

PA339.3

05/42(MA251)

42

R834

1973

BRITISH LIBRARY

19 AUG 1977

OF POLITICAL AND  
ECONOMIC SCIENCE

# Business Monitor

A publication of the Government Statistical Service

## Report on the Census of Production

**Refrigerating machinery,  
space-heating, ventilating  
and air-conditioning  
equipment**



Department of Industry  
Business Statistics Office

HMSO



# PA 339.3 Business Monitor

A publication of the Government Statistical Service

## Report on the Census of Production 1973

### Refrigerating machinery, space-heating, ventilating and air-conditioning equipment

Presented by the Secretary of State for Industry  
to Parliament in pursuance of the Statistics of Trade Act 1947  
(10 & 11 Geo.6 Cha.39 sec 7)

Department of Industry  
Business Statistics Office

London: Her Majesty's Stationery Office

#### Special Note for Purchasers

Commencing with the 1971 Census, the Census of Production reports are being numbered in a uniform series embracing all industrial inquiries in the Business Monitor series. These Business Monitors have a code P (for production) followed first by A (indicating that it is an annual series) or Q (quarterly) or M (monthly); and then by a number indicating the minimum list heading, or sub-division of a minimum list heading, of the Standard Industrial Classification (revised 1968).

The Census of Production (PA) reports are available on standing order (details on application to Her Majesty's Stationery Office, P.O. Box 569, London SE1 9NH. Telephone 01-928 6977), although they are not included in the global subscription arrangements for the Business Monitor series.

#### Government Statistical Service

A service of statistical information and advice is provided to the Government by specialist staffs employed in the statistics division of individual Departments. Statistics are made generally available through their publications and further information and advice on them can be obtained from the Departments concerned.

#### Enquiries:

Business Statistics Office  
Newport, Gwent  
NPT 1XG  
Newport 56111 (STD code 0633) ext 2455  
Telex 497121  
Answer Back BSONPT G



List of Industry Reports, etc.

PA1001	Introductory notes	PA369.1	Electrical equipment for motor vehicles, cycles and aircraft
PA101	Coal mining	PA369.2	Primary and secondary batteries
PA102	Stone and slate quarrying and mining	PA369.4	Electric lamps, electric light fittings, wiring accessories, etc.
PA103	Chalk, clay, sand and gravel extraction	PA370	Shipbuilding and marine engineering
PA104	Petroleum and natural gas	PA380	Wheeled tractor manufacturing
PA109	Miscellaneous mining and quarrying	PA381.1	Motor vehicle manufacturing
PA211	Grain milling	PA381.2	Trailers, caravans and freight containers
PA212	Bread and flour confectionery	PA382	Motor cycle, tricycle and pedal cycle manufacturing
PA213	Biscuits	PA383	Aerospace equipment, manufacturing and repairing
PA214	Bacon curing, meat and fish products	PA384	Locomotives, railway track equipment, railway carriages, wagons and trams
PA215	Milk and milk products	PA390	Engineers' small tools and gauges
PA216	Sugar	PA391	Hand tools and implements
PA217	Cocoa, chocolate and sugar confectionery	PA392	Cutlery, spoons, forks and plated tableware, etc.
PA218	Fruit and vegetable products	PA393	Bolts, nuts, screws, rivets, etc.
PA219	Animal and poultry foods	PA394	Wire and wire manufactures
PA221	Vegetable and animal oils and fats	PA395	Cans and metal boxes
PA229.1	Margarine	PA396	Jewellery and precious metals
PA229.2	Starch and miscellaneous foods	PA399.1	Metal furniture
PA231	Brewing and malting	PA399.5	Drop forgings, etc.
PA232	Soft drinks	PA399.6	Metal hollow-ware
PA239.1	Spirit distilling and compounding	PA399.8	Miscellaneous metal manufacture
PA239.2	British wines, cider and perry	PA411	Production of man-made fibres
PA240	Tobacco	PA412	Spinning and doubling on the cotton and flax systems
PA261	Coke ovens and manufactured fuel	PA413	Weaving of cotton, linen and man-made fibres
PA262	Mineral oil refining	PA414	Woolen and worsted
PA263	Lubricating oils and greases	PA415	Jute
PA271.1	Inorganic chemicals	PA416	Rope, twine and net
PA271.2	Organic chemicals	PA417.1	Hosiery and other knitted goods
PA271.3	Miscellaneous chemicals	PA417.2	Warp knitting
PA272	Pharmaceutical chemicals and preparations	PA418	Lace
PA273	Toilet preparations	PA419	Carpets
PA274	Paint	PA421	Narrow fabrics
PA275	Soap and detergents	PA422.1	Household textiles and handkerchiefs
PA276	Synthetic resins and plastics materials and synthetic rubber	PA422.2	Canvas goods and sacks and other made-up textiles
PA277	Dyestuffs and pigments	PA423	Textile finishing
PA278	Fertilizers	PA429.1	Asbestos
PA279.1	Polishes	PA429.2	Miscellaneous textile industries
PA279.2	Formulated adhesives, gelatine, etc.	PA431	Leather (tanning and dressing) and fellmongery
PA279.3	Explosives and fireworks	PA432	Leather goods
PA279.4	Formulated pesticides, etc.	PA433	Fur
PA279.5	Printing ink	PA441	Weatherproof outerwear
PA279.6	Surgical bandages, etc.	PA442	Men's and boys' tailored outerwear
PA279.7	Photographic chemical materials	PA443	Women's and girls' tailored outerwear
PA311	Iron and steel (general)	PA444	Overalls and men's shirts, underwear, etc.
PA312	Steel tubes	PA445	Dresses, lingerie, infants' wear, etc.
PA313	Iron castings, etc.	PA446	Hats, caps and millinery
PA321	Aluminium and aluminium alloys	PA449.1	Corsets and miscellaneous dress industries
PA322	Copper, brass and other copper alloys	PA449.2	Gloves
PA323	Miscellaneous base metals	PA450	Footwear
PA331	Agricultural machinery (except tractors)	PA461.1	Refractory goods
PA332	Metal-working machine tools	PA461.2	Building bricks and non-refractory goods
PA333	Pumps, valves and compressors	PA462	Pottery
PA334	Industrial engines	PA463	Glass
PA335	Textile machinery and accessories	PA464	Cement
PA336	Construction and earth-moving equipment	PA469.1	Abrasives
PA337	Mechanical handling equipment	PA469.2	Miscellaneous building materials and mineral products
PA338	Office machinery	PA471	Timber
PA339.1	Mining machinery	PA472	Furniture and upholstery
PA339.2	Printing, bookbinding and paper goods machinery	PA473	Bedding, etc.
PA339.3	Refrigerating machinery, space-heating, ventilating and air-conditioning equipment	PA474	Shop and office fittings
PA339.5	Scales and weighing machinery and portable power tools	PA475	Wooden containers and baskets
PA339.7	Food and drink, processing machinery and packaging and bottling machinery	PA479	Miscellaneous wood and cork manufactures
PA339.9	Miscellaneous (non-electrical) machinery	PA481	Paper and board
PA341	Industrial (including process) plant and steelwork	PA482.1	Cardboard boxes, cartons and fibre-board packing cases
PA342	Ordnance and small arms	PA482.2	Packaging products of paper and associated materials
PA349.1	Ball, roller, plain and other bearings	PA483	Manufactured stationery
PA349.2	Precision chains and other mechanical engineering	PA484.1	Wallcoverings
PA351	Photographic and document copying equipment	PA484.2	Miscellaneous manufactures of paper and board
PA352	Watches and clocks	PA485	Printing, publishing of newspapers and periodicals
PA353	Surgical instruments and appliances	PA489	General printing and publishing
PA354	Scientific and industrial instruments and systems	PA491	Rubber
PA361	Electrical machinery	PA492	Linoleum, plastics floor-covering, leathercloth, etc.
PA362	Insulated wires and cables	PA493	Brushes and brooms
PA363	Telegraph and telephone apparatus and equipment	PA494.1	Toys, games and children's carriages
PA364	Radio and electronic components	PA494.3	Sports equipment
PA365.1	Gramophone records and tape recordings	PA495	Miscellaneous stationers' goods
PA365.2	Broadcast receiving and sound reproducing equipment	PA496	Plastics products
PA366	Electronic computers	PA499.1	Musical instruments
PA367	Radio, radar and electronic capital goods	PA499.2	Miscellaneous manufacturing industries
PA368	Electrical appliances primarily for domestic use	PA601	Gas
		PA602	Electricity
		PA603	Water supply
		PA1002	Summary tables

PA339.3 REFRIGERATING MACHINERY, SPACE-HEATING, VENTILATING AND AIR-CONDITIONING EQUIPMENT

PA339.3 1

The information in this report relates to establishments classified to the Refrigerating machinery, space-heating, ventilating and air-conditioning equipment industry, minimum list heading 339.3/4 in the Standard Industrial Classification (revised 1968). The activities of the industry include:—

*Manufacturing refrigerating machinery, commercial refrigerators and commercial refrigerating equipment, including deep freeze and quick freeze machinery. The manufacture of domestic type refrigerators and deep freeze units (including non-electrical refrigerators) is excluded. Manufacturing space heating, ventilating and air-conditioning equipment, other than at foundries and dust extraction systems, including heater batteries, unit heaters, ventilators, hoods, cowls, ducting, etc., and self-contained air-conditioning machines. Establishments specialising in the installation of such equipment are excluded. Thermostats and similar measuring and controlling apparatus, domestic type electric heaters, fans, etc., self contained oil burners and gas heaters are also excluded.*

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

LIST OF CONTENTS

Table No	Title	Page
	United Kingdom establishments classified to the industry	
1	Output and costs, 1970, 1971, 1972 and 1973	PA339.3 2
2	Capital expenditure, 1970, 1971, 1972 and 1973	PA339.3 3
3	Stocks and work in progress, 1970, 1971, 1972 and 1973	PA339.3 3
4	Analysis of establishments by size, 1973	PA339.3 4-5
5	Regional distribution of employment, net capital expenditure and net output, 1973	PA339.3 6
6	Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 20 or more persons, 1973	PA339.3 7
7	Percentage analysis of employees, by full and part-time employment and sex, 1973	PA339.3 7
8	Sales of principal products of the industry by establishments employing 25 or more persons, including sales by establishments classified to other industries 1973.	PA339.3 8-9-10



TABLE 1

PA339.3 2

Output and costs, 1970, 1971, 1972 and 1973  
All United Kingdom establishments classified to the industry (a)

	Unit	1970	1971	1972	1973
Enterprises	Number	728	766	794	806
Establishments	"	769	832	858	869
Sales of goods produced, work done and industrial services rendered (b)	£'000				277,152
Capital goods produced for establishments' own use (c)	"	213,251	237,453	253,656	570
Non-industrial services rendered (d)	"				672
Goods merchanted or factored	"	11,526	12,550	14,193	16,113
<b>Total sales and work done (b) (d)</b>	"	<b>224,775</b>	<b>250,002</b>	<b>267,850</b>	<b>294,506</b>
Increase during the year, work in progress and goods on hand for sale	"	3,486	2,936	871	7,070
<b>Gross output (b) (d)</b>	"	<b>228,262</b>	<b>252,937</b>	<b>268,721</b>	<b>301,576</b>
Purchases of materials for use in production, and packaging and fuel (c)	"				140,099
Purchases of goods for merchenting or factoring (c)	"	119,768	129,743	131,163	13,402
Increase during the year, stocks of materials, stores and fuel	"	4,139	108	451	9,900
Cost of industrial services received (e)	"	4,162	5,155	4,587	6,718
<b>Net output (f)</b>	"	<b>108,470</b>	<b>118,149</b>	<b>133,421</b>	<b>151,257</b>
Total employment (g)	Thousands	44.6	45.8	45.2	45.8
<b>Net output per head (f)</b>	£	<b>2,432</b>	<b>2,580</b>	<b>2,952</b>	<b>3,301</b>
Payments for non-industrial services (h)					
Rents, hire of plant, machinery and vehicles	£'000				2,373
Commercial insurance premiums	"				1,582
Bank charges	"				161
Other non-industrial services	"				11,391
Licensing of motor vehicles (j)	"				177
Rates, excluding water rates (j)	"				2,146
<b>Gross value added at factor cost</b>	"				<b>133,426</b>
<b>Gross value added at factor cost per head</b>	£				<b>2,912</b>

(a) For 1973, estimates for establishments not making satisfactory returns and for establishments employing less than 20 persons accounted for 31 per cent of the total figures in which they were incorporated: of this unsatisfactory returns accounted for 21 per cent.

(b) The figures for 1970-1972 do not include receipts for repairs and maintenance.

(c) Not recorded separately for 1970-1972.

(d) The figures for 1970-1972 do not include revenue from rents for industrial buildings.

(e) The figures for 1970-1972 exclude the amounts payable for repairs and maintenance.

(f) The definition of net output used in previous census reports provided for the deduction of amounts payable to other organisations for transport of goods within the United Kingdom. The net output and net output per head figures on that basis were:-

Year	Net output £'000	Net output per head £
1970	105,625	2,368
1971	114,478	2,500
1972	129,931	2,872

Additionally, the figures for 1970-1972 do not reflect revenue from rents or amounts payable for repairs and maintenance (see footnotes d and e).

(g) Average number employed (full and part-time; see table 7) during the year (including working proprietors) by the establishment.

(h) Not collected for 1970-1972 except for amounts payable to other organisations for transport of goods within the United Kingdom.

(j) Not collected for 1970-1972.

TABLE 2

PA339.3 3

Capital expenditure, 1970, 1971, 1972 and 1973  
All United Kingdom establishments classified to the industry (a)(b)

	1970	1971	1972	1973
Land and buildings				
New building work	2,448	1,905	2,103	3,842
Land and existing buildings				
Acquisitions	1,178	1,686	1,745	333
Disposals	3,514	164	676	1,374
Vehicles				
Acquisitions				
Motor cars (c)	1,773	1,941	2,265	1,716
Other vehicles (c)				529
Disposals				
Motor cars (c)	638	748	953	716
Other vehicles (c)				110
Plant and machinery				
Acquisitions	4,223	5,008	5,402	7,950
Disposals	141	209	220	217
<b>Total net capital expenditure (d)</b>	<b>5,328</b>	<b>9,418</b>	<b>9,665</b>	<b>11,954</b>

(a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.

(b) Capital expenditure in respect of manufacturing establishments where production had not commenced before the end of the year, is included.

(c) Not recorded separately for 1970-1972.

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

TABLE 3

Stocks and work in progress, 1970, 1971, 1972 and 1973

All United Kingdom establishments classified to the industry (a)

	1970	1971	1972	1973
			Increase	Value at end of year
Materials, stores and fuel	4,139	108	451	9,900
Work in progress	1,705	1,059	1,610	5,019
Goods on hand for sale	1,781	1,877	- 739	2,051
<b>Total</b>	<b>7,625</b>	<b>3,044</b>	<b>1,322</b>	<b>16,969</b>

(a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.



TABLE 4

PA339.34

Analysis of establishments by size, 1973  
All United Kingdom establishments classified to the industry (a)

Size group (b)	Estab-lish-ments	Enter-prises (c)	Employment			Wages and salaries (e)			
			Total (b)	Opera-tives	Others (d)	Operatives		Others (d)	
						Total	per head	Total	per head
Number	Number	Number	Number	Number	Number	£'000	£	£'000	£
1 - 10	371	361	1,921	8,594	3,935	13,980	1,627	7,433	1,889
11 - 19	199	199	2,921						
20 - 49	125	122	3,827						
50 - 99	65	64	4,553						
100 - 199	61	58	8,242	5,499	2,739	9,006	1,638	5,123	1,870
200 - 299	17	17	4,025	2,487	1,538	3,958	1,591	2,934	1,908
300 - 499	11	11	4,009	2,584	1,425	4,420	1,711	3,045	2,137
500 - 749	13	13	8,198	5,283	2,915	9,080	1,719	5,823	1,998
750 - 999	3	3	2,841	1,769	1,072	2,968	1,678	2,089	1,949
1,000 and over	4	4	5,279	3,136	2,143	5,096	1,625	4,769	2,225
<b>Total</b>	<b>869</b>	<b>806</b>	<b>45,816</b>	<b>29,352</b>	<b>15,767</b>	<b>48,507</b>	<b>1,653</b>	<b>31,217</b>	<b>1,980</b>

- (a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.  
(b) Average number employed (full and part-time; see table 7) 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 therefore exceeds the total for the industry.  
(d) Administrative, technical and clerical employees.

PA339.35

Total sales and work done (f)	Gross output	Net output	Gross value added at factor cost		Net capital expenditure (g)	Total stocks and work in progress at end of year	
			Total	per head			
							Total
£'000	£'000	£'000	£	£'000	£	£'000	£'000
78,014	79,373	38,948	2,946	(h)	(h)	2,021	14,963
49,998	51,601	25,813	3,132	57,428(h)	2,676(h)	1,347	12,661
27,320	27,821	13,657	3,393	12,017	2,986	1,057	16,730
26,379	26,957	13,066	3,259	11,651	2,906	1,039	5,456
53,160	55,400	27,097	3,305	24,047	2,933	4,035	14,676
23,559	23,960	13,329	4,692	12,060	4,245	825	3,349
36,076	36,465	19,346	3,665	16,223	3,073	1,630	11,592
<b>294,506</b>	<b>301,576</b>	<b>151,257</b>	<b>3,301</b>	<b>133,426</b>	<b>2,912</b>	<b>11,954</b>	<b>69,427</b>

- (e) Another important component of labour costs, employers' national insurance contributions, graduated pensions, contributions to other pensions and welfare schemes and the running costs of canteens, is estimated for the industry at £7,782 thousand.  
(f) Comprises sales of goods produced (including capital goods manufactured, buildings constructed by establishments for their own use), work done, industrial and non-industrial services rendered, goods merchanted or factored.  
(g) New building work plus acquisitions less disposals of land and existing buildings, vehicles and plant and machinery.  
(h) Gross value added data relates to establishments employing 1-199 persons.



TABLE 5

PA339.3 6

Regional distribution of employment, net capital expenditure and net output, 1973  
All United Kingdom establishments classified to the industry (a)

Area	Employment (b)		Net capital expenditure (c)				Net output and employment in the region of establishments with more than 80 per cent of their employment in the region (e)		
	Thousands	per cent of United Kingdom	£'000	per cent of United Kingdom	£'000	Other (d)	Estimated net output	Average number employed as a percentage of total average number employed in the industry in the region	Net output as a percentage of total of the industry in the United Kingdom
Standard regions of England									
North	2.6	5.7	793	6.6	*	*	7,059	80.1	4.7
Yorkshire and Humberside	3.9	8.5	422	3.5	*	*	12,104	83.4	8.0
East Midlands	3.0	6.5	1,446	12.1	11	1,434	10,333	83.6	6.8
East Anglia	1.0	2.2	155	1.3	9	147	920	36.0	0.6
South East	18.6	40.6	4,678	39.2	*	*	37,777	66.7	25.0
South West	1.1	2.4	254	2.1	8	247	1,690	42.4	1.1
West Midlands	4.2	9.2	777	6.5	*	*	10,066	59.5	6.7
North West	5.1	11.1	1,450	12.2	8	1,442	8,187	46.1	5.4
England	39.5	86.2	9,976	83.5	*	*	88,137	65.6	58.3
Wales	*	*	*	*	*	*	*	*	*
Scotland	3.6	7.8	792	6.6	*	*	4,640	58.4	3.1
Great Britain	*	*	*	*	*	*	*	*	*
Northern Ireland	*	*	*	*	*	*	*	*	*
Unallocated (a) (f)	-	-	-	-	-	-	51,830	-	34.3
United Kingdom	45.8	100.0	11,954	100.0	-1,041	12,995	151,257	/	100.0

(a) Including estimates for establishments not making satisfactory returns and for establishments exempted by virtue of size.

(b) Average number employed (full and part-time; see table 7) during the year (including working proprietors).

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

(d) Acquisitions less disposals.

(e) 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.

(f) Includes unallocated net output of establishments covering addresses in two or more regions.

TABLE 6

PA339.3 7

Percentage analysis of twelve-month periods covered by returns received from United Kingdom establishments employing 20 or more persons, 1973

Accounting year ended	Percentage of total returns received		Percentage of total number employed	
	per cent		per cent	
1973 April (a)	1.1	0.7		
May	1.6	0.6		
June	4.8	4.7		
July	0.5	0.2		
August	2.6	0.7		
September	6.3	5.9		
October	6.3	4.6		
November	1.1	0.3		
December	43.9	44.2		
1974 January	3.2	2.5		
February	2.7	2.7		
March (b)	25.9	32.9		
	<b>100.0</b>	<b>100.0</b>		

(a) From 6th April.

(b) Including returns made for twelve-month period ended 1st to 5th April 1974.

TABLE 7

Percentage analysis of employees, by full and part-time employment and sex, 1973 (a)  
Other machinery industries, minimum list heading 339

Sex	Full-time	Part-time	All employees
	per cent	per cent	per cent
Male	83	1	84
Female	13	3	16
	<b>96</b>	<b>4</b>	<b>100</b>

Source: Department of Employment

(a) The percentages relate to the numbers employed (excluding working proprietors) in the United Kingdom in minimum list heading 339 at mid-June, 1973. In the 1973 Census of Production the employment of the Refrigerating machinery, space-heating, ventilating and air-conditioning equipment industry represented 22 per cent of the employment of minimum list heading 339 as a whole.



TABLE 8

PA339.3 8

Sales of principal products of the industry by establishments employing 25 or more persons, including sales by establishments classified to other industries, 1973 (a)

	Quantity		Value	
	Number		£'000	
Refrigerating machinery (except domestic type refrigerators):				
Refrigeration machinery and components:				
Compressors and condensing units:				
All types	..		20,419	
Components (e.g. evaporators, condensers, refrigeration valves)	..		12,254	
Replacement parts	..		2,899	
Refrigerated cabinets and cold storage equipment:				
Sectional coldrooms		2,480		2,354
Service cabinets (reach in, with or without windows) above 12 cu ft		16,495		2,942
Frozen products display cases for temperatures - 10°C and below		7,034		2,431
Display cases for temperatures above - 10°C		15,397		4,267
Food freezers (chest and vertical types above 12 cu ft) and all ice cream conservators		120,855		7,713
Self-contained refrigerating units:				
Packaged liquid chillers:				
Reciprocating		1,601		2,003
Centrifugal, screw and absorption		196		2,098
For other uses (e.g. transport refrigeration units, ice makers and drinking water fountains)		80,063		5,521
Total refrigerating machinery	..			64,900
Space-heating, ventilating and air-conditioning equipment:				
Space-heating (excluding process heating and domestic appliances up to and including 3 kw):				
Warm air generators:				
Up to and including 50 kw (domestic)		160,900		7,725
Over 50 kw (non-domestic)		36,420		7,824
Parts	..			1,545
Boilers for central heating:				
Domestic (including master radiator units)		430,725		28,251
Non-domestic 51 kw and over (excluding process and steam boilers)		18,791		7,026
Heat emitters:				
Radiators (including cast iron), finished		4,651,944		23,019
Other (including forced and natural draught convectors, radiant panel and strip)		597,280		16,390
Other water, steam and radiant heating equipment, parts and components (including calorifiers, direct and indirect cylinders and mechanical stokers)	..			9,364
Total space-heating equipment	..			101,144
Ventilating:				
Fans, with or without drives, with or without casing (excluding desk and ceiling fans):				
Propeller		164,051		4,557

TABLE 8 (continued)

PA339.3 9

	Quantity		Value	
	Number		£'000	
Space-heating, ventilating and air-conditioning equipment: (continued)				
Ventilating: (continued)				
Fans, with or without drives, with or without casing (excluding desk and ceiling fans): (continued)				
Axial		456,058		13,571
Other (including tangential, cross flow and centrifugal)		581,943		6,712
Ventilating units (9" and above) powered and unpowered		356,038		9,551
Parts for fans and ventilating units	..			2,676
Total ventilating equipment	..			37,067
Air-conditioning:				
Air-conditioning packages:				
Room units (including window, "through the wall", self-contained, split units up to and including 9,000 kcal and heat reclaim units):				
Not exceeding 3,000 kcal		15,670		3,224
Over 3,000 up to 6,000 kcal		15,639		2,150
Over 6,000 kcal		209		209
Split systems, complete, above 9,000 kcal				
Other self-contained air-conditioners (all ratings)		3,100		2,216
Central system major components:				
Central station air handling units		4,386		4,753
Fan coil units and induction units		13,212		642
Condensers, air cooled		48,080		3,020
Condensers, water cooled		4,463		675
Evaporative condensers and cooling towers		770		1,330
Duct mounted and zone mixing boxes				
Sound and pressure attenuators for incorporating in ducting		20,008		972
Air treatment and distribution equipment:				
Air filters, all types		344,868(b)		2,554(b)
Humidifiers		4,144		94
Air terminal devices (grilles, diffusers and registers)		1,570,179		4,412
Other components and parts of air-conditioning equipment not elsewhere specified	..			7,186
Ducting and parts:				
Ducting for heating, ventilating, air treatment and air-conditioning systems	..			23,964
Other fabricated parts (e.g. hoods, cowls, turning vanes, straps, hangers)	..			2,267



TABLE 8 (continued)

PA339.3 10

	Quantity		Value £'000
	Number		
Total air-conditioning equipment	..		59,669(b)
Waste products	..		245
Work done:			
Machinery and plant (other than marine machinery, complete process plant and constructional steelwork) erected and installed:			
Mechanical	..		11,889
Other	..		2,408
Repairs and jobbing work	..		4,416
Other work done (including jacquard card designing and cutting)	..		1,157
Unclassified sales	..		8,378
Total sales of principal products of the Refrigerating machinery, space-heating, ventilating and air-conditioning equipment industry (MLH 339.3 and 339.4) and work done			291,273

Source: Business Monitor (PQ 339.3). Quarterly Statistics

- (a) Sales are deliveries on sale for home or abroad; forward sales are excluded. Values are net selling values, value added tax (or purchase tax where previously applicable) trade discounts and commissions are excluded.
- (b) Figures for air washers included.



## Notes

These notes give the main information needed for interpreting the figures in the industry Business Monitors: more detailed information about the census is given in a separate Business Monitor — PA1001 (Introductory Notes) of the Report on the Census of Production, 1973.

### GENERAL INFORMATION

#### *Changes made for 1973*

The Census for 1973 was the first to be modified to bring it into line with similar inquiries being conducted in other member countries of the European Economic Communities. One modification has made possible the publication for the first time in the Annual Censuses of data on a number of additional items. These include:

- Capital goods purchased for establishments' own use (previously included with sales of goods produced etc.)
- Purchases of goods for merchandising or factoring (previously included with purchases of materials etc.)
- Payments for non-industrial services
- Licensing of motor vehicles
- Rates, excluding water rates
- Gross value added
- Amounts paid to outworkers (where applicable)
- Employers' national insurance contributions etc.

#### *Suppression of information relating to individual undertakings.*

The Statistics of Trade Act 1947 provides that — "No individual estimates or returns, and no information relating to an individual undertaking obtained under the foregoing provisions of this Act, shall, without the previous consent in writing of the person carrying on the undertaking which is the subject of the estimates, returns or information, be disclosed except—

(a) in accordance with directions given by the Minister in charge of the government department in possession of the estimates, returns or information to a government department or to the Import Duties Advisory Committee for the purposes of the exercise by that department or committee of any of their functions; or

(b) for the purposes of any proceedings for an offence under this Act or any report of these proceedings."

If a figure involved disclosure the contributor concerned was sometimes asked to give permission for its publication. In the majority of cases this permission was given but when it was refused and in cases where the contributors were not approached the figure has been suppressed, sometimes by combining it in some way with other figures, but sometimes — as in the regional tables by omitting the figure altogether.

#### *Symbols used*

The following symbols are used throughout the P A series of Business Monitors:

- .. 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, therefore, be an apparent slight discrepancy between a sum of constituent items and a total shown.

#### *Industrial classification*

The United Kingdom Standard Industrial Classification (SIC) was first issued in 1948 and was subsequently revised in 1958 and 1968. It exists to promote uniformity and comparability in the official statistics of the United Kingdom. The general principles followed are those of the International Standard Industrial Classification of all Economic Activities of the United Nations Statistical Office but the United Kingdom SIC reflects the organisation and structure of industry and trade as it exists in the United Kingdom. The SIC is a classification by activity and is not a commodity classification. However, an index of all commodity headings for which sales data are provided in the Quarterly Business Monitors is published as PQ1000 in the Business Monitor Series.

The SIC is revised every 10 years or so and is to be revised to bring it more closely into line with the General Industrial Classification of Economic Activities within the European Communities (NACE).

#### *Statistical units*

The statistical unit for the purpose of the Census is the establishment which is defined in the SIC as the smallest unit which can provide the information normally required for an economic census, for example, employment, expenses, turnover, capital formation. Usually the principal activities carried on in an establishment fall within a single heading of the classification (e.g. steel making or sugar refining). Typically the establishment embraces all the activities carried on at a single address e.g. a farm, a mine, or a factory, including those which are ancillary to the principal activities. Frequently distinct activities characteristic of different industries are carried on at one address, but normally these are not classified separately and the whole establishment is classified according to the main activity. If, however, the required range of data can be provided for each activity, each is taken to constitute a separate establishment. Sometimes activities which are conducted as a single business are carried on at a number of addresses. Where this is so, businesses are asked to provide the full range of separate information in respect of each address, whether or not the activities are different. Their activities may, however, be integrated to such an extent that they constitute a single establishment. In that case the establishment is defined to cover the combined activities at these addresses (termed local units). Separate figures are obtained, however, of employment and net capital expenditure at each unit.

Efforts are made by the Business Statistics Office to ensure, by negotiating with respondents, that the return from an establishment does not cover local units on addresses in more than one of the countries of the United Kingdom.

Further information about the statistical unit appeared in an article "The statistical unit in business inquiries" in Statistical News No. 13 May 1971.

Establishments are asked to exclude from their returns particulars relating to any department not engaged in production e.g. merchandising, transport, warehousing, for which they keep a separate set of accounts. Transfers of goods produced to such departments are treated as sales and respondents are asked to value them as far as possible as if sold to an independent purchaser. Where separate accounts are not kept they are asked to include details of all these activities in their return.

Particulars relating to head offices, which were mainly engaged in the administration of the production units within the scope of the census were included. Where more than one return was made the information in respect of the head office was apportioned among them.

For certain purposes in the annual censuses of production (especially the enterprise analyses of Business Monitor PA 1002) related establishments are combined. For these purposes an enterprise group is defined as a business consisting of either a single establishment, or of two or more establishments under common ownership or control. The bringing together of establishments into enterprise groups is also necessary for the purpose of ensuring that there will be no disclosure of the activities of any one enterprise group. Information about the relationship of establishments, the changing structure of groups of companies and about common ownership links is obtained from many sources, including the Stock Exchange Year Book, company reports, press reports and information supplied by individual establishments.

#### THE REGISTER

The register permits a questionnaire to be sent direct to the reporting establishment on which the latter can include information relating to all the manufacturing (or local) units which it comprises.

The inquiries provide a major source of information for keeping the register continuously up-to-date and act as a check on its detail and structure. For the establishments on the register which make returns to the quarterly inquiries, the industrial classification is derived from an analysis of their sales of commodities and is reviewed annually. Employment data is entered on the register from returns to the annual census of production. In cases where an establishment does not make a return to these inquiries the employment data is based on information provided by the Department of Employment from the annual censuses of employment.

Establishments with 20 or more employees are included in the censuses each year and the information they supply to the



census is supplemented by the returns that those of them with 25 or more employees provide to the quarterly inquiries. Information about establishments with less than 20 employees in most industries is less securely based, but increasing use has been made of data on these small establishments supplied by the Department of Employment. One benefit of using this information is an improvement in the estimates of the number of smaller establishments and enterprises, but there is little effect on other aggregates (e.g. employment, output, net capital expenditure).

#### Coverage

A return was required in the 1973 Census from each establishment with 20 or more employees. Each establishment is classified to an industry, as defined in the SIC, whose principal products form the major part of the establishment's sales.

#### Regions

The regions defined in Table 5 do not take account of the boundary changes arising out of the Local Government Act 1972 and the Local Government Act (Scotland) 1973. As these boundary changes did not come into effect until April 1974 in England and Wales and in May 1975 in Scotland, the regions defined for these analyses are consistent with boundaries which existed in 1973.

#### 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
- (b) all other employees (operatives)

Averages could be calculated from the 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 establishment) 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 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 directors in receipt of a definite wage, salary or commission, managers, superintendents and works foremen; research, design employees (other than operatives); draughtsmen, editorial staff, advertising staff, travellers and all office employees.

Operatives include all other classes of employees, that is, broadly speaking, all manual wage earners. They include operatives employed in power stations, transport (including roundsmen), warehouses, stores, shops and canteens, inspectors, maintenance workers and cleaners. Operatives engaged in outside work of erecting, fitting etc. are also included, but outworkers 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 1970 to 1973. Establishments were asked not to deduct from the value of capital expenditure amounts received or expected to be received in grants or allowances from the Government or any statutory body or local authority. Establishments with 100 or more employees were also asked to include a total net capital expenditure figure for the calendar year 1973.

##### (a) New building work

This represents the cost incurred during the year of new building and other constructional work to be used in connection with the business covered by the return. 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 the 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. Deductible value added tax is excluded but non-deductible value added tax on motor cars acquired is included. 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.

##### Gross output

In the calculation of gross output the value of total sales and work done is increased by the rise (or reduced by the fall) during the year in the value of work in progress and goods on hand for sale.

##### Net output

Net output, a customary census measure, is calculated by deducting from gross output the cost of purchases (reduced by the rise, or increased by the fall, during the year of stocks of materials etc.) and the cost of industrial services received, and — where applicable — duties etc.

##### Net output per head

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

##### Gross value added at factor cost

Gross value added at factor cost is calculated by deducting from net output the cost of non-industrial services (rent of buildings and capital equipment, commercial insurance premiums, bank charges and amounts paid for professional services, postal etc. services, transport, advertising etc.). This estimate of gross value added approaches more closely than census net output to the definition of net output or value added in national accounts statistics.

##### Gross value added at factor cost per head

The figures of gross value added at factor cost per head are derived by dividing the gross value added by the average number of persons employed (full 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, plant 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. Purchases of goods for merchanting or factoring were collected separately for 1973. Materials supplied by customers for processing are excluded, as are all purchases charged to capital account. The values shown exclude value added tax but include any duty paid (less rebate etc.), values 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 are 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 of goods produced, work done and industrial services rendered

Sales for the purposes of the annual censuses means deliveries on sale of goods made by establishments in the United Kingdom covered by the inquiry. Sales of goods made for these establishments by outworkers or by establishments from materials given out to them are included; as also are sales of waste products. Any new building work and machinery or other capital items produced by establishments for hiring out or leasing are regarded as sales, the value included in the return being that adopted in the establishments' capital asset accounts. Forward sales and canteen takings are excluded. All sales in the period of the injury are included irrespective of when the goods were manufactured. Goods produced in one establishment and transferred either to ancillary departments not engaged in production and for which there are separate accounts, or to another establishment of the same firm not covered by the return, are 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 are kept are valued on the same basis.

The value shown for sales is the "net selling value" defined as the amount (excluding value added tax) charged to customers whether on an ex-works or delivered basis, after any trade discounts and agents' commissions have been deducted. The cost of packing materials less allowance for returnable cases is included. In industries where products attract Excise Duty the value stated is usually inclusive of duty if sold duty-paid and exclusive of duty if sold in bond or exported.

Figures for work done represent the amount charged for work carried out on materials supplied by a customer and include repair work. Within certain industries this heading covers a wide variety of activities. For example, within the food sector — butter packed on commission; within the textile industries — making up of garments, fur dressing and textile finishing; within printing and publishing — preparatory work on type-setting, block making and binding. Work done is also significant in the electrical machinery and heavy engineering industries, covering erection, installation and repair and jobbing work. Other activities within this heading include exploration work, research and development, glass cutting and dressing and planing of timber. Industrial services rendered includes repairs and maintenance, installation work, and technical research and studies rendered to other organisations.

##### Capital goods produced for establishments' own use

This includes all work carried out during the year by the establishments' own staff for their own use, which was of a capital nature.

##### Non-industrial services rendered

Includes rents received for commercial and industrial buildings, amounts charged for hiring out plant, machinery and other goods and amounts charged to other organisations for the provision of transport. Also includes amounts received for the right to use patents, trademarks, copyrights etc., manufacturing and quarrying rights and technical "know-how"; revenue from such staff facilities as canteens are also included.

##### Goods merchant or factored

Merchant goods are those (excluding canteen sales) sold without having been subjected to any manufacturing process by the seller.

##### Stocks and work in progress

Values are given of stocks of goods on hand for sale and of materials, stores and fuel, at the end of the year of return and of the change during the year, including any stocks of goods held for merchanting or factoring. Work in progress is defined as materials which have been partially processed by the establishment but which are not usually sold or transferred to another establishment without further processing. The values include the cost of materials consumed and labour used, together with a margin of overhead costs, and profits. Progress payments made to sub-contractors are excluded and progress payments received from other organisations are not deducted.

##### 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 are excluded.

##### Remuneration paid to outworkers

The remuneration paid to outworkers (i.e. persons employed by the establishment who do their work in their own homes) is generally on a piece-work basis. Only amounts paid to outworkers whose names appear on the establishment's payroll are included. Amounts paid to outworkers by sub-contractors are excluded.

##### Employers' insurance and welfare contributions

This item includes employers' contributions to national insurance and graduated pensions as well as commercial insurance premiums to provide pensions, superannuation or other retirement benefits, sickness benefits, personal accident benefits, disability or death benefits for employees or former employees or their dependants. Contributions to the running costs of canteens, social centres, children's holiday homes, etc. for employees, former employees, and their dependants are also included.



© Crown copyright 1977

**Her Majesty's Stationery Office**

*Government Bookshops*

49 High Holborn, London WC1V 6HB

13a Castle Street, Edinburgh EH2 3AR

41 The Hayes, Cardiff CF1 1JW

Brazennose Street, Manchester M60 8AS

Southey House, Wine Street, Bristol BS1 2BQ

258 Broad Street, Birmingham B1 2HE

80 Chichester Street, Belfast BT1 4JY

*Government publications are also available  
through booksellers*