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Business Monitor

A publication of the Government Statistical Service

Report on the Census of Production

General mechanical engineering



Department of Industry
Business Statistics Office

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PA349

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Report on the Census of Production 1971

General mechanical engineering

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Department of Industry
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List of Industry Reports, etc.

PA1001 Introductory Notes
 PA101 Coal mining
 PA102 Stone and slate quarrying and mining
 PA103 Chalk, clay, sand and gravel extraction
 PA104 Petroleum and natural gas
 PA109.1 Metalliferous mining and quarrying
 PA109.3 Salt and miscellaneous non-metalliferous mining and quarrying
 PA211 Grain milling
 PA212 Bread and flour confectionery
 PA213 Biscuits
 PA214 Bacon curing, meat and fish products
 PA215 Milk and milk products
 PA216 Sugar
 PA217 Cocoa, chocolate and sugar confectionery
 PA218 Fruit and vegetable products
 PA219 Animal and poultry foods
 PA221 Vegetable and animal oils and fats
 PA229.1 Margarine
 PA229.2 Starch and miscellaneous foods
 PA231 Brewing and malting
 PA232 Soft drinks
 PA239.1 Spirit distilling and compounding
 PA239.2 British wines, cider and perry
 PA240 Tobacco
 PA261 Coke ovens and manufactured fuel
 PA262 Mineral oil refining
 PA263 Lubricating oils and greases
 PA271.1 General chemicals (inorganic)
 PA271.2 General chemicals (organic)
 PA271.3 Miscellaneous general chemicals
 PA272 Pharmaceutical chemicals and preparations
 PA273 Toilet preparations
 PA274 Paint
 PA275 Soap and detergents
 PA276 Synthetic resins and plastics materials and synthetic rubber
 PA277 Dyestuffs and pigments
 PA278 Fertilizers
 PA279.1 Polishes
 PA279.2 Formulated adhesives, gelatine etc.
 PA279.3 Explosives, fireworks and matches
 PA279.4 Formulated pesticides and disinfectants
 PA279.5 Printing ink
 PA279.6 Surgical bandages etc.
 PA279.7 Photographic chemical materials
 PA311 Iron and steel (general)
 PA312 Steel tubes
 PA313 Iron castings
 PA321 Aluminium and aluminium alloys
 PA322 Copper, brass and other copper alloys
 PA323 Other base non-ferrous metals
 PA331 Agricultural machinery (other than tractors)
 PA332 Metal-working machine tools
 PA333 Pumps, valves and compressors
 PA334 Industrial engines
 PA335 Textile machinery and accessories
 PA336 Construction and earth moving equipment
 PA337 Mechanical handling equipment
 PA338 Office machinery
 PA339.1 Mining machinery
 PA339.2 Printing and bookbinding machinery
 PA339.3 Refrigerating machinery
 PA339.4 Space heating, ventilating and air-conditioning equipment
 PA339.7 Food and drink processing machinery
 PA339.9 Miscellaneous (non-electrical) machinery
 PA341 Industrial (including process) plant and steelwork
 PA342 Ordnance and small arms
 PA349 Ball and roller bearings
 Precision chains and other mechanical engineering
 PA351 Photographic and document copying equipment
 PA352 Watches and clocks
 PA353 Surgical instruments and appliances
 PA354 Scientific and industrial instruments and systems
 PA361 Electrical machinery
 PA362 Insulated wires and cables
 PA363 Telegraph and telephone apparatus and equipment
 PA364 Radio and electronic components
 PA365 Broadcast receiving and sound reproducing equipment
 PA366 Electronic computers
 PA367 Radio, radar and electronic capital goods

PA368 Electrical appliances primarily for domestic use
 PA369 Miscellaneous electrical goods
 PA370 Shipbuilding and marine engineering
 PA380 Wheeled tractor manufacturing
 PA381 Motor vehicle manufacturing
 PA382 Motor cycle, tricycle and pedal cycle manufacturing
 PA383 Manufacturing and repairing aerospace equipment
 PA384 Locomotives, trams, railway carriages, wagons and track equipment
 PA390 Engineers' small tools and gauges
 PA391 Hand tools and implements
 PA392 Cutlery, spoons, forks and plated tableware etc.
 PA393 Bolts, nuts, screws, rivets etc.
 PA394 Wire and wire manufactures
 PA395 Cans and metal boxes
 PA396 Jewellery and precious metal
 PA399.1 Metal furniture
 PA399.5 Drop forgings etc.
 PA399.6 Metal hollow-ware
 PA399.8 Miscellaneous metal manufacture
 PA411 Production of man-made fibres
 PA412 Spinning and doubling on the cotton and flax systems
 PA413 Weaving of cotton, linen and man-made fibres
 PA414 Woollen and worsted
 PA415 Jute
 PA416 Rope, twine and net
 PA417 Hosiery and other knitted goods
 PA418 Lace
 PA419 Carpets
 PA421 Narrow fabrics
 PA422.1 Made-up household textiles
 PA422.2 Canvas goods and sacks etc.
 PA423 Textile finishing
 PA429.1 Asbestos
 PA429.2 Miscellaneous textiles
 PA431 Leather (tanning and dressing) and fellmongery
 PA432 Leather goods
 PA433 Fur
 PA441 Weatherproof outerwear
 PA442 Men's and boys' tailored outerwear
 PA443 Women's and girls' tailored outerwear
 PA444 Overalls and men's shirts, underwear etc.
 PA445 Dresses, lingerie, infants' wear etc.
 PA446 Hats, caps and millinery
 PA449.1 Corsets and miscellaneous dress industries
 PA449.2 Gloves
 PA450 Footwear
 PA461 Refractory goods
 Building bricks and non-refractory goods
 PA462 Pottery
 PA463 Glass
 PA464 Cement
 PA469.1 Abrasives
 PA469.2 Miscellaneous building materials and mineral products
 PA471 Timber
 PA472 Furniture and upholstery
 PA473 Bedding and soft furnishing
 PA474 Shop and office fittings
 PA475 Wooden containers and baskets
 PA479 Miscellaneous wood and cork manufactures
 PA481 Paper and board
 PA482.1 Cardboard boxes, cartons and fibre-board packing cases
 PA482.2 Packaging products of paper and associated materials
 PA483 Manufactured stationery
 PA484.1 Wallcovering
 PA484.2 Miscellaneous manufactures of paper and board
 PA486 Printing and publishing of newspapers and periodicals
 PA489 General printing, publishing etc.
 PA491 Rubber
 PA492 Linoleum, plastics floor covering, leathercloth etc.
 PA493 Brushes and brooms
 PA494.1 Toys, games and children's carriages
 PA494.3 Sports equipment
 PA495 Miscellaneous stationers' goods
 PA496 Plastics products
 PA499.1 Musical instruments
 PA499.2 Miscellaneous manufacturing industries
 PA601 Gas
 PA602 Electricity
 PA603 Water supply
 PA1002 Summary Tables

The information in this report relates to establishments classified to the Other mechanical engineering industry not elsewhere specified, minimum list heading 349/1,2 and 3 in the Standard Industrial Classification (revised 1968). The activities of the industry include:-

- (i) Manufacturing ball, roller, needle and similar bearings, including those for motor vehicles (MLH 349/1).
- (ii) Manufacturing transmission and other precision chains including transmission chains for motor vehicles and cycles (MLH 349/2).
- (iii) Establishments undertaking general sub-contract or repair work and establishments whose mechanical engineering products (including machinery parts) are of such a mixed character that they cannot be allocated elsewhere among the mechanical engineering group of industries - Order VII (MLH 349/3).

Prior to 1971, for census purposes, the manufacture of ball and roller bearings and precision chains formed part of the General mechanical engineering industry and separate figures are not available. This report is, therefore, presented in three parts:- A. General mechanical engineering industry, MLH 349, 1970 and 1971; B. Ball and roller bearings, MLH 349/1, 1971; C. Precision chains and other mechanical engineering, MLH 349/2 and 3, 1971.

In interpreting the data in the tables it is essential to bear in mind the notes and definitions which commence on page (iii).

Table No.	Title	Page
	Section 1 - Estimates for all United Kingdom establishments in the industries	
1	Input and output, 1970 and 1971 - Establishments classified to the industries	PA349 3
	1a Combined analysis, 1970 and 1971	PA349 4
	1b Separate analysis, 1971	
2	Capital expenditure and stocks, 1970 and 1971 - Establishments classified to the industries	
	2a Combined analysis, 1970 and 1971	PA349 5
	2b Separate analysis, 1971	PA349 6
3	Analysis of establishments by size, 1971 - Establishments classified to the industries	
	3a Combined analysis	PA349 7
	3b Ball and roller bearings industries	PA349 8
	3c Precision chains and other mechanical engineering industries	PA349 9
4	Percentage analysis of employees by full and part-time employment and sex, 1971 - Establishments classified to the industries	PA349 10
5	Regional distribution of employment, net capital expenditure and net output, 1971 - Establishments classified to the industries	
	5a Combined analysis	PA349 11
	5b Ball and roller bearings industries	PA349 12
	5c Precision chains and other mechanical engineering industries	PA349 13
	Section 11 - Analysis of returns received	
6	Percentage analysis of twelve-month periods covered by returns from establishments employing 25 or more persons, 1971	PA349 14

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	2a Combined analysis, 1970 and 1971	PA349 6
	2b Separate analysis, 1971	
3	Analysis of establishments by size, 1971 - Establishments classified to the industries	PA349 7
	3a Combined analysis	PA349 8
	3b Ball and roller bearings industries	PA349 9
	3c Precision chains and other mechanical engineering industries	
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	5a Combined analysis	PA349 12
	5b Ball and roller bearings industries	PA349 13
	5c Precision chains and other mechanical engineering industries	
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TABLE 1a

Input and output, 1970 and 1971

All United Kingdom establishments classified to the General mechanical engineering industry (a)

	Unit	1970	1971
Enterprises	Number	5,128	5,321
Establishments	"	5,222	5,469
Sales of goods produced and work done	£'000	698,718	747,912
Services rendered to other organisations (b)	"	8,110	6,727
Goods merchanted or factored	"	33,360	50,523
Canteen takings	"	1,381	1,412
Total sales and work done	"	741,569	806,574
Increase during the year, goods on hand for sale	"	6,425	7,151
Increase during the year, work in progress	"	6,406	- 6,245
Gross output	"	754,400	807,481
Cost of purchases	"	310,049	317,973
Increase during the year, stocks of materials, stores and fuel	"	7,457	- 604
Payments to other organisations for work done on materials given out	"	18,731	19,146
for transport by road	"	4,074	4,445
for transport by rail, water, air and Post Office parcel services	"	1,661	1,903
Total costs	"	327,058	344,070
Net output	"	427,342	463,410
Total employment (including working proprietors) (c)	Thousands	205.1	197.2
Net output per head	£	2,084	2,350

- (a) For 1971, estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons, accounted for 31 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 11 per cent. For 1970 the comparable figures were 32 per cent and 10 per cent respectively.
- (b) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered.
- (c) Average number of persons employed during the year.

TABLE 1b

PA349 4

Input and output, 1971

All United Kingdom establishments classified to the Ball and roller bearings, Precision chains and other mechanical engineering industries (a)

	Unit	Ball and roller bearings	Precision chains and other mechanical engineering
Enterprises	Number	31	5,292
Establishments	"	39	5,430
Sales of goods produced and work done	£'000	133,949	613,964
Services rendered to other organisations (b)	"	208	6,519
Goods merchanted or factored	"	14,010	36,512
Canteen takings	"	349	1,063
Total sales and work done	"	148,516	658,058
Increase during the year, goods on hand for sale	"	3,249	3,902
Increase during the year, work in progress	"	- 1,841	- 4,403
Gross output	"	149,925	657,556
Cost of purchases	"	56,416	261,557
Increase during the year, stocks of materials, stores and fuel	"	- 1,096	493
Payments to other organisations for work done on materials given out	"	633	18,513
for transport by road	"	586	3,859
for transport by rail, water, air and Post Office parcel services	"	244	1,659
Total costs	"	58,975	285,094
Net output	"	90,950	372,461
Total employment (including working proprietors) (c)	Thousands	37.3	159.9
Net output per head	£	2,439	2,329

- (a) For 1971, estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons in the Ball and roller bearings industry accounted for 4 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 3 per cent. In the Precision chains and other mechanical engineering industry the corresponding figures are 39 per cent and 13 per cent respectively.
- (b) Amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered.
- (c) Average number of persons employed during the year.

TABLE 2a

PA349 5

Capital expenditure and stocks, 1970 and 1971

All United Kingdom establishments classified to the General mechanical engineering industries (a)

	1970	1971
Capital expenditure (b)	£'000	£'000
New building work	6,908	5,956
Land and existing buildings		
Acquisitions	1,712	2,845
Disposals	844	4,425
Plant and machinery		
Acquisitions	28,867	30,089
Disposals	1,649	2,863
Vehicles		
Acquisitions	4,329	4,518
Disposals	1,530	1,831
Total net capital expenditure (c)	37,793	34,290
Stocks and work in progress at end of year (d)		
Materials, stores and fuel	64,016	63,313
Work in progress	71,380	70,553
Goods on hand for sale	45,544	53,570
Total stocks	180,940	187,436

- (a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.
- (b) Capital expenditure in respect of manufacturing establishments where production had not commenced before the end of the year, is included.
- (c) Acquisitions less disposals.
- (d) The stock changes in Table 1, based on opening and closing values returned by firms, may be different from those obtained from end-year values. The differences are attributable to variation in valuation by firms between the years and to differences in respondents, and in total employment.

Capital expenditure and stocks, 1971

All United Kingdom establishments classified to the Ball and roller bearings, Precision chains and other mechanical engineering industries (a)

	Ball and roller bearings	Precision chains and other mechanical engineering
	£'000	£'000
Capital expenditure (b)		
New building work	500	5,456
Land and existing buildings		
Acquisitions	94	2,751
Disposals	236	4,189
Plant and machinery		
Acquisitions	6,551	23,538
Disposals	404	2,459
Vehicles		
Acquisitions	330	4,188
Disposals	141	1,690
Total net capital expenditure (c)	6,695	27,595
Stocks and work in progress at end of year (d)		
Materials, stores and fuel	11,401	51,912
Work in progress	17,193	53,359
Goods on hand for sale	20,939	32,631
Total stocks	49,534	137,901

- (a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.
- (b) Capital expenditure in respect of manufacturing establishments where production had not commenced before the end of the year, is included.
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TABLE 3a

Analysis of establishments by size, 1971

All United Kingdom establishments classified to the General mechanical engineering industry (a)

Size group (b)	Estab-lishments	Enter-prises (c)	Total employment (b)	Employees		Wages and salaries		Wages and salaries per head		Total sales and work done (e)	Gross output	Net output	Net output per head	Capital expenditure (net) (f)	Total stocks and work in progress at end of year
				Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)						
	Number	Number	Number	Number	Number	£'000	£'000	£	£	£'000	£'000	£'000	£	£'000	£'000
1-24	4,570	4,570	42,089	53,872	14,782	76,487	27,174	1,420	1,838	302,097	300,791	170,431	2,269	14,121	47,675
25-49	377	372	13,914												
50-99	279	277	19,095												
100-199	125	124	17,588	13,323	4,206	17,495	7,042	1,313	1,674	69,565	69,099	39,921	2,270	3,132	11,808
200-399	47	47	11,871	8,615	3,248	10,940	4,957	1,270	1,526	48,573	48,214	24,906	2,098	1,548	14,450
400-749	37	36	20,665	13,523	7,140	18,250	12,230	1,350	1,713	116,296	116,795	63,826	3,089	2,369	27,376
750-1,499	18	17	17,933	13,124	4,808	18,318	7,495	1,396	1,559	71,166	70,870	42,824	2,388	6,804	21,645
1,500 and over	16	14	54,025	39,733	14,292	52,199	22,746	1,314	1,592	198,877	201,711	121,504	2,249	6,314	64,482
Total	5,469	5,321	197,180	142,190	48,476	193,690	81,645	1,362	1,684	806,574	807,481	463,410	2,350	34,290	187,436

(a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.

(b) Average number employed during the year (including working proprietors) by the establishment.

(c) Some enterprises control establishments in more than one size group: the sum of the figures for the size groups will therefore exceed the total for the industry.

(d) Administrative, technical and clerical employees.

(e) Including sales of goods merchanted or factored, canteen takings and services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered).

(f) Acquisitions less disposals.

TABLE 3b

Analysis of establishments by size, 1971

All United Kingdom establishments classified to the Ball and roller bearings industry (a)

Size group (b)	Estab-lishments	Enter-prises (c)	Total employment (b)	Employees		Wages and salaries		Wages and salaries per head		Total sales and work done (e)	Gross output	Net output	Net output per head	Capital expenditure (net) (f)	Total stocks and work in progress at end of year												
				Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)																		
	Number	Number	Number	Number	Number	£'000	£'000	£	£	£'000	£'000	£'000	£	£'000	£'000												
1-24	4	4	38	431	118	504	206	1,169	1,747	3,035	3,071	1,582	2,737	169	635												
25-49	7	7	271																								
50-99	3	3	269																								
100-199	6	5	1,096													834	261	976	445	1,171	1,704	4,231	4,137	2,458	2,243	81	655
200-399	3	3	835													622	213	832	328	1,337	1,540	3,517	3,521	1,814	2,172	211	1,725
400-749	5	5	2,877													2,008	869	2,564	1,424	1,277	1,638	13,239	13,880	7,630	2,652	584	4,160
750-2,499	6	5	7,864													5,530	2,333	7,144	3,783	1,292	1,622	27,739	28,375	16,076	2,044	820	9,170
2,500 and over	5	5	24,035	17,951	6,084	25,239	9,773	1,406	1,606	96,755	96,941	61,389	2,554	4,829	33,189												
Total	39	31	37,285	27,376	9,878	37,260	15,958	1,361	1,616	148,516	149,925	90,950	2,439	6,695	49,534												

(a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.

(b) Average number employed during the year (including working proprietors) by the establishment.

(c) Some enterprises control establishments in more than one size group: the sum of the figures for the size groups will therefore exceed the total for the industry.

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(f) Acquisitions less disposals.

PA349 8

TABLE 3c

Analysis of establishments by size, 1971

All United Kingdom establishments classified to the Precision chains and other mechanical engineering industries (a)

Size group (b)	Estab-lishments	Enter-prises (c)	Total employment (b)	Employees		Wages and salaries		Wages and salaries per head		Total sales and work done (e)	Gross output	Net output	Net output per head	Capital expenditure (net) (f)	Total stocks and work in progress at end of year
				Operatives	Others (d)	Operatives	Others (d)	Operatives	Others (d)						
	Number	Number	Number	Number	Number	£'000	£'000	£	£	£'000	£'000	£'000	£	£'000	£'000
1-10	2,897	2,897	13,537	53,441	14,664	75,983	26,968	1,422	1,839	299,062	297,720	168,849	2,266	13,952	47,040
11-24	1,669	1,669	28,514												
25-49	370	365	13,643												
50-99	276	274	18,826												
100-199	119	119	16,492	12,490	3,945	16,519	6,597	1,323	1,672	65,334	64,962	37,463	2,272	3,051	11,153
200-299	32	32	7,778	5,830	1,941	7,356	2,978	1,262	1,534	32,192	31,906	15,956	2,051	1,043	8,620
300-749	44	43	21,046	13,677	7,365	18,438	12,458	1,348	1,692	115,920	115,704	63,331	3,009	2,079	27,321
750-1,499	14	14	14,045	10,208	3,837	14,542	5,939	1,425	1,548	57,550	57,081	34,096	2,428	6,463	15,910
1,500 and over	9	7	26,014	19,168	6,846	23,591	10,747	1,231	1,570	87,999	90,184	52,766	2,028	1,007	27,858
Total	5,430	5,292	159,895	114,814	38,598	156,430	65,687	1,362	1,702	658,058	657,556	372,461	2,329	27,595	137,901

(a) Including estimates for establishments not making satisfactory returns and for establishments employing less than 25 persons.

(b) Average number employed during the year (including working proprietors) by the establishment.

(c) Some enterprises control establishments in more than one size group: the sum of the figures for the size groups will therefore exceed the total for the industry.

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(e) Including sales of goods merchanted or factored, canteen takings and services rendered to other organisations (amounts charged for hiring out plant, machinery or other goods, for providing transport, or for any technical or other services rendered).

(f) Acquisitions less disposals.

PA349 9

TABLE 4

PA349 10

Percentage analysis of employees, by full and part time employment and sex, 1971 (a)
All United Kingdom establishments classified to the industry

Sex	Full time	Part time	All employees
	per cent	per cent	per cent
Male	79	1	80
Female	16	4	20
	95	5	100

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) at mid-June, 1971.

TABLE 5a

PA349 11

Regional distribution of employment, net capital expenditure and net output, 1971
All United Kingdom establishments classified to the General mechanical engineering industry (a)

Area	Average number employed (a)		Net capital expenditure (b)		Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (c)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	Estimated net output	Average number employed as a percentage of total average number employed in the industry in the region	Net output as percentage of total of the industry in the United Kingdom
Standard Regions of England							
North	13.6	6.9	2,612	7.6	14,269	50.4	3.1
Yorkshire and Humberside	21.7	11.0	639	1.9	29,083	56.5	6.3
East Midlands	15.5	7.8	2,888	8.4	19,640	46.0	4.2
East Anglia	2.6	1.3	989	2.9	3,190	48.0	0.7
South East	65.8	33.4	10,709	31.2	90,225	48.7	19.5
South West	13.7	7.0	2,490	7.2	14,336	47.6	3.1
West Midlands	26.5	13.5	2,931	8.6	35,070	58.9	7.6
North West	18.9	9.5	2,740	8.0	26,391	61.3	5.7
England:	178.3	90.4	25,998	75.8	232,204	52.3	50.2
Wales	7.9	4.0	5,849	17.1	12,217	67.3	2.6
Scotland	10.2	5.2	2,357	6.9	14,994	56.0	3.2
Great Britain	196.4	99.6	34,204	99.8	259,415	53.1	56.0
Northern Ireland	0.8	0.4	86	0.2	442	62.8	0.1
Unallocated (d)	-	-	-	-	203,553	-	43.9
United Kingdom	197.2	100.0	34,290	100.0	463,410		100.0

(a) Including working proprietors.

(b) New building work plus acquisitions less disposals of land and existing buildings, plant and machinery and vehicles.

(c) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.

(d) Includes estimates of net output for establishments not making satisfactory returns and establishments employing less than 25 employees, and unallocated net output of establishments covering addresses in two or more regions.

TABLE 5b

PA349 12

Regional distribution of employment, net capital expenditure and net output, 1971
All United Kingdom establishments classified to the Ball and roller bearings industry (a)

Area	Average number employed (a)		Net capital expenditure (b)		Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (c)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	Estimated net output £'000	Average number employed as a percentage of total average number employed in the industry in the region	Net output as percentage of total of the industry in the United Kingdom
Standard Regions of England							
North	*	*	*	*	*	*	*
Yorkshire and Humberside	*	*	*	*	*	*	*
East Midlands	*	*	*	*	*	*	*
East Anglia	*	*	*	*	*	*	*
South East	13.5	36.2	2,559	38.2	24,837	70.2	27.3
South West	2.7	7.2	554	8.3	2,681	44.3	2.9
West Midlands	3.1	8.2	298	4.4	7,696	100.0	8.5
North West	*	*	*	*	*	*	*
England	33.0	88.5	5,596	83.6	52,490	58.9	57.8
Wales	*	*	*	*	*	*	*
Scotland	*	*	*	*	*	*	*
Great Britain	*	*	*	*	*	*	*
Northern Ireland	*	*	*	*	*	*	*
Unallocated (d)	-	-	-	-	29,698	-	32.6
United Kingdom	37.3	100.0	6,695	100.0	90,950		100.0

(a) Including working proprietors.

(b) New building work plus acquisitions less disposals of land and existing buildings, plant and machinery and vehicles.

(c) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.

(d) Includes estimates of net output for establishments not making satisfactory returns and establishments employing less than 25 employees, and unallocated net output of establishments covering addresses in two or more regions.

TABLE 5c

PA349 13

Regional distribution of employment, net capital expenditure and net output, 1971
All United Kingdom establishments classified to the Precision chains and other mechanical engineering industries (a)

Area	Average number employed (a)		Net capital expenditure (b)		Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (c)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	Estimated net output £'000	Average number employed as a percentage of total average number employed in the industry in the region	Net output as percentage of total of the industry in the United Kingdom
Standard Regions of England							
North	*	*	*	*	*	*	*
Yorkshire and Humberside	*	*	*	*	*	*	*
East Midlands	*	*	*	*	*	*	*
East Anglia	*	*	*	*	*	*	*
South East	52.3	32.7	8,151	29.5	65,388	43.2	17.5
South West	11.1	6.9	1,936	7.0	11,654	48.4	3.1
West Midlands	23.5	14.7	2,634	9.6	27,375	53.5	7.4
North West	*	*	*	*	*	*	*
England	145.3	90.9	20,402	73.9	179,714	50.8	48.3
Wales	*	*	*	*	*	*	*
Scotland	*	*	*	*	*	*	*
Great Britain	*	*	*	*	*	*	*
Northern Ireland	*	*	*	*	*	*	*
Unallocated (d)	-	-	-	-	173,855	-	46.6
United Kingdom	159.9	100.0	27,595	100.0	372,461		100.0

(a) Including working proprietors.

(b) New building work plus acquisitions less disposals of land and existing buildings, plant and machinery and vehicles.

(c) Where a census return covered addresses in two or more regions an estimate was made of the net output attributable to the region only where more than 80 per cent of the establishment's employees were located in the region. The estimate was made by assuming that net output at each address covered by a return was proportionate to employment at the address. The establishment's residual net output was included in unallocated net output.

(d) Includes estimates of net output for establishments not making satisfactory returns and establishments employing less than 25 employees, and unallocated net output of establishments covering addresses in two or more regions.

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 25 or more persons, 1971

Accounting year ended	Ball and roller bearings		Precision chains and other mechanical engineering	
	Percentage of total returns received	Percentage of total numbers employed	Percentage of total returns received	Percentage of total numbers employed
1971 April (a)	0.0	0.0	3.5	3.0
May	3.1	0.3	1.7	1.0
June	0.0	0.0	6.3	2.7
July	0.0	0.0	3.3	2.1
August	0.0	0.0	3.4	3.0
September	31.3	50.9	6.9	7.6
October	0.0	0.0	5.6	17.8
November	3.0	0.1	2.5	1.3
December	46.9	38.9	32.4	23.4
1972 January	6.3	8.8	5.2	6.4
February	0.0	0.0	3.1	1.2
March (b)	9.4	1.0	26.1	30.5
	100.0	100.0	100.0	100.0

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1972.

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Notes

These notes give the main information needed for interpreting the figures in the industry reports, (more detailed information about the census is given in a separate booklet—"Introductory Notes", Part PA1001 of the Report on the Census of Production for 1971).

GENERAL INFORMATION

Changes compared with 1970

The questions asked in the 1971 census were the same as those in the 1970 census with one main exception: for 1971 establishments were asked to include in capital expenditure, expenditure on units that were not in production in the year of return; for 1970 this expenditure was collected in a separate inquiry. This change of method of collection does not affect the results for 1970 and 1971 because capital expenditure for units not yet in production is included in the aggregates for both years.

Industrial classification

The Annual Censuses of Production are conducted on the Business Statistics Office's Production Register. Normally establishments on the Register are classified to industries on the basis of major activity in conformity with the third edition of the Standard Industrial Classification (Revised 1968). Normally an establishment was classified to an industry if its sales of the principal products of that industry accounted for a greater proportion of its total sales than in its sales of the principal products of any other industry; classification is generally based on an establishment's returns to the quarterly production inquiry. Where this was not possible—for example where a quarterly production inquiry had not then been introduced—the classification of an establishment reflects its return to the Census of Production, 1968. Establishments for which information was not available either from the quarterly inquiries or the 1968 Census were classified on the basis of the description of the business given by the establishments to the Business Statistics Office, for instance, in the course of registration.

Coverage

Detailed census returns were generally sought only from establishments employing on average 25 or more persons, but in some industries where firms employing less than 25 persons account for a relatively high proportion of total employment and output the exemption limit was lowered to 11. Census returns were also sent to establishments whose employment was not known to the Business Statistics Office at the time of dispatch.

TERMS USED IN THE CENSUS REPORT

Average number employed

Establishments were required to state the number of persons on the payroll (i.e. whose national insurance cards were held by them) on the average during the year of return, whether full time or part time employees. Separate figures were required for (a) administrative, technical and clerical employees and (b) all other employees (operatives). Averages could be calculated from figures relating to the last week of each calendar month. Establishments were also required to state the number of working proprietors where appropriate and these are included in total employment figures. Outworkers (i.e. persons employed by establishments who worked in their own homes etc. on materials supplied by the establishments) are excluded.

The figures include persons engaged on merchanting or factoring and canteen workers where particulars in respect of these activities could not be excluded from the return.

Working Proprietors

These include all persons regarded as "self employed" for national insurance purposes and members of their families who worked in the business without receiving a fixed wage or salary; but such persons who worked less than half the normal number of working hours are excluded. Directors working in the business but not in receipt of a definite wage, salary or commission are included under this heading; directors paid by fee only are not included.

Employees

Administrative, technical and clerical employees include managing and other directors in receipt of a definite wage, salary or commission, managers, superintendents and works foremen; research, experimental development, technical and design

employees (other than operatives); draughtsmen and tracers; editorial staff, staff reporters, canvassers, competition and advertising staff; travellers; and office (including works office) employees.

Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include those employed in and about the factory or works; operatives employed in power houses, transport work (including roundsmen), stores, warehouses, shops and canteens; inspectors, viewfinders and similar workers; maintenance workers, and cleaners. Operators engaged in outside work of erecting, fitting etc. are also included, but out-workers are excluded.

Capital expenditure

Capital expenditure during the year in respect of manufacturing units where production had not started before the end of the year is included in the figures for both 1970 and 1971.

(a) New building work

This represents the cost incurred during the year of new building and other constructional work (including office buildings, canteens and the like used in connection with the business covered by the return, but not dwelling houses for employees). The value is that charged to capital account during the year of return; it includes expenditure on new buildings or on the extension or reconstruction of old buildings, the value of works of a capital nature carried out by the establishment's own staff and the cost of any newly constructed buildings purchased. Figures shown include any legal charges, stamp duties, agents' commissions, etc.

(b) Land and existing buildings

The items shown are the capital cost of freeholds purchased and the capital cost of premium payable for leaseholds acquired (excluding the value of any assets acquired in taking over an existing business), and the amounts receivable for any freeholds or leaseholds disposed of. The value is that charged to capital account during the year of return.

(c) Plant, machinery and vehicles

The items shown are the value of plant and machinery and of vehicles acquired, both new and second-hand, and the amount received for items disposed of during year. The value of plant and machinery acquired includes plant, etc., which firms produced for their own use in connection with the business covered by the return. The value of plant, etc., acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. No deduction is made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written off for items scrapped.

Enterprise

The term enterprise is used in this report to mean one or more establishments under common ownership or control. An enterprise normally consists of a single establishment, more than one establishment owned by the same firm, or a number of establishments owned by a parent company and its subsidiary companies. Information about the relationship between constituent companies of enterprises was obtained mainly from published sources such as the Stock Exchange Year Book supplemented by information from company reports and information supplied by establishments. The information available is not complete but covers the largest and most important groups of industrial establishments and is believed sufficient to provide a worthwhile basis for analysis.

Establishment

The definition of an establishment in 1970 and 1971 was that of the Standard Industrial Classification (Revised 1968): "the smallest unit which can provide the information normally required for an economic census, for example, employment, expenses, turnover, capital formation". Sometimes activities which are conducted as a single business are carried on at a number of addresses, termed local units. Where the activities of such a business are closely integrated, and detailed census information is not available for each unit, it is treated as a multi-unit establishment and a single return accepted. Separate figures are obtained, however, of employment and net capital expenditure at each unit.

Gross output

Gross output measures the total value of production (including work done) by establishments during the year. It is calculated as follows:—

Value of sales and work done
Plus/Less: Increase/decrease in value of stocks of goods on hand for sale
Plus/Less: Increase/decrease in value of work in progress
= Gross output.

Net output

Net output represents the value added to materials by the process of production (including the margin on selling any merchanted or factored goods). It is calculated as follows:—

Gross output
Less: Purchases adjusted for change in value of stocks of fuel and raw materials
Less: Payments for work given to other establishments
Less: Payments for transport
Less: Net amount of any duties, subsidies, allowances and levies payable
= Net output.

Net output per person employed

The figures of net output per person employed are derived by dividing the net output by the average number of persons employed (full time and part time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

Purchases

Purchases include the cost of materials and components bought for use in production; of fuel and electricity for all purposes; of packaging materials including the cost of returnable cases and containers when first purchased; of workshop materials, office materials and materials for repairs to establishment's own buildings, plants and vehicles when carried out by their own work people included in the returns; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also included. In general, purchases of goods for merchanting or factoring and canteen supplies are included. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account.

The values shown include any duty paid (less rebate, etc.) but exclude trade discounts allowed. The cost of transport is included only if included in the cost of materials as invoiced; amounts paid to transport organisations, including an establishment's own separate transport organisations for delivery of materials and fuel are, therefore, excluded. Materials purchased overseas are included at the c.i.f. cost plus any duty payable if the cost of transport from the docks was not included in the invoiced price, but at their full delivery cost if invoiced "carriage paid home". Materials and fuel transferred from another department of the establishment not covered by the same return are included at the estimated selling value recorded by the other department.

Sales

Sales are in respect of goods made by the business covered by the return, goods made for it by outworkers or by other establishments from materials given out to them (sometimes described as goods made on commission) and waste products. Any machinery or other capital items produced for use in the business covered by the return are included, the value being that adopted in the establishment's asset accounts. Goods sold without being subjected to any manufacturing process (i.e. merchanting or factored) and canteen takings are included.

The value shown for sales is the net selling value, defined as the amount charged to customers whether on an ex-works or delivered basis excluding any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packaging materials is included. Goods charged on a delivered basis to customers overseas are included at the f.o.b. value.

Goods produced in one establishment and transferred to another establishment of the same firm not covered by the return were treated as sales by the producing establishment and valued as far as possible as if they had been sold to an independent purchaser. Goods transferred to wholesale or retail selling organisations for which separate accounts were kept were valued on the same basis.

To the extent that sales of finished products of one establishment constitute the materials purchased by another, total figures of the value of sales (and of materials and fuel purchased) include an element of duplication. In some industries, e.g. motor vehicle manufacturing, and woollen and worsted, this duplication is substantial; and aggregates of the figures for a number of industries contain significantly greater amounts of duplication. For work done on commission, sub-contract work, etc., the value shown is the total amount charged for the work, including the value of any materials bought and used in such work.

Services rendered

This represents the amounts charged for hiring out plant, machinery and other goods, providing transport, or for any technical or other services rendered to other organisations. It includes amounts credited for similar services rendered to other establishments of the same enterprise not covered by the return.

Standard Industrial Classification

Industry classification is based on the Standard Industrial Classification (Revised 1968). It is published by HM Stationery Office together with a separate index in the form of an alphabetical list of industries.

Stocks and work in progress

Values are given of stocks of goods on hand for sale, and of materials and fuel, at the end of the year of return, including any stocks of goods held for merchanting or factoring. Values of the change during the year are also shown. The values include duty in the case of dutiable goods held out of bond.

The value of work in progress at the end of, and the change during, the year are also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received.

Transport payments

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payment to other establishments, and to any separate transport organisation of the same establishment not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, i.e. railways, road haulage, canals, coastwise shipping, air, etc. Payments made for sea and air freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded.

Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to national insurances and pension schemes is excluded.

Work given out

The figures shown represent the total amount paid for work done by other establishments (whether part of the same enterprise or not) on materials supplied to them. They do not include payments to individual outworkers or payments for business and other services.

SYMBOLS USED

The following symbols are used throughout the report:

- ... not available
- nil or less than half the final digit shown
- * figures cannot be shown owing to the risk of disclosing information about individual enterprises
- R revised

ROUNDING OF FIGURES

Figures in the tables have, where necessary, been rounded to the nearest final digit; there may be an apparent slight discrepancy between the sum of the constituent items and the total shown.

Notes

These notes give the main information needed for interpreting the figures in the industry reports, (more detailed information about the census is given in a separate booklet—"Introductory Notes", Part PA1001 of the Report on the Census of Production for 1971).

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The questions asked in the 1971 census were the same as those in the 1970 census with one main exception: for 1971 establishments were asked to include in capital expenditure, expenditure on units that were not in production in the year of return; for 1970 this expenditure was collected in a separate inquiry. This change of method of collection does not affect the results for 1970 and 1971 because capital expenditure for units not yet in production is included in the aggregates for both years.

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Coverage

Detailed census returns were generally sought only from establishments employing on average 25 or more persons, but in some industries where firms employing less than 25 persons account for a relatively high proportion of total employment and output the exemption limit was lowered to 11. Census returns were also sent to establishments whose employment was not known to the Business Statistics Office at the time of dispatch.

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These include all persons regarded as "self employed" for national insurance purposes and members of their families who worked in the business without receiving a fixed wage or salary; but such persons who worked less than half the normal number of working hours are excluded. Directors working in the business but not in receipt of a definite wage, salary or commission are included under this heading: directors paid by fee only are not included.

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The items shown are the value of plant and machinery and of vehicles acquired, both new and second-hand, and the amount received for items disposed of during year. The value of plant and machinery acquired includes plant, etc., which firms produced for their own use in connection with the business covered by the return. The value of plant, etc., acquired is the expenditure charged to capital account during the year of return less any discounts received, but including the cost of transport and installation. No deduction is made for depreciation, amortization or obsolescence. The proceeds of items disposed of during the year exclude amounts written off for items scrapped.

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Net output represents the value added to materials by the process of production (including the margin on selling any merchanted or factored goods). It is calculated as follows:—

Gross output
Less: Purchases adjusted for change in value of stocks of fuel and raw materials
Less: Payments for work given to other establishments
Less: Payments for transport
Less: Net amount of any duties, subsidies, allowances and levies payable
= Net output.

Net output per person employed

The figures of net output per person employed are derived by dividing the net output by the average number of persons employed (full time and part time) on all activities covered by the returns, including operatives, administrative, technical and clerical employees and working proprietors, but excluding outworkers.

Purchases

Purchases include the cost of materials and components bought for use in production; of fuel and electricity for all purposes; of packaging materials including the cost of returnable cases and containers when first purchased; of workshop materials, office materials and materials for repairs to establishment's own buildings, plants and vehicles when carried out by their own work people included in the returns; of consumable tools; and of parts for machinery purchased during the year as replacements. Water charges are also included. In general, purchases of goods for merchanding or factoring and canteen supplies are included. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account.

The values shown include any duty paid (less rebate, etc.) but exclude trade discounts allowed. The cost of transport is included only if included in the cost of materials as invoiced; amounts paid to transport organisations, including an establishment's own separate transport organisations for delivery of materials and fuel are, therefore, excluded. Materials purchased overseas are included at the c.i.f. cost plus any duty payable if the cost of transport from the docks was not included in the invoiced price, but at their full delivery cost if invoiced "carriage paid home". Materials and fuel transferred from another department of the establishment not covered by the same return are included at the estimated selling value recorded by the other department.

Sales

Sales are in respect of goods made by the business covered by the return, goods made for it by outworkers or by other establishments from materials given out to them (sometimes described as goods made on commission) and waste products. Any machinery or other capital items produced for use in the business covered by the return are included, the value being that adopted in the establishment's asset accounts. Goods sold without being subjected to any manufacturing process (i.e. merchanted or factored) and canteen takings are included. The value shown for sales is the net selling value, defined as the amount charged to customers whether on an ex-works or delivered basis excluding any trade discounts, agents' commissions, allowances for returnable cases, purchase tax, etc.; the net amount charged for packaging materials is included. Goods charged on a delivered basis to customers overseas are included at the f.o.b. value.

Goods produced in one establishment and transferred to another establishment of the same firm not covered by the return were treated as sales by the producing establishment and valued as far as possible as if they had been sold to an independent purchaser. Goods transferred to wholesale or retail selling organisations for which separate accounts were kept were valued on the same basis.

To the extent that sales of finished products of one establishment constitute the materials purchased by another, total figures of the value of sales (and of materials and fuel purchased) include an element of duplication. In some industries, e.g. motor vehicle manufacturing, and woollen and worsted, this duplication is substantial; and aggregates of the figures for a number of industries contain significantly greater amounts of duplication. For work done on commission, sub-contract work, etc., the value shown is the total amount charged for the work, including the value of any materials bought and used in such work.

Services rendered

This represents the amounts charged for hiring out plant, machinery and other goods, providing transport, or for any technical or other services rendered to other organisations. It includes amounts credited for similar services rendered to other establishments of the same enterprise not covered by the return.

Standard Industrial Classification

Industry classification is based on the Standard Industrial Classification (Revised 1968). It is published by HM Stationery Office together with a separate index in the form of an alphabetical list of industries.

Stocks and work in progress

Values are given of stocks of goods on hand for sale, and of materials and fuel, at the end of the year of return, including any stocks of goods held for merchanding or factoring. Values of the change during the year are also shown. The values include duty in the case of dutiable goods held out of bond.

The value of work in progress at the end of, and the change during, the year are also usually shown. This excludes any progress payments made to sub-contractors, and no deduction is made on account of progress payments received.

Transport payments

These represent the total amount paid or credited during the year for both outwards transport of finished goods sold and inwards transport of materials and fuel purchased. They include payment to other establishments, and to any separate transport organisation of the same establishment not covered by the return, but exclude the value of transport services provided by the business covered by the return. The items included are payments for hired cartage and for inwards and outwards carriage by all forms of inland transport, i.e. railways, road haulage, canals, coastwise shipping, air, etc. Payments made for sea and air freight on goods sold to customers overseas and on materials and fuel purchased from overseas suppliers are excluded.

Wages and salaries

These are amounts paid during the year to operatives and to administrative, technical and clerical employees. Payments to working proprietors, whether called salaries or not, are excluded. The values shown include all overtime payments, bonuses and commissions, whether paid regularly or not, and no deduction is made for income tax, insurances, contributory pensions, etc. The value of any payments in kind, travelling expenses, lodging allowances, etc. and employers' contributions to national insurances and pension schemes is excluded.

Work given out

The figures shown represent the total amount paid for work done by other establishments (whether part of the same enterprise or not) on materials supplied to them. They do not include payments to individual outworkers or payments for business and other services.

SYMBOLS USED

The following symbols are used throughout the report:

- .. not available
- nil or less than half the final digit shown
- * figures cannot be shown owing to the risk of disclosing information about individual enterprises
- R revised

ROUNDING OF FIGURES

Figures in the tables have, where necessary, been rounded to the nearest final digit; there may be an apparent slight discrepancy between the sum of the constituent items and the total shown.

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