	93,2	100,0 1/
M	101,8	104,1	106,2	101,1	101,1	106,5	
J	102,4	102,9	104,9	104,5	100,5	110,4	
J	101,7	104,7	108,2	104,4	104,3	107,2	
A	106,0	107,8	105,8	99,9	103,5	108,5	
S	106,7	105,2	108,2	106,8	107,0	112,4	
O	112,5	115,8	119,1	111,7	112,9	117,0	
N	110,7	114,4	111,7	109,8	115,5	120,7	
D	84,8	83,7	86,9	85,3	90,5	94,7	
Year	100,0	101,5	104,3	101,1	101,4	106,0	
Seasonally adjusted indices							
J	96,5	99,1	105,5	104,7	100,5	102,2	109,0
F	99,3	98,6	105,2	102,9	99,8	105,0	107,7
M	100,0	99,5	100,3	100,9	99,6	106,9	109,9



parts and accessories	8,0	125,4	101,1	149,3	123,6	105,5	140,8	130,2
Motor vehicles	4,5	114,9	91,8	143,4	110,5	98,8	135,2	120,3
Bodies for motor vehicles; trailers and semi-trailers	0,5	63,3	67,8	81,4	81,0	66,0	70,9	79,0
Parts and accessories	3,0	152,4	121,1	170,5	151,0	123,0	162,0	154,5
Other transport equipment	1,0	115,0	110,2	113,7	119,1	106,3	118,0	114,9
Furniture	1,6	98,9	78,8	99,4	74,8	87,9	98,5	84,4
Other manufacturing divisions	2,6	111,5	83,7	113,3	88,2	103,2	112,3	108,1
Total	100,0	106,0	93,2	111,8	100,0	99,3	109,9	106,9

\* Revised  
1/ Preliminary

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

Month	1995	1996	1997	1998	1999	2000*	2001
Actual values							
J	19 206 220	21 803 249	25 254 480	25 913 926	26 410 458	28 601 180	34 247 325*
F	24 414 317	26 328 500	29 866 793	29 901 544	30 607 558	35 189 976	39 274 357*
M	26 712 878	28 188 286	29 866 272	32 190 538	32 788 344	38 037 515	43 022 215
A	22 897 368	26 231 967	30 438 604	29 758 879	30 508 382	32 682 801	37 758 814 1/
M	25 806 431	28 293 052	30 626 091	30 352 835	32 737 449	37 068 308	
J	26 204 689	28 261 416	30 575 542	31 723 893	33 126 289	38 704 882	
J	25 613 126	28 378 392	31 169 707	31 732 667	33 429 319	36 278 835	
A	27 064 919	29 568 761	31 400 042	30 810 619	33 740 922	38 969 664	
S	27 737 968	29 549 724	31 344 644	32 896 327	35 884 855	39 925 256	
O	29 294 559	33 070 022	35 902 602	34 970 472	37 436 877	41 735 176	
N	29 960 074	33 084 713	33 709 581	34 300 610	38 898 469	43 996 693	
D	23 877 458	26 338 721	28 128 922	29 016 347	33 036 204	37 361 236	
Year	308 790 007	339 096 803	368 283 280	373 568 657	398 605 126	448 551 522	
Seasonally adjusted values							
J	23 564 291	26 611 651	30 594 018	31 141 563	31 535 372	34 042 621	40 759 341
F	24 832 737	26 858 479	30 570 662	30 692 446	31 489 757	36 256 035	40 514 853
M	25 197 892	26 768 513	28 563 286	30 901 317	31 468 614	36 463 047	41 262 413
A	24 371 153	27 787 935	32 105 346	31 413 275	32 260 745	34 690 074	40 164 872
M	25 936 287	28 322 921	30 587 282	30 299 731	32 774 613	37 173 431	
J	25 881 973	27 931 826	30 225 532	31 349 015	32 693 683	38 145 875	
J	25 452 702	28 204 073	30 955 821	31 476 840	33 133 447	35 939 468	
A	26 403 904	28 964 013	30 888 593	30 362 080	33 341 216	38 577 177	
S	26 508 592	28 302 608	30 084 297	31 575 746	34 406 078	38 189 941	
O	26 380 786	29 784 076	32 394 722	31 709 786	34 113 650	38 134 119	
N	26 840 316	29 729 336	30 384 540	30 987 764	35 171 699	39 796 626	
D	26 789 764	29 290 378	30 984 357	31 612 119	35 734 357	40 251 193	

\* 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		
		April	March	April 1/	April	March	April
		2000	2000	2001	2000	2001	
Food and food products	59 567 213	4 832 194	5 799 316	5 566 750	4 951 109	5 993 228	5 713 116

Meat, fish, fruit etc.	17 557 839	1 461 889	1 538 626	1 527 824	1 481 905	1 517 413	1 551 882
Dairy products	7 246 522	544 418	694 103	584 518	606 675	673 249	653 563
Grain mill products	15 373 318	1 229 763	1 421 846	1 336 866	1 276 880	1 397 235	1 393 629
Other food products	19 389 534	1 596 124	2 144 741	2 117 542	1 588 494	2 427 836	2 112 398
Beverages	20 378 659	1 513 467	1 902 301	1 724 398	1 691 311	1 796 314	1 924 687
Total textiles	10 164 459	786 869	972 108	831 986	835 615	889 854	885 948
Textiles	6 440 583	512 865	632 105	535 952	524 262	559 989	549 588
Other textile products	3 723 876	274 004	340 003	296 034	301 635	322 958	327 332
Total wearing apparel	10 523 645	884 680	1 007 478	873 420	877 634	867 952	867 763
Knitted, crocheted articles	1 693 563	134 284	174 234	145 900	127 284	145 141	138 468
Wearing apparel	8 830 082	750 396	833 244	727 520	745 764	720 346	724 066
Tanning and dressing of leather	2 666 786	216 849	286 152	237 517	216 851	267 869	237 835
Footwear	2 238 178	188 759	172 846	150 325	202 620	154 743	161 018
Wood and products of wood	9 073 197	677 518	801 517	784 895	692 060	757 849	801 710
Sawmilling and planing of wood	2 589 363	192 494	238 816	228 318	214 703	224 534	255 554
Products of wood	6 483 834	485 024	562 701	556 577	492 568	533 038	564 980
Paper and paper products	23 434 546	1 631 625	2 218 723	1 804 321	1 813 191	2 075 753	2 010 877
Total publishing and printing	11 678 548	899 453	1 011 607	909 963	943 192	979 446	956 459
Publishing	4 668 251	377 416	394 706	365 902	390 652	393 692	378 487
Printing, recorded media	7 010 297	522 037	616 901	544 061	551 258	598 628	575 742
Coke and refined petroleum products	31 823 682	2 393 738	2 995 747	3 035 431	2 514 384	3 238 670	3 196 911
Basic chemicals	22 044 200	1 539 331	1 722 588	1 871 559	1 677 278	1 840 115	2 056 181
Other chemical products	26 327 958	2 029 668	2 507 210	2 295 969	2 112 147	2 330 187	2 387 767
Rubber products	4 645 737	339 374	511 323	383 480	341 360	483 041	388 750
Plastic products	10 669 187	722 306	1 045 317	886 538	774 087	986 829	954 591
Glass and glass products	2 280 493	160 306	215 043	208 113	177 722	229 518	230 724
Other non-metallic mineral products	10 249 683	753 797	960 491	837 927	801 872	910 944	894 833
Basic iron and steel products	33 529 317	2 580 707	2 897 551	2 681 812	2 647 938	2 715 723	2 758 837
Basic precious and non-ferrous metal products	15 542 665	1 082 927	1 597 033	1 307 904	1 211 443	1 558 755	1 477 151
Fabricated metal products	24 753 734	1 697 585	2 444 915	1 989 964	1 753 838	2 250 913	2 058 748
Structural metal products	7 818 495	545 198	882 411	658 851	562 557	777 961	677 039
Other fabricated metal product	16 935 239	1 152 387	1 562 504	1 331 113	1 216 234	1 460 038	1 403 929
Total machinery and equipment	19 664 968	1 276 187	2 148 678	1 459 788	1 470 588	1 735 244	1 705 223
General purpose machinery	8 821 849	603 777	772 931	693 554	684 303	752 485	788 405
Special purpose machinery	8 658 911	536 625	1 176 489	625 169	637 685	817 924	750 928
Household appliances	2 184 208	135 785	199 258	141 065	158 500	191 048	167 171
Electrical machinery, apparatus	13 219 217	961 211	1 304 514	1 077 168	1 020 862	1 240 838	1 151 411
Radio, television and communication apparatus	4 639 808	365 168	380 394	359 006	413 645	339 663	403 087
Professional equipment	1 388 382	96 057	136 011	123 406	98 698	129 482	127 476
Motor vehicles; trailers; parts and accessories	54 020 716	3 508 869	5 998 772	4 505 989	3 746 572	5 306 616	4 834 553
Motor vehicles	37 493 963	2 389 768	4 287 487	3 023 607	2 601 373	3 720 899	3 309 257
Bodies for motor vehicles; trailers and semi-trailers	1 670 903	112 460	170 390	122 101	112 834	144 393	123 811
Parts and accessories	14 855 850	1 006 641	1 540 895	1 360 281	1 037 378	1 423 020	1 416 378
Other transport equipment	3 247 376	170 309	383 815	170 999	237 786	290 900	241 200
Furniture	6 253 537	406 861	475 315	423 992	444 654	494 121	465 711
Other manufacturing divisions	14 525 631	966 986	1 125 450	1 256 194	1 099 703	1 253 941	1 440 200
Total	448 551 522	32 682 801	43 022 215	37 758 814	34 690 074	41 262 413	40 164 872

\* Revised  
1/ Preliminary

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

Selected manufacturing subgroups	Actual values			Seasonally adjusted values		
	April	March	April 1/	April	March	April
	2000	2001		2000	2001	

Spinning, weaving and finishing of textiles	223 091	209 503	214 898	218 278	204 543	209 981
Tents, tarpaulins, sails and other canvas goods and automotive textile goods	25 045	28 508	27 074	25 498	25 808	27 756
Other textile articles	63 667	58 309	55 173	61 288	54 311	52 946
Knitted and crocheted fabrics and articles	140 515	101 766	96 788	142 531	101 643	98 376
Wearing apparel	784 647	700 761	684 133	793 740	698 455	694 128
Sawmilling and preserving of timber	24 451	27 567	29 045	23 766	25 505	28 147
Veneer sheets, plywood, laminboard, etc.	23 679	19 804	24 972	21 998	20 166	23 320
Builders' carpentry and joinery	41 065	46 100	46 505	45 087	51 610	51 426
Pulp, paper and paperboard	334 095	464 076	478 864	352 398	520 051	505 987
Corrugated paper and paperboard and containers	331 022	399 272	385 529	344 741	411 423	402 625
Paints, varnishes and coatings	23 042	23 421	22 763	32 981	28 822	33 275
Basic iron and steel products	3 399 990	2 944 893	2 918 321	3 333 306	2 916 755	2 860 235
Steel pipe and tube mills	163 591	172 138	187 826	169 229	181 114	194 041
Basic precious and non-ferrous metal products	1 144 010	1 534 191	1 722 972	1 133 381	1 539 557	1 704 427
Metal structures, parts	1 021 268	1 363 698	1 218 312	1 010 074	1 357 788	1 205 767
Cutlery, hand tools and general hardware	35 432	18 683	28 746	33 586	19 176	27 202
Metal containers, e.g. cans and tins	74 873	83 102	89 359	76 670	80 702	91 534
Cables, wire products, springs	58 258	66 468	65 821	58 639	63 867	66 503
Metal fasteners	55 688	54 749	56 730	55 327	53 641	56 854
All other metal products	526 297	709 826	572 235	550 491	718 947	594 779
Domestic appliances	37 408	23 457	23 458	37 445	23 849	23 516
Electric motors, generators and transformers	456 691	374 793	371 134	462 869	368 810	378 045
Insulated wire and cables	211 366	298 085	395 676	198 159	274 740	371 053
Accumulators, primary cells and primary batteries	13 628	15 690	16 285	12 864	15 034	15 314
Television, radio and communication apparatus	1 169 909	1 954 353	2 075 747	1 110 328	1 962 161	1 949 961
Motor vehicles	2 168 213	2 104 048	2 183 930	1 998 044	1 975 543	2 032 664
Parts and accessories for motor vehicles	303 706	310 750	350 987	297 563	319 308	343 406
Furniture	191 203	247 358	222 741	213 647	274 144	249 760

\* Revised

## 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 detailed 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 to international practice, the indices have to be rebased every five years to a new base year. The indices in this statistical release have been calculated on the basis of 1995=100 since November 1997. Both actual and seasonally adjusted figures are presented.
	3	In order to improve timeliness, some information for the current month April 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.
<b>Scope of the survey</b>	4	This survey covers manufacturing establishments conducting activities regarding - <ul style="list-style-type: none"> <li>▪ the manufacturing, processing, making or packing of products;</li> <li>▪ the slaughtering of animals, including poultry; and</li> <li>▪ installation, assembly, completion, repair and related work.</li> </ul>
<b>Classification</b>	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, major group and subgroup level. Each statistical unit is classified to an industry which reflects the predominant activity of the establishment (branch).

<b>Statistical unit</b>	<b>6</b>	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 6).
<b>Survey methodology and design</b>	<b>7</b>	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.
	<b>8</b>	The survey is collected by mail each month from a sample of approximately 2 500 manufacturing establishments.
	<b>9</b>	The above-mentioned measurement method in paragraph 7 was followed in 40 of the various major groups. On account of certain considerations more appropriate indicators were used for the four remaining major groups namely "other transport equipment"; tobacco products and coke and refined petroleum products and bodies for motor vehicles. The volume indices for the major groups tobacco products and coke and refined petroleum products are calculated on the basis of physical quantities. The major group tobacco products is included under 'Other' manufacturing industries. This method is also 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). In the case of "other transport equipment" units such as ships and aircraft are completed over a relatively long period and establishments can often not report charges for work done continuously. The sales and charges for work done are only shown after completion of the product, which is not a true reflection of the real production for the month under consideration. Therefore the index for "other transport equipment" is calculated monthly according to man-hours worked.

<b>Sample design</b>	<b>10</b>	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.
<b>Benchmarking</b>	<b>11</b>	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.
	<b>12</b>	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

		<p>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.</p>
<b>Production index for the total manufacturing industry</b>	<b>13</b>	<p>In order to calculate a production index for the total manufacturing industry, the production indices for the major groups are combined as follows:</p> <p>A weight is calculated for every major group according to the value added of the relevant major group compared with the value added to 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.</p>
<b>Seasonal adjustment</b>	<b>14</b>	<p>Seasonally adjusted estimates of all items 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.</p>

<b>Trend cycle</b>	<b>15</b>	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.
<b>Reliability of estimates</b>	<b>16</b>	Estimates are subject to sampling and non-sampling errors. Figures for the latest month are preliminary.
<b>Historical data</b>	<b>17</b>	More comprehensive detail on the method of calculation and historical data in respect of the production indices according to manufacturing major groups and the value of sales for the period January 1990 to September 1999 were published in statistical releases P3041.3 (entitled <b>Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 1995=100, January 1990 to September 1999</b> ) on 21 December 1999 and P3041.4 (entitled <b>Manufacturing statistics: Value of sales, January 1990 to September 1999</b> ) on 8 December 1999.
<b>Related publications</b>	<b>18</b>	Users may also wish to refer to the following publications which are available from Stats SA - <ul style="list-style-type: none"> <li>▪ P3041.3 -Manufacturing statistics: Indices of the physical volume of manufacturing production, Base: 1995=100, January 1990 to September 1999.</li> <li>▪ P3041.4 -Manufacturing statistics: Value of sales (divisions, major groups and subgroups), January 1990 to September 1999.</li> <li>▪ Bulletin of Statistics.</li> <li>▪ SA Statistics.</li> </ul>
<b>Unpublished statistics</b>	<b>19</b>	In some cases Stats SA can also make available statistics which are not published. The statistics can be made available as: computer printouts, diskette and CD. Generally a charge is made for providing unpublished statistics.

<b>Rounding-off of figures</b>	<b>20</b>	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.
<b>Pre-release policy</b>	<b>21</b>	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:
	<b>22</b>	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.
	<b>23</b>	Stats SA's pre-release policy may be inspected at its Website, <a href="http://www.statssa.gov.za">www.statssa.gov.za</a> .
<b>Symbols and abbreviations</b>		<p>Stats SA Statistics South Africa</p> <p>TBVC states Relates to the former Transkei, Bophuthatswana, Venda and Ciskei states</p> <p>SIC Standard Industrial Classification of all Economic Activities</p> <p>ISIC International Standard Classification of all Economic Activities</p>

SNA System of National Accounts

PPI Production Price Index

GDP Gross Domestic Product

1/ Preliminary figures

\* Revised figures

### Technical notes

<b>Response rates</b>	See the response rates for April 2001, by manufacturing major divisions, in table B.
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**Table B - Response rates for April 2001**

<b>Manufacturing major divisions</b>	<b>% response</b>
Food and food products	80,4
Beverages	85,3
Textile	91,3
Total wearing apparel	82,8
Tanning and dressing of leather	73,3
Footwear	77,3
Wood and products of wood	66,4

Paper and paper products	89,2
Total publishing and printing	71,8
Coke and refined petroleum products	80,0
Basic chemicals	86,1
Other chemical products	85,0
Rubber products	81,8
Plastic products	75,3 61,5
Glass and glass products	92,3
Other non-metallic mineral products	74,8
Basic iron and steel products	83,3 67,5
Basic precious and non-ferrous metal products	66,7
Fabricated metal products	73,8
Total machinery and equipment	77,9
Electrical machinery, apparatus	66,3
Radio, television and communication apparatus	75,0
Professional equipment	65,5
Motor vehicles; trailers; parts and accessories	80,2
Other transport equipment	81,6
Furniture	88,9

Other manufacturing industries	74,1
<b>Total</b>	<b>78,7</b>

<b>Glossary</b>	
<b>Enterprise</b>	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.
<b>Establishment</b>	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.
<b>Index of physical volume of manufacturing production</b>	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 1995. The production in the base period is set at 100.
<b>Industry</b>	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).
<b>Intercensal period</b>	Intercensal period is the period between January of the one census year and January of the next census year.
<b>Intermediate consumption</b>	<p>Intermediate consumption includes -</p> <ul style="list-style-type: none"> <li>• purchases and transfers-in of materials;</li> <li>• payments to other establishments for work done;</li> <li>• other direct factory costs;</li> <li>• rent and leasing paid;</li> <li>• head office charges;</li> <li>• royalties, copyright, trade names and patent rights paid;</li> <li>• advertising;</li> <li>• insurance premiums;</li> <li>• services; and</li> <li>• secretarial and administrative fees.</li> </ul>
<b>Output</b>	<p>Output is the aggregate value of goods manufactured and work done.</p> <p>Output includes -</p> <ul style="list-style-type: none"> <li>• sales and transfers-out of own manufactures, factory waste and stocks of factored</li> <li>• goods;</li> <li>• repairs;</li> <li>• installation, erection and assembly;</li> <li>• sundry trading revenue;</li> <li>• sales of factored goods minus purchases of factored goods;</li> <li>• rent and leasing received;</li> <li>• royalties received;</li> <li>• difference between opening value and closing value of work in progress, stocks of own</li> </ul>

	<ul style="list-style-type: none"> <li>• manufactures and stocks of factored goods;</li> <li>• head office charges; and</li> <li>• other revenue.</li> </ul>
	Output excludes excise and customs duty paid.
<b>Value added</b>	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.
<b>Sales</b>	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.
<b>Weight</b>	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.

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