

Weathermaster Induction System, 1963 [16/BL50, page 1-5]

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APPENDIX-A COMMERCIAL AIR CONDITIONING PROJECTS, 1921-38

Taken from CHG Document 6/502-1

CEC would describe air washer systems, without refrigeration as "air conditioning," so not all the projects listed were equipped with mechanical cooling.

STUDIOS

The British Broadcasting Corporation
Broadcasting House, Portland Place, London
Maida Vale, London
Glasgow
Delhi Broadcasting Station
The Gramophone Co Ltd, Recording Studios, St John's Wood, London

OFFICE BUILDINGS

Bartlett House, London
Courtaulds Ltd (Board Room)
Evening Standard, London
Government Secretariat, New Delhi
Hospitals' Trust Ltd, Dublin
Humber Ltd, Coventry
Kleinwort, Sons & Co Ltd, London
J Lyons & Co Ltd, Spike House, London
Martin & Company, Calcutta
Michelin et Cie, Clermont Ferrand
National Bank of Egypt
National City Bank of New York, Calcutta
North Western Railway, Lahore
Princes House, Gresham Street, London
Rover Company Ltd
Whitehall Securities Ltd

THEATRES/CINEMAS

Brighton Astoria
Brixton Astoria, London
Cambridge Theatre, Seven Dials, London
Cinema Bel-Air Metropole, Lausanne
Cinema "Les Varieties," Toulouse
Cinema Metropole, Brussels
Cinema des Beaux Arts, Monte Carlo
Cinema et Salle de Musique, Monte Carlo
Cineac, Paris, Nice, Marseilles, Lille, Brussels, Liege
Carlton Theatre, Haymarket, London
Empire Theatre, Leicester Square, London
Finsbury Park Astoria, London
Imperial Theatre, New Delhi
Intransigent Theatre, Paris
Le Rex, Paris
l'Olympia, Paris
Le Paramount, Paris
New Empire Theatre, Calcutta
Paramount Theatres
 Tottenham Court Road, London
 Leeds
 Manchester
 Newcastle
Plaza, New Delhi
Poissoniere Theatre, Paris
Southend, Astoria
Streatham Astoria, London
Warner Theatre, Leicester Square, London

Missing from this Carrier list is the Broadway Cinema at Stratford in East London, the first to be "conditioned" by CEC, with a washer only, no refrigeration, c.1926.

HOTELS

Cumberland Hotel, London
Great Eastern Hotel, Calcutta
Le Bristol Hotel, Paris
Regent Palace Hotel, London
Strand Palace Hotel, London

RESTAURANTS

Brasserie la Maxeville, Paris
Blackpool Casino
Coventry Street Corner House, London
Cumberland Corner House, London
Empire Hall, Olympia, London
Fullers Ltd, London
The Bristol Hotel, Paris
Oxford Corner House, London (*retrofitted, 1936)
Regent Palace Hotel, London
Restaurant Maxims, Paris
Salle des Banquets, Hotel Metropole, Brussels
Strand Corner House Braserie, London
Taverne Royal, Brussels
Trocadero Restaurant, London

CASINOS

Casino de la Foret, Le Touquet
Casino Municipal, Juan-les-Pins
New Casino, Blackpool
Sporting Club d'Hiver, Monte Carlo

KITCHENS

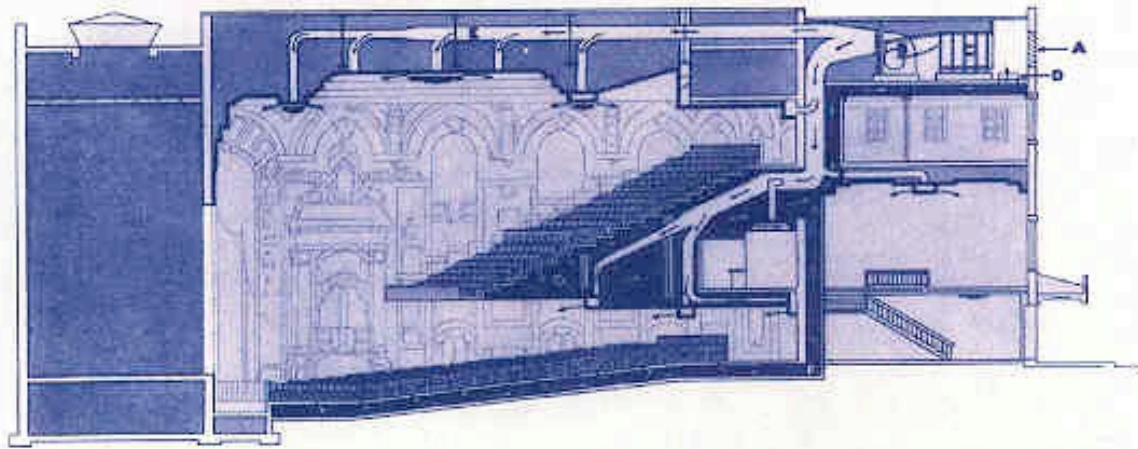
Blackpool Casino
Coventry Street Corner House, London
Cumberland Hotel, London
Empire Hall, Olympia, London
Houses of Parliament, London
Junior Carlton Club, London
London Casino
Regent Palace Hotel, London
Sporting Club d'Hiver, Monte Carlo

HOSPITALS

Delhi Tuberculosis Hospital
Jaipur General Hospital
Jodhpur Hospital
Lady Willingdon Hospital, Lahore
London School of Hygiene & Tropical Medicine
Staff Hospital, Abadan
Staff Hospital, Trinidad

OTHER LARGE INSTALLATIONS

Bengal Legislative Chamber, Calcutta
John Barker & Company Ltd, London
Bombay Legislative Chamber
Camberwell Town Hall, London
Galeries Lafayette, Paris
Jodhpur Palace, Jodhpur
Khasbagh Palace, Rampur
Lloyd's, London
London County Hall
Masonic Peace Memorial
New Delhi Legislative Building
Newington Sessions House, London
Rambagh Palace, Jaipur
Sixty, Avenue Road, London
Stock Exchange, London



*Diagram of Theatre
Ventilated by Carrier Air Conditioning System*

- | | |
|---|---------------------|
| A Fresh Air Inlet | D Return Air Damper |
| B Fan | E Main Supply Duct |
| C Carrier Air Conditioning
Machine | F Return Air Duct |
| G Void under Balcony used for Return Air Duct | |

CEC cinema cooling system with spray washer (no refrigeration), c.1932 [6/567, page 27].



*Ballroom of the Dorchester Hotel, London, c.1930. Air conditioned by CEC.
[5/567, page 31].*

APPENDIX-B

INDUSTRIAL AIR CONDITIONING CLIENTS, 1921-38

Taken from CHG Document 6/502-1

CEC would describe air washer systems, without refrigeration as "air conditioning," so not all the projects listed were equipped with mechanical cooling.

Abdulla & Co Ltd, London, The Hague & Brussels (13 plants)
Ahmedabad Mills (5 plants)
Associated Newspapers Ltd, London & Manchester
Atherton Mills, Cawnpore

Barclay Perkins & Co Ltd
Berkshire Printing Co Ltd
Boots Pure Drug Co Ltd, Nottingham
British-American Tobacco Co Ltd
British Cellophane Ltd, Bridgwater
British Zylonite Co Ltd
Brown & Nolan Ltd, Dublin

Cadbury Brothers Ltd
Carborundum Company Ltd
Carreras Ltd, London (13 plants)
Catalin Ltd, Waltham Abbey
Sir Joseph Causton & Sons Ltd, Eastleigh
Chaussures Monteux
Cheadle Textiles Ltd
Co-operative Wholesale Society Ltd, London
Courtaulds Ltd, Coventry
Crown Cork Ltd, Southall

H L Driver Ltd, Leicester
Evening Standard, London
Thomas Forman & Sons, Nottingham
J S Fry & Sons Ltd, Bristol & Somerdale (4 plants)
Fuse Loading Factory, Kirkee, India

Gallaher Ltd, Belfast
D Gestetner Ltd, London
Gevaert, Antwerp
Haigh & Sons
F W Hampshire & Co Ltd
Hely's Printing Works, Dublin
R & J Hill Ltd, London
Hudson Scott Ltd, Carlisle

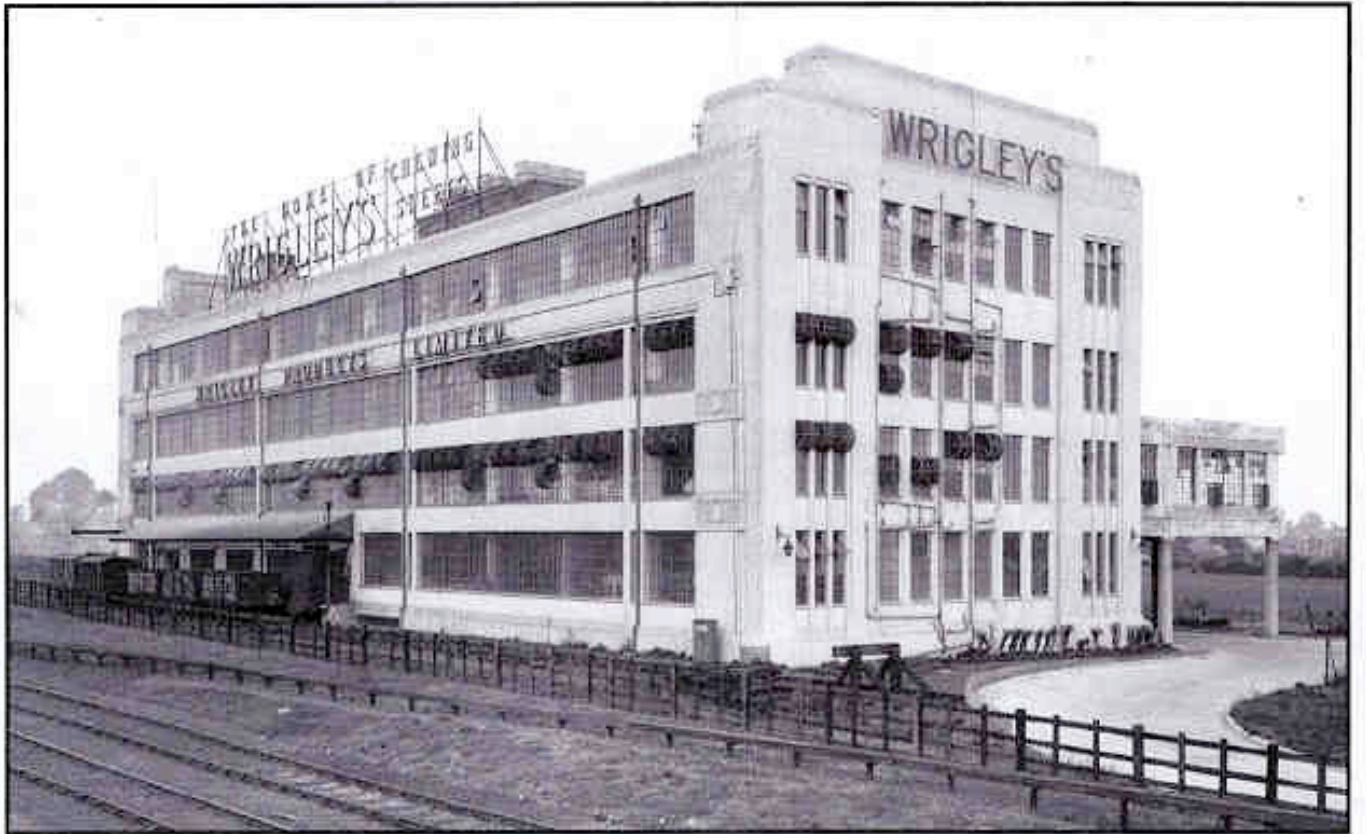
Imperial Chemical Industries, Ltd
W & R Jacobs Ltd, Dublin
Ben Johnson & Co Ltd, York
Kesoran Cotton Mills, Calcutta
Kirklees Ltd, Bury
Kraft Dairies Ltd

Ed Laurens, Geneva
J Lyons & Co Ltd, Greenford & Cadby Hall, London (9 plants)
J Mackintosh & Sons Ltd
Mars Confections Ltd, Slough
Marsden Mills, Ahmedabad
McVitie & Price Ltd, Harlesden & Manchester (5 plants)

North British Rayon Co Ltd, Jedburgh
North British Rubber Co Ltd, Edinburgh
Norton Grinding Wheel Co Ltd
Olympic Kinematograph Laboratories, London (4 plants)
Godfrey Phillips Ltd, London
Pilkington Brothers Ltd

Rowntree & Co Ltd, York
Royal Air Force, Kidbrooke
Shahinian Ltd, Alperton
Spillers Ltd, Newcastle
John G Stein & Co Ltd
Sun Engraving Co Ltd, Watford

Tate & Lyle Ltd, London (7 plants)
Technicolour Ltd, Harmondsworth
Joseph Terry & Sons Ltd, York
United Match Industries Ltd, Bishops Stortford
Universal Grinding Wheel Co Ltd
Van Nelle Rotterdam
W R Warner Ltd, London
W R Wilkinson & Co Ltd, Pontefract
Wrigley Products Ltd, Wembley



Factory of Wrigley Products (The Home of Chewing Sweets), Wembley, c.1927 [p-651].

APPENDIX-C**WEATHERMASTER PROJECTS post-war**

Taken from CHG Document [12] R97-10, dated 20 April 1967, listed in alphabetical order.

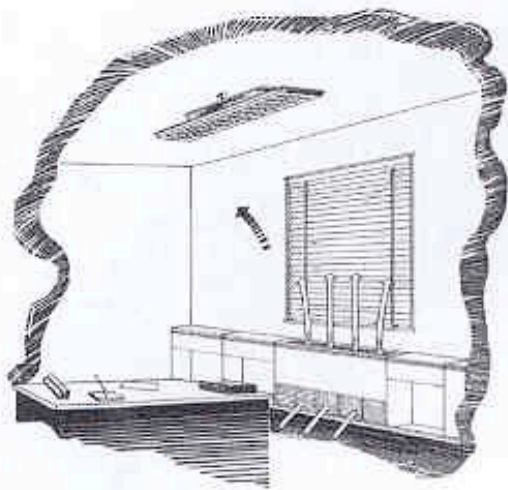
Project/Client [Description Reference]	No. of Induction Units
CARRIER ENGINEERING COMPANY LTD, LONDON	
Aer Lingus, Dublin	324
Ariel Hotel, Heathrow [R97-13]	186
Automobile Association, London	36
Lewis Berger Ltd, London	12
Birmingham Post & Mail, Birmingham [R97-5]	406
BISRA Laboratories, Liverpool	65
Cambridge University Press, Cambridge	188
The Chartered Bank, London	26
City of London Real Property Co Ltd, London	396
City Road Development, London	938
Commercial Union Assurance Co Ltd, Leeds	101
Co-operative Insurance Society, Manchester [R97-6]	1580
Co-operative Permanent Building Society, London	179
Durham University Science Library, Durham	117
Ellis & Goldstein Ltd, London	15
Guardian Assurance Co Ltd, Bristol	42
G N Haden & Sons Ltd, London	
Pilkington Brothers Ltd, Lancashire	1660
CAV Ltd, London	26
Radiation Ltd, London	187
Salvation Army HQ, London	391
Chestergate House, London	643
J Laing & Son Ltd, London	496
CINB, London	22

	3425
Hanover Court, London	267
Hoover Ltd, London	22
Irish Assurance Co Ltd, Dublin	246
Kleinwort, Sons & Co Ltd, London	10
London & Manchester Assurance Co Ltd, London	443
Joseph Lucas Ltd, Birmingham	124
Mars Ltd, Slough	14
Mavor & Coulson Ltd, Glasgow	190
13/15 Moorgate & 51/55 Coleman Street, London	140

Project/Client [Description Reference]	No. of Induction Units
Orient Line to Australia, London	154
Petra Investments Ltd, London	220
Planning & Development Ltd, Duke Avenue, Surrey	613
Planning & Development Ltd, Grafton Road, Croydon	672
Portland Court, London	300
Portman Estate, London	328
Power Gas Corporation, London	136
Prudential Assurance Company Ltd	
Salisbury Square House, London	473
Holborn Bars, London	14
New Bond Street, London	107
Manchester	161

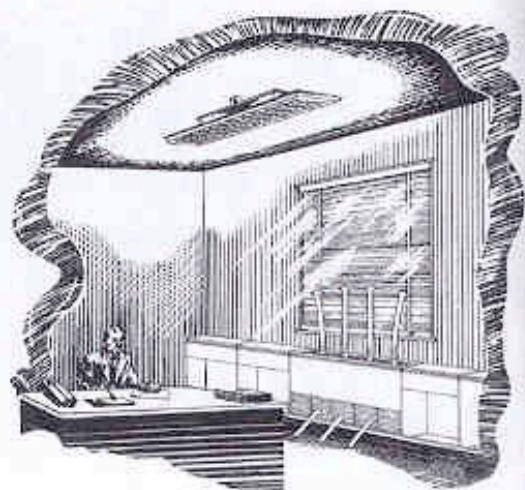
	755
A V Roe & Co Ltd, Manchester	72
Ross Group, Grimsby	341
Scottish Co-operative Wholesale Society, Glasgow	338
Scottish Gas Board, Edinburgh	247
Scottish Widows' Fund & Life Assurance Society, Edinburgh	279
Selby Fork Motel, Leeds	78
Tubes Ltd, Birmingham	21
UKAEA, London [R97-7]	217
William Deacon's Bank Ltd, Manchester	182
SOCIETE CARRIER, PARIS	
Agence France Presse, Paris	133
Air France, Orly	490
BACCI, Paris	756
Bank of America, Paris	41
Banque de France, Paris	100
Baudet-Donon-Roussel, Paris	485
CGE, Villarceaux	250
Caisses des Depots et Consignations, Angers	549
Caisse Mutuelle d'Assurances, Paris	400
Centre Operational de la Fenouillere, Fos-Sur-Mer	95
Cie d'Assurance Drout, Marly le Roi	468
Cifica, Neuilly	275
Cite Administrative de Bordeaux, Bordeaux	1000
Citroen, Perpignan	22

Project/Client [Description Reference]	No. of Induction Units
EDF Wagram, Paris	1492
EDF Place des Ets Unis, Paris	18
Electro-Refractaire, Pontet	115
Esso, Courbevoie	1720
Faculte des Scences de Montpellier, Montpellier	580
Hotel Hilton, Av de Suffren, Paris	505
Immeuble, 40 Av Georges V, Paris	260
Immeuble Etienne Pernet, Paris	277
La Nationale, Neuilly	1074
Main Montparnasse, Paris	3642
Maison des Sciences de L'Homme, Paris	1174
Marie Brizaed, Bordeaux,	46
Merlin-Gerin, Neuilly	274
Mobil Oil, Paris	207
OTH, Paris	325
Petrofrance, Paris	22
Peugeot, Paris	1112
Prefecture de Rouen, Rouen	597
Proctor & Gamble, Paris	342
Sciaky Freres, Vitry Sur Seine	101
Sequana, Paris	1760
SI de Gestion Liges, Boulogne Sur Seine	742
SI Neuilly Hotel de Ville, Neuilly	1754
SNECMA, Bordeaux	357
Societe Generale, Paris	144
Societe Simca, Poissy	287
Sollac, Florange	1196
Ste Koni France, Villeneuve-Loubet	34
Ste Rhone Poulenc, Paris	968
Sud-Ouest de Bordeaux, Bordeaux	15
CARRIER BELUX, BRUSSELS	
Credit Communal de Belgique, Brussels	1325
Fabrique Nationale D'Armes de Guerre, Herstal	60
Limpens, Mechelen	548
Photo Produits Gevaert, Antwerp	80



PRIMARY AIR

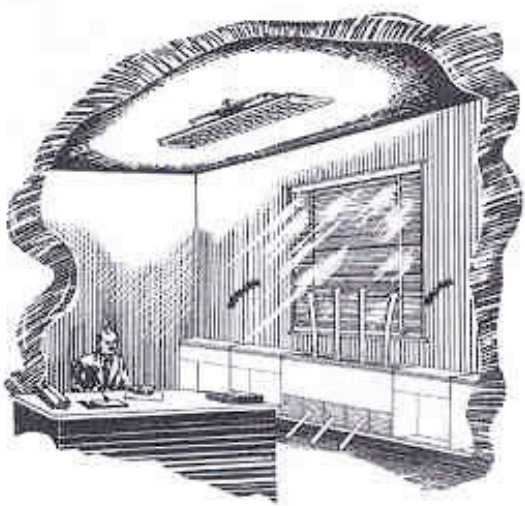
1. Offsets transmission loads.
2. Provides humidity control.
3. Provides motivating force for induction and circulation of room air.
4. Supplies ventilation air.



SECONDARY WATER COIL

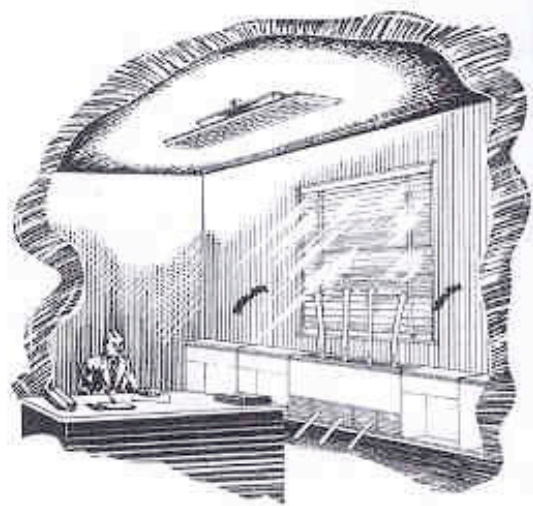
1. Offsets the heat gains due to sun, lights and people.

FIG. 6—SUMMER CYCLE OF OPERATION



Cool primary air plus the transmission losses balance the maximum heat gains from Sun, Lights and People at the time of change-over.

FIG. 7—CHANGE-OVER POINT



Hot secondary water and cool primary air are supplied to the room unit so that heating or cooling are available as required.

FIG. 8—WINTER CYCLE OF OPERATION

*Operation of Carrier Weathermaster induction system on changeover control cycle, 1963.
 [16/BL50, page 1-6].
 Being marketed in the UK at that time as the Conduit Inductionaire System.*

APPENDIX-D

EARLY CARRIER CENTRIFUGAL REFRIGERATION 1926-36

Taken from CHG Documents 15/ 326-12 & 490-1: also 6/562-4

Where cooling capacity is indicated 1 TR = ton of refrigeration = 12,000 Btu/h = 3.512 kW

Ref No.	Client	Centrifugal Model	Date
00470	Daily Mail, London	9.E9.8 (1st in UK)	1926
-----	Carlton Theatre, Haymarket	8.E7.7	1927
00606	Courtaulds Ltd, Aber Works	6.E6.6	
00645	Wrigleys Ltd, London	8.E8.7 (2 machines) *	
00798	Gestetner Ltd, London	9.E9.7	
01906	Empire Theatre, Leicester, London	9.E9.8 (250 TR)	1928
01268	Wrigleys Products Ltd, London	9.E9.8 (3 machines)	
01795	Terry Ltd, York	9.E.R9.9 (200 TR)	
01873	McVitie & Price Ltd, Manchester	9.F(?)R9.9	
-----	Paramount Theatre, Paris	----- (150 TR)	1929
02037	Paramount Theatre, Manchester	8.E.R7.7	1930
02-05	McVitie & Price, Harlesden	9.E.R9.9	
02126	Courtaulds Ltd, Wolverhampton	8.E8.7	
02260	BBC Broadcasting House, London	9.E.R8.8 (200 TR)	1931
02938	Paramount Theatre, Leeds	8.E.R8.8	1932
03109	Cumberland Hotel, London	10.E.R9.9 (2 machines, 500 TR)	1933
04922	Courtaulds Ltd, Flint	7.F8.7	
05417	Technicolour Ltd, Harmondsworth	6.5.C.Z (65 TR)	
18845	J A Patteiroux Ltd, Manchester	17M.32-4.4	
29201	Wrigleys Products Ltd, London	----- (73-150 TR)* moved to Plymouth factory	
30580	Daily Mail, London	9.E9.8	
31484	BBC Broadcasting House, London	17MB (250 TR)	
35941	J A Patteiroux, Hyde, Cheshire	17MB.31-3.5-3.5	

* Total capacity of 3 Wrigley machines = 350 TR

APPENDIX-E**CARRIER ABSORPTION REFRIGERATION 1950-76***Taken from CHG Document 16/644-7. Covers machines manufactured in UK.*

Client	Type/No.	Date
TYPE 16B		
Anglo Iranian Oil Co, Abadan, Iran	16B5 (2)	1950
Mashur, Iran	16B5	1950
J Lyons & Co, Greenford	16B5 (2)	1950 & 52
BBC, Lime Grove	16B5	1950
Iraq Petroleum Co Ltd, Barjisiyah, Iraq	16B5 (3)	1951
James Pascall Ltd, Mitcham	16B5 (2)	1951
Arthur Guinness & Sons Ltd, London	16B5	1951
Basrah Petroleum Co Ltd, Basrah, Iraq	16B5 (4)	1952 (3) & 55
The Carborundum Co Ltd, Manchester	16B5 (2)	1952
Qatar Petroleum Co Ltd, Umm Said, Arabia	16B5	1952
Iraq Petroleum, Kirkuk, Iraq	16B9 (2)	1952
TYPE 16C		
Simca, Poissy, France	16C3	1953
UKAEA, London	16C5	1956
John Lewis & Co Ltd, London	16C5	1956
J Pattriouex, Manchester	16C9	1956
BBC Television Centre, London	16C11 (4)	1956 (2), 62-63
Ferranti Ltd, Edinburgh	16C2	1957
Gallaher Ltd, Lisnafillan	16C6 (2)	1957
Basrah Petroleum Co Ltd, Barjisiyah, Iraq	16C8	1957
Ilford Ltd, Basildon	16C3	1958
Imperial College of Science, London	16C3	1958
Joseph Lucas Ltd, Birmingham	16C6	1958
SIET for Standard Leige, Brussels	16C6	1958
D C Thomson & Co Ltd, Dundee	16C2	1959
Joseph Sankey & Sons Ltd, Bilston	16C4	1959
Societe Carrier SA, Surenes, France	16C4	1959
Co-op Permanent Building Society, London	16C5	1959
Clondalkin Paper Mills Ltd, Dublin	16C6	1959
A V Roe & Co Ltd, Manchester	16C6.5	1959

Soc.Carrier, Air France, Orly Airport, Paris	16C9	1959
BBC Broadcasting House, London	16C5 (2)	1959 & 61
Ben Johnson & Co Ltd, York	16C5	1960
A V Roe & Co Ltd, Manchester	16C7	1960
Vickers Ltd, London	16C9	1960
Wales Gas Board, Cardiff	16C4	1961
Empire Theatre, London	16C7	1961
Taylowe Ltd, Maidenhead	16C4	1962
RAF Edzell	16C5 (2)	1962

Document 326 continues with a list of machines made by Carrier Corp in the USA and installed by CEC.

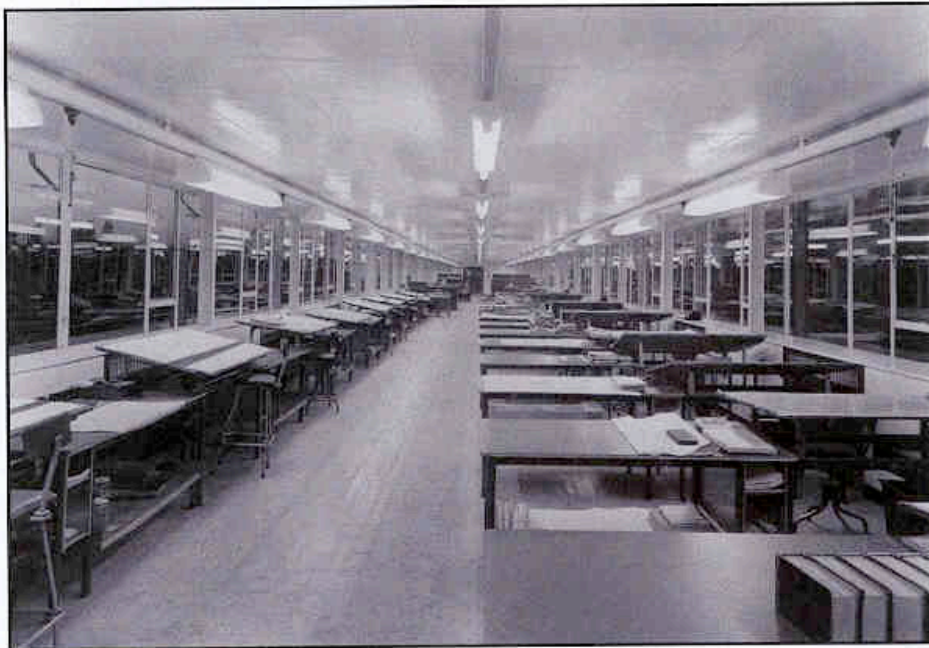
It includes machines sold by Carlyle Air Conditioning & Refrigeration Ltd.

There are by type:

16E	2	
16H	36	
6JA	26	<i>includes six 16JA061 for St Thomas's Hospital, London</i>
16JB	63	<i>includes six 16JB054 (3000 TR) for Hallamshire Hospital, Sheffield</i>



Carrier Construction Company Ltd, Wembley Factory, 1957 [CEC, 003974].



Carrier Construction Company Ltd, Wembley, Drawing Office, c.1958 [CEC, 004230].

APPENDIX-F

METAL FINISHING PROJECTS 1921-1939

Taken from CHG Document [10] 570-4 and listed in the order of the original

key

<i>ABSC</i>	<i>Automatic Body Shop Conveyor</i>
<i>BDS</i>	<i>Body Shop Conveyors</i>
<i>BFP</i>	<i>Body Finishing Plant</i>
<i>CEO</i>	<i>Continuous Enamelling Ovens</i>
<i>CEP</i>	<i>Continuous Enamelling Plant</i>
<i>CESE</i>	<i>Complete Enamelling Shop Equipment</i>
<i>CFL</i>	<i>Chassis Finishing Line</i>
<i>CPP</i>	<i>Chassis Painting Plant</i>
<i>EO</i>	<i>Enamelling Ovens</i>
<i>FP</i>	<i>Finishing Plant</i>
<i>HTEP</i>	<i>High Temperature Enamelling Plant</i>
<i>IEO</i>	<i>Intermittent Enamelling Ovens</i>
<i>NBFP</i>	<i>Nitro-cellulose Body Finishing Plant</i>
<i>NWFP</i>	<i>Nitro-cellulose Wing Finishing Plant</i>

Client

MOTOR VEHICLE MANUFACTURERS

Austin Motor Co Ltd, Birmingham	CEO (2), ABSC
Armstrong Siddeley Motors Ltd, Coventry	CEP, BSC
Clyno Engineering Co Ltd, Wolverhampton	CEP, CFL
Citroën Cars Ltd, Slough	IEO (4), NBFP
Ste Ame Andre Citroën, Quai de Javel, Paris	IEO (4), BFP
Ste Ame Andre Citroën, Levallois	CEO (2)
Citroën Automobil A-G, Cologne	CESE
Sta Italiana Automobil Citroën, Milan	CESE
Ste Ame Andre Citroën, Brussels	CESE
Ford Motors (England) Co Ltd, Trafford Park, Manchester	BFP
General Motors Ltd, Hendon	EO (2)
General Motors Nordiska AB, Stockholm	CEO (2)
General Motors SA, Antwerp	EO (2)
General Motors SA, Copenhagen	EO (2)
General Motors AG, Berlin	CEO (2)
Humber Ltd, Coventry	CEP, BFP
Standard Motor Co Ltd	CEP

Finishing Equipment

Client	Finishing Equipment
Morris Commercial Cars Ltd, Birmingham	CEP
Morris Motors (1926) Ltd, Cowley, Oxon	CEO (7), CPP, NBFP
Singer & Co Ltd, Coventry	CEP, BFP
Singer & Co Ltd, Birmingham	CEP, NBFP
Vauxhall Motors Ltd, Luton	NBFP, NWFP
Wolseley Motors Ltd, Chelsea, London	BFP
The Hillman Motor Car Co Ltd, Coventry	CEP
Ste Ame des Automobiles and Cycles Peugeot, Sochaux	CEO (2), BFP
Ste Ame des Automobiles and Cycles Peugeot, Paris	BFP
Ste Ame Berliet, Lyons	BFP
Ste Ame Mathis, Strasbourg	BFP
Ste Ame Salmson Moteurs, Paris	BFP
Rover Co Ltd, Coventry	BFP
Midland Light Bodies Ltd, Coventry	BFP
Willys Overland Crossley Ltd, Heaton Chapel, Stockport	HTEP
Ste Parisienne de Carrosserie Automobile, Paris	CEP
Schebera AG, Berlin	BFP
Wanderer-Werke, Chemnitz	CEP, BFP
Gottfried Linder AG, Ammendorf	BFP
Ceskomaravska-Kolbe AG, Prague	CEP
Adam Opel, Ruesselsheim	BFP
Dixi-werke, Eisenach	CEP
Benz et Cie, Mannheim	BFP
Skoda Works, Pilsen	FP
Skoda-Werke, Mlada Boleslar	CEP
MOTOR CYCLE MANUFACTURERS	
The Raleigh Cycle Co Ltd, Nottingham	CEP
H Collier & Sons Ltd (Matchless Motor Cycles), Plumstea	CEP
Douglas Motors Ltd, Kingswood, Bristol	CEP
Components Ltd (Ariel Motor Cycle) Selly Oak, Birmingham	CEP
Humber Ltd, Coventry	CEP
A J Stevens & Co (1914) Ltd, Wolverhampton	CEP
Humber Ltd, Coventry	CEP
Ste Ame des Automobiles & Cycles Peugeot	CEP
Triumph Cycle Co Ltd, Coventry	CEP
Fabrique Nationale d'Armes de Guerre, Herstal-lez-Liège	CEP

Client	Finishing Equipment
CYCLE MANUFACTURERS	
Components Ltd (Ariel Cycle), Selly Oak, Birmingham	CEP
Humber Ltd, Coventry	CEP
The Raleigh Cycle Co Ltd, Nottingham	CEP
Ste Ame des Automobiles & Cycles Peugeot	CEP

MISCELLANEOUS

<i>key</i>	<i>ABFE</i>	<i>Automatic Body Finishing Equipment</i>
	<i>AMFE</i>	<i>Agricultural Machinery Finishing Equipment</i>
	<i>APDE</i>	<i>Automatic Painting & Drying Equipment</i>
	<i>BCFE</i>	<i>Baby Carriage Finishing Equipment</i>
	<i>CPDE</i>	<i>Cannister Painting & Drying Equipment</i>
	<i>CWEE</i>	<i>Continuous Wheel Enamelling Equipment</i>
	<i>FSE</i>	<i>Finishing Shop Equipment</i>
	<i>TPO</i>	<i>Tin Printing Ovens</i>

Harris Lebus Ltd, Tottenham (Furniture Makers)	FSE
London, Midland & Scottish Railway Co Ltd, Derby	FSE
Meccano Ltd, Liverpool	APDE
Meccanco (France) Ltd, Pris	APDE
Short Bros Ltd, Rochester	ABFE
Steel Barrel Co Ltd, Uxbridge	CPDE
Tan Sad Ltd, Birmingham	BCFE, CEP
Lines Bros, Morden	BCFE, CEP
Compagnie Internationale des Mahines Agricoles Croix	AMFE
Rubery Owen & Co, Darlaston	CWEE
Crown Cork Co, Southall	TPO (7)

**APPENDIX-G
CARRIER ENGINEERING COMPANY,
GROUP NET PROFITS, 1951-70**

YEAR	NET PROFIT	CAPITAL
1951	£363,944	£450,000
1952	£371,264	
1953	£378,952	
1954	£402,319	£700,000
1955	£408,849	
1956	£507,632	
1957	£569,752	
1958	£881,669	
1959	£765,637	
1960	£440,583	£1,200,000
1961	£319,000	£2,000,000
1962	£249,697	
1963	£293,000	
1964	£324,255	
1965	£267,751	
1966	£171,000	
1967	£332,968	
1968	£375,602	
1969	£426,630	
1970	£698,000	

APPENDIX-H

LIST OF PRINCIPAL PEOPLE, COMPANIES & TRADE NAMES

LIST OF PEOPLE

Arranged in alphabetical order

ANDREWS, R S (Andy)	Auditor CEC, Chairman 1959
ASHLEY, F P (Fred)	Head of Estimating CEC, Director 1955, MD 1959, Vice-Chairman & Assistant MD, 1962, retired 1968
BOIS, Roger	Assistant MD Societe Carrier 1960
CARRIER, Willis Haviland	Founder 1915 Carrier Corporation, USA. Elected President & Chief Engineer. Founder CEC, Director 1921-32. Known as the "Father Air Conditioning. Died 1950.
CARROLL, Geoff	Salesman CEC,
EDWARDS, J R (Joe)	Non-executive Director CEC 1968, resigned 1970 (at Haden take-over)
FAULKNER, Peter	Commercial Director CEC 1962, retired 1965
FOWLER, A P (Alex)	Director CEC 1932, largely responsible for building up the paint spraying business. Joint MD 1955, Vice-Chairman 1959, died 1967
GEERING, L E (Leo)	Head of Installation CEC, Director 1955, retired 1963
GROOM, Harold	Director CEC 1932, Joint MD 1955, Chairman & MD Carrier Construction 1959
GROOM, Stanley Laurence	Founder CEC, Chairman & Managing Director 1921-57, died 1957
HARDCASTLE, T (Tom)	Director CEC 1965, died 1970
HEARD, J A E (Archie)	Joined CEC 1929. Trained with Carrier Corp, New Jersey. Worked in India, where he also served during war. Returned to CEC London 1945. Sales Director then Assistant MD 1959, MD 1962. MD Carrier Eng Co Ltd 1971, after Haden takeover. Retired 1972.
HOOPER C T G	Originally Chief Engineer CEC. Established CEC presence in India.
JAMESON, W (Jumbo)	Director CEC 1932. Died 1955
LYLE, J Irvine	Founder 1915 Carrier Corporation, USA. Elected Treasurer & General Manager, Founder CEC, Director 1921-32. Died 1942.
MANLY, Peter	Director & Company Secretary CEC. Director & Secretary Carrier Eng Co 1971, after Haden take-over

CEC: Appendices

MICHELIS, Jean (Mike)	Joined CEC in Paris, 1928 from General Motors to help established the paint finishing business. MD Societe Carrier 1960, Director CEC 1964, Director Carrier Eng Co 1971 after Haden take-over
MITCHELL, Sir Steuart	Chairman CEC 1968, resigned 1970 (at Haden take-over)
MODIANO, René	Opened CEC in Paris, 1923. Manager Carrier Continentale, 1929
PITCHER, H (Harold)	Director CEC 1963
PUTNAM, A W	CEC Chief Engineer, Director 1955, retired 1968
RACHAL, John	Executive, Carrier Corporation
SAINTY, C L	Chief Engineer CEC, Director 1932, responsible for air conditioning work, resigned c.1946.
SANDERSON, Arthur	Founder CEC, Director & Secretary 1921, retired 1928
SMITH, J W (Silas)	Chief Draughtsman CEC, Production Director 1960
WAMPLER, Cloud	Director Carrier Corporation, 1935, VP 1941, President 1942.

LIST OF COMPANIES

Arranged, as far as possible, in chronological order within each country

Australia

MECHANICAL HANDLING LTD, Sydney:

Belgium

CARRIER BELUX SA, Brussels: Environmental Control & Metal Finishing Systems & Equipment

France

CARRIER ENGINEERING COMPANY LTD, Paris:

CARRIER CONTINENTALE SARL, Paris:

SOCIETE CARRIER SARL, Paris, Societe Francaise d'Exploitation des Procédés Carrier:

SOCIETE CARRIER SA, Paris: Environmental Control & Metal Finishing Systems & Equipment

DRYSYS EQUIPMENT (FRANCE) SA, Paris: Export Sales

Germany

CARRIER LUFTTECHNISCHE GESELLSCHAFT, Stuttgart:

India

CARRIER ENGINEERING COMPANY LTD, Bombay:

VOLKART BROTHERS

Italy

DRYSYS EQUIPMENT ITALIANA SpA, Milan: Metal Finishing Systems

Japan

KENZAISHA COMPANY LTD

TAIKISHA

SUMITO SHOJI KAISHA LTD

South Africa

CARRIER ENGINEERING COMPANY LTD, Johannesburg:
DRYSYS (SA) PTY, Port Elizabeth: finishing Systems
CASTOR LOVE

Spain

DRYSYS ESPANOLA SA, Madrid: Finishing Systems
URRUZALA SA
CORCH SA

United Kingdom

STONE, Deptford, 1831. Marine engineering company, developed train lighting, then air conditioning.
CARRIER ENGINEERING COMPANY LTD, London, 1921. Environmental Control & Metal Finishing.
CARRIER ROSS ENGINEERING CO LTD, Croydon, 1929. Thermal Engineers.
STONE CARRIER, 1935. Joint venture Carrier & Stone in train air conditioning.
CARRIER WEATHERMAKERS, London, 1937-39. Air conditioning unit sales in UK.
DRYSYS EQUIPMENT LTD, London. Registered 1948. Name later used for all export work to avoid trademark disputes with Carrier Corp.
STONE PLATT, 1958. Company manufacturing Carlyle (Carrier) equipment in UK.
CARLYLE AIR CONDITIONING & REFRIGERATION LTD, 1959. Set up by Carrier Corp. to trade in UK
CARRIER CONSTRUCTION COMPANY LTD, Wembley, 1959. Fabricated Metal Products & Equipment.
G N HADEN & SONS LTD, London, 1816. Building Services Engineers.
HADEN-YOUNG, London, 1969. Formed by merger of G N Haden and Troughton & Young.
HADEN-CARRIER, London. 1970. Formed by merger of Haden & CEC after takeover battle

United States of America

BUFFALO FORGE COMPANY. Manufacturer, employed young Willis Carrier, 1901 & Irving Lyle.
CARRIER AIR CONDITIONING OF AMERICA, 1908-14. Subsidiary Buffalo Forge.
CARRIER ENGINEERING CORPORATION, 1915. Established by Willis Carrier, Lyle & others.
DRYING SYSTEMS INC, Chicago. Origin of "Drysys" trademark. (later purchased by Michigan Oven).
ROSS INDUSTRIES CORPORATION. Joined with CEC, 1929, to form Carrier-Ross in UK.
SCHWEITZER ENGINEERING COMPANY, Detroit, 1939. Paint spraying equipment.
SCHWEITZER EQUIPMENT COMPANY, Cleveland, Ohio: Spraying Machines
CARRIER CORPORATION, 1930. Formed by merger Carrier Eng Corp, York Heating & Ventilating and Brunswick-Kroeschell Co.
MAHON, R. C. Firm licensed by CEC to sell Rotodip in USA.
OFFEN COMPANY, Chicago. Manufacturer of web-fed print drying plant.
GASWAY CORPORATION, Chicago. Manufacturer of metal coil-coating equipment.

LIST OF TRADE NAMES

Arranged in alphabetical order

AQUATHERM. High pressure hot water heating system for industrial applications, developed by CEC, 1932.
HYDROSPIN. A spraybooth washing system developed by CEC R&D at Acton, 1960s.
MANUFACTURED WEATHER. An advertising term/trademark used by Carrier Corp & CEC from c.1919.
MARINAIR. A high velocity marine air conditioning system used by CEC on the "QE2".
PNEUMACLEAR, PNEUMAFIL & PNEUMASTOP. Textile finishing systems, patented by Luwa of Zurich, to which CEC acquired UK rights in 1950s & 60s.
ROTODIP. Rotating paint spray system patented by CEC & Alex Fowler, 1947.
ROTOSPRAY. A variation of Rotodip, also patented by CEC & Alex Fowler.
WEATHERMAKER. Self-contained air conditioning unit, introduced into UK by CEC, 1937.
WEATHERMASTER. Induction unit for multiroom buildings, developed by Willis Carrier, 1929.