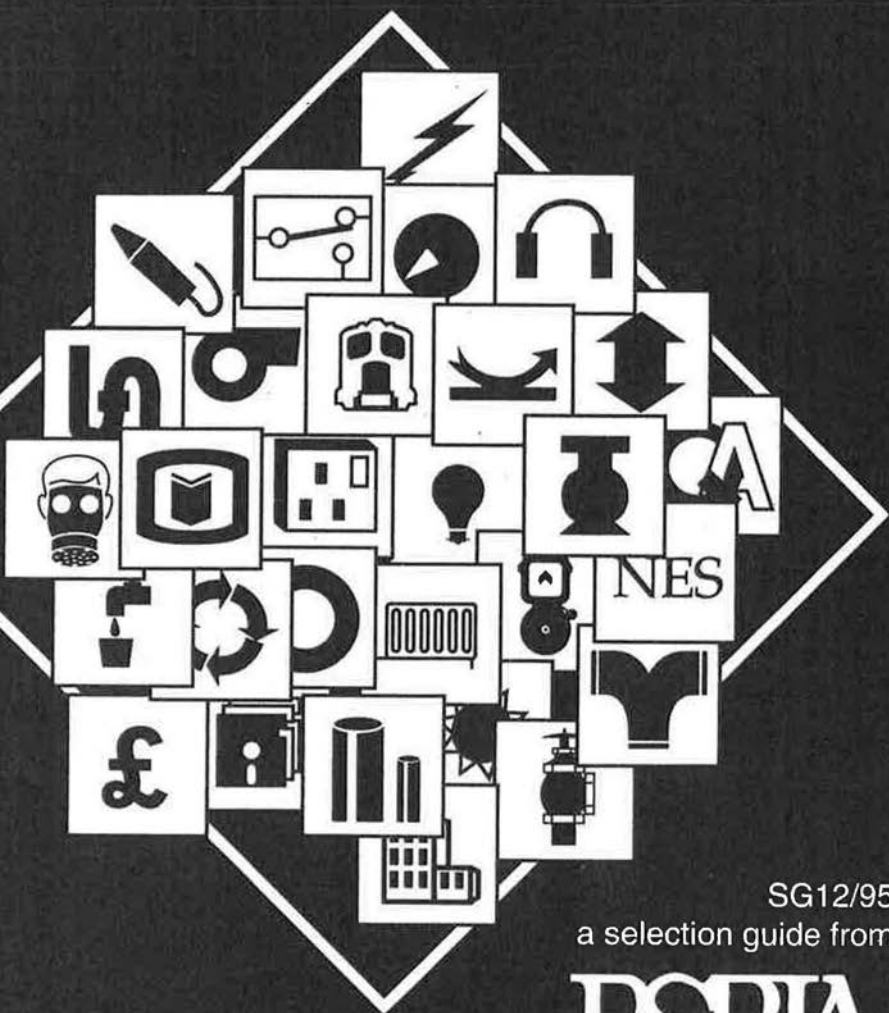


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SOFTWARE FOR
BUILDING SERVICES

S. Loyd



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a selection guide from

BSRIA

Software for building services

- a selection guide

Editor: Stephen Loyd

Editorial Assistant: Theresa Kucharczyk

**The Building Services Research
and Information Association**
Old Bracknell Lane West
Bracknell, Berkshire RG12 7AH
Tel: (01344) 426511 Fax: (01344) 487575

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INTRODUCTION

Finding the appropriate software may prove a difficult and time consuming exercise. There are few opportunities to see what's on offer in the growing market of building services software packages.

Expenditure on IT has remained strong despite the harsh economic climate of recent years and there has been a growing expectation that software packages should be independently quality assured. Consequently accreditation schemes for software are now beginning to emerge and are likely to feature increasingly in the years ahead.

This guide is concerned exclusively with software for the building services industry available in the United Kingdom. As with previous editions of this guide the number of entries has maintained steady growth and this edition reflects increased prominence of health and safety, and quality assurance related software.

Details of each package are as given by the suppliers with a small amount of editing to maintain consistency.

It should be noted that many of the programs carry out functions which would place them under more than one subject category. In such cases the program is presented in the category which best expresses its principal function. It is therefore recommended that readers make full use of the accompanying subject index.

DISCLAIMER

Inclusion of a program within this guide must not be taken to imply that it reaches any defined standard or fulfils any particular requirement. None of the programs listed has been tested by BSRIA and no claims are made on behalf of the purveyors. Where a program is listed as having a technical basis drawn from published work, or conformity to a regulation or standard, this should not be taken to imply that the publisher of the basis, regulation or standard warrants or authorises the use of the program in any way.

It is for the potential user to carry out such checks as seem appropriate in order to be satisfied that a program is of an appropriate type and quality to meet specified requirements.

It cannot be stressed too strongly that the final responsibility and legal liability rests with the user of a program for any errors arising from its use.

BIBLIOGRAPHY

The following papers are available from BSRIA's library service. They are listed here to help in the decision process of selecting software as well as highlighting trends in software development.

1 The 1994 maintenance information systems survey *Maintenance, November/December 1994, vol.9, no.5, SSI-SS24.*

Notes the need to evaluate and implement maintenance computer systems which not only satisfy the requirements of maintenance but which are capable of integration with all other aspects of the business. Presents a software survey designed to assist in the initial selection process. Part 1 presents the basic information and main features of the currently available packages in a way which makes comparison simple, Part 2 gives a brief product/company profile for each supplier.

2 CAD programs. (in German) *Stadt und Gebäudetechnik, 1994, no.5, 22-25.*

Lists suppliers of computer aided design programs in Germany relevant to building services, together with information on the capabilities and fields of application of the programs and the backup service provided by the companies.

3 Computer power *Building Services Environmental Engineer, October 1992, vol.16, no.2, 29-30.*

Presents a brief product profile on some recent developments in computers and their associated software.

4 Computer trends in contracting *Electrical Contractor, August 1990, vol.89, no.8, 28-33.*

Discusses the results of a survey of electrical contractors using computers. Analyses the uses to which the systems are put. Gives an estimate of time saved. Provides a comprehensive list of software available for contractors, including its functions, computer type and supplies.

5 PC-based systems for machinery diagnostics *Noise Vibration Worldwide, September 1990, 21-23.*

States personal computers offer high performance and low cost throughout a variety of roles. One application which is set to gain widespread use throughout many industries is that of diagnostic systems, in particular for machinery condition monitoring. Lists and discusses the advantages of PC-based systems for machinery diagnostics involving sophisticated vibration analysis techniques. Describes the facilities required for vibration data acquisition and for signal processing. Notes the use of workstation software, a CAD facility for diagnostic systems, developed to overcome problems preventing the wider application of diagnostic systems plus the graphical user interface representing the machine in schematic form. Illustrates an example.

6 Software *ASHRAE Journal, September 1994, vol.36, no.9, 56-62.*

Supplies an overview of HVACR software currently available in the USA.

7 Software selection techniques Alshawi. *Construction Computing, Autumn 1992, no.39, 20-22.*

Describes a structured methodology for software selection based on the management of software engineering and value management evaluation techniques. States the method

BIBLIOGRAPHY

provides a general guide for people to follow when selecting a software package for a particular application. The effectiveness of the described quantitative evaluation approach is well-proven in value management studies. It has also been used successfully in this context by construction professionals on the MSc Information Technology in Property and Construction course at the Department of Surveying, Salford University.

8 Selection criteria for commercially available software in construction accounting Arditi D. et al. *International Journal of Project Management*, February 1991, vol.9, no.1, 39-44.

Identifies evaluation criteria for software packages related to construction cost accounting, and provides relevant information on commercially available major software packages.

9 Planned maintenance and the use of computers Armstrong J. *BSRIA Technical Note TN 1/85.1*, 1991, 23pp. ISBN 0 86022 127 X. £30.00. (Not available from BSRIA's library).

States that planned maintenance is organised and carried out with forethought, control and the use of records to a predetermined plan. Sets out the broad principles of a planned maintenance system and the terminology used. Goes on to consider the role of computers in planned maintenance. Supplies a survey of available software in an appendix.

10 Sprinkler calculations - computer programs Ashfield A. *Fire Surveyor*, February 1993, vol.22, no.1, 14-15.

Describes four computer programs which can be used to calculate 1) optimum sprinkler head spacing in a room, 2) flow, pressure and 'k' factor at a head/nozzle, 3) pressure drop in a single pipe, 4) orifice plate sizing to absorb a given pressure. Offers free copies of these four programs.

11 CAD for electrical contractors Barnes C. *Electrical Contractor*, January 1990, vol.89, no.1, 32-33.

Draws attention to the advantageous features offered by CAD systems.

12 Daylighting contribution in interior lighting - experimental verification of software simulation results Belia L., Cesarano A. et al *Lighting Research & Technology*, 1994, vol.26, no.2, 99-105.

Describes a study carried out in an office building to investigate daylight impact, comparing SUPERLITE 1.01 and LUMENMICRO 5 simulation results with measured data. Referring to the CIE standard Clear (with direct sun) and Overcast sky luminance distributions, compares calculated illuminance and daylight factor data for the work plane with on-site data collected under real sky conditions. Aims to define the meaning and/or uncertainty attached to the quoted results from the simulation programs. Concludes by noting significant discrepancies between simulations and real measurements.

13 Windows of opportunity Bell D. *Electrical Contractor*, April 1994, vol.93, no.4, 31-33.

Gives advice on selecting a computer system suitable for electrical contractors and how to decide whether there is a real need to computerise. Supplies a directory of software packages for the electrical contractor.

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14 Assessing programs which predict the thermal performance of buildings Bloomfield D P. et al, *BRE Information Paper 7/92*, Building Research Establishment, 1992, 3pp.

Writes for building services engineers, local authorities and architects. States that computer programs which predict the thermal performance of buildings are now in widespread use. Before they can be applied with confidence their operation must be tested and their accuracy determined. Discusses some of the problems inherent in such model validation, outlines sources of error within simulation programs and describes the techniques which the validator can use to detect errors.

15 Software for energy in building - the French situation. (in French) Brejon P. *CIBSE National Conference 1991 Canterbury, April 1991, International Session, Part II, 9pp.*

AFME (French Agency for Energy Management) and AICVF (French Association for HVAC engineers) have achieved a data bank, available for consultation from a simple MINITEL through the dial code 3616 LEB. This bank includes about 140 packages classified into 5 main topics - sizing and design of equipment and plants (50 software), thermal regulation (20 software), audit, retrofitting and energy managing of existing buildings (40 software), information and training (15 software), others (15 software). Presents an analysis of this data bank that describes the tendencies of the French situation, and further, to the conditions necessary for a European market of commercialised software on energy in buildings.

16 Building energy analysis simulation - experience of three programs in use Chow W K., Chan K T. et al *Building Services Engineering Research & Technology, 1994, vol.15, no.3, 157-164.*

Reports an experience of using three building energy analysis programs - BLAST-3.0, DOE-2.1D and ESP version 7 release 2b. The programs are validated and the results compared for the subtropical climate of Hong Kong. Describes a study of two occupied buildings to evaluate the programs - a 10-storey office building and a lecturer's office. The indoor conditions and energy consumptions of the two buildings were measured. Compares the predicted energy performance with the measured energy consumption for the two buildings. Discusses discrepancies between the simulated results and the measured performance and the likely problems in the application of the programs by practising engineers. Further demonstrates the applicability of the three programs by simulating the energy performance of a hypothetical test building where the programs' predictions of building load imposed on the air conditioning plant are compared.

17 Development of an educational software package for using systems and HVAC classes Curtiss P S. *ASHRAE Transactions, 1994, vol.100, part 1, paper no.NO-94-27-3, 1619-1626.*

Describes a software package, HCB, Heating and Cooling of Buildings, consisting of six main programs and a program manager. States the software can be used with or without a mouse and does not require a math coprocessor. The software has been used and tested in classes and forms a useful tool for learning concepts and for demonstrating the process by which computers are used to solve engineering problems.

18 Computer aided monitoring and targeting for industry Dept. of Energy, *Good Practice Guide 31, 1991, 58pp.*

Writes for industrial users of computer systems. Aims to introduce users to computer aided monitoring and targeting and to allow greater control of energy management. In four parts 1) Provides a basic outline of the principles of M and T, 2) Gives general guidance on the use of computer-aided M and T and the selection and implementation of software systems,

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3) Includes a detailed review of data collection, data analysis and reporting, 4) Supplies useful information and details of further reading.

19 Selecting property management software - problems and solutions Dixon T J. *Property Management, 1993, vol.11, no.2, 155-171.*

Examines the problems associated with implementing property management software systems in private and public organisations, and suggests a systematic approach to software selection. States that a lack of strategic information technology (IT) policy and lack of information on software availability have proved to be key areas of deficiency. Describes specific selection criteria for making sensible choices for property management software and gives details of some of the main programs available and their characteristics.

20 The scope of computer aided facilities management Donaldson I. *Facilities, November 1991 vol.9, no.5-11, December 1991, vol.9, no.12, 16-20.*

Part 1 examines the need for and benefits of a Computer Aided Facilities Management (CAFM) system. States that the CAFM system should be selected by a company's facilities manager, and not by the IT department. Part 2 notes the types of CAFM system and gives criteria to apply when selecting one. Discusses cost factors, who should operate the system and their training. Advises on the maintenance of the system, software and hardware, the evolution of the software, and cable management systems.

21 Designs on screen Driver K., Leonard J. et al *Electrical Review, 15-28 April 1994, 20-22, 24.*

Presents reviews by three senior engineers of three 16th Edition design software packages - Ove Arup's own design package 'Cable', Amtech's 'Cable Master 7.0', Cymap's CADlink, Facet's Field 16 and Amtech's Protect 1.0. Examines their user-friendliness, technical capability, quality, size and flexibility of the database, quality and flexibility of output and quality and accessibility of manual or on-line help.

22 A maintenance information resource Eason N W. *Maintenance, September 1992, vol.7, no.3, 23-47.*

Presents three related article - 1) Examines the basis for the implementation of maintenance information systems, considering why they are required, how they are selected, and the general results that they achieve. Goes on to question whether the current methods are correct and appropriate, and suggests that the requirements can be met by taking a radically different approach, 2) The 1992 maintenance information systems survey, Anon, Presents basic information on and the main features of currently available maintenance software packages in a way designed to make comparison a simple task. Also gives a brief product/company profile for each supplier, 3) How to choose between the wide range of computer packages for maintenance management, De Groote:P., Discusses in some detail the problems of choosing a simple off the peg computerised maintenance management system. Explains a systematic selection procedure, using quantitatively weighted criteria.

23 Software for simulation Farish M. et al *Building Services CIBSE Journal, April 1992, vol.14, no.4, 23-29.*

Presents three short articles dealing with software for building services simulation - 1) Software for simulation, Farish:M., Describes the latest programs from Cymap for the

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analysis of M and E services, 2) Total recall, Bunn:R., Examines how advances in building simulation will affect tomorrow's building management systems, 3) No smoke without Jasmine, Bunn:R., Investigates the latest advances in smoke modelling, with particular reference to the BRE simulation model Jasmine (Analysis of Smoke Movement in Enclosures).

24 A guide to electrical-design software Farrell G W., Valvoda F. *Consulting Specifying Engineer, January 1993, vol.13, no.1, 63-65.*

One of a series of articles. Summarises in a table the features and capabilities of electrical design computer programs from 27 suppliers in the USA. Discusses the programs in general.

25 Development of software dedicated to building services (in German) Gluck B. *Heizung Luftung Haustechnik, April 1994, vol.45, no.4, 141-144.*

States that building services systems, particularly for heating and air conditioning, are calculated using up to date hardware, which is being continually improved, but the quality of the software is not comparable, and available possibilities are not fully utilised. Lists reasons for the comparatively undeveloped state of building services software and discusses them. Presents an illustration using the example of computer sizing of a two-pipe heating system. Discusses the TRNSYS building model. Concludes there is no hope of change in the short term. Unfortunately the manner tends to dominate the content, so that computer programs with an excellent operator interface and handling seem more attractive than is justified by their frequently simple technical content.

26 Guidance on selecting energy programs Howard R. et al *Construction Industry Computing Association 1994, 78pp, ISBN 0 906225 22 1.*

Provides straightforward comparative analysis of all commercially available software packages to help users find out what energy programs can do and what they take into account while doing it. A further objective is to reassure those not currently using computer calculations that cheap, simple programs exist. Section headings are - Introduction and method of study, Analysis and recommendations for use of software, How to use the report, definition of terms, Matrices for selecting suitable programs, Program description sheets and sample output, References.

27 Day-to-day use of energy analysis software Lawrie L K. *Energy Engineering, 1992, vol.89, no.5, 41-51.*

States that energy analysis software is often used once (for example, design analysis). The results are usually discarded. Points out that some energy analysis software could be quite useful throughout the life cycle of a building. Examines some uses for energy analysis software which could be applicable to ordinary practice. Discusses the future of energy analysis software. Uses the Building Loads Analysis and Systems Thermodynamics (BLAST) family of programs to illustrate the various possibilities.

28 Thermal program validation - the current status Lomas K J. *Proceedings of BEP94, Building environmental performance -facing the future, University of York, April 1994, BEPAC, 73-82.*

Outlines the current state of the art in thermal simulation program validation. Presents a view of the accuracy of the current generation of detailed programs and suggests the direction which future validation work should take. Presents the results from some of the main validation exercises involving analytic verification, intermodel comparisons and empirical validation. Finds some significant errors in some of the world's best-known thermal

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programs. Recommends a database of validation benchmarks as one route to enabling program users and purchasers to test for themselves the reliability of thermal simulation programs.

29 Computers for HVAC Lyons M. et al *Heating & Air Conditioning Journal, January 1994, 10-14.*

Presents four brief articles dealing with aspects of the applications of computers to HVAC - 1) The future of design, Lyons:M., Explains the advantages of technologies such as virtual reality and computational fluid dynamics for engineers in the building services industry, 2) Speeding up intelligence, Anon, Describes a software package that integrates building design with engineering calculations, 3) Assisting green technology, Anon, Describes simulation software that can be used to predict the building performance, giving designers the confidence to apply natural ventilation and other low energy green technologies to buildings, 4) Changing roles, Fredericks:J., Looks at how computers are changing the role of the building services engineer.

30 Monitoring and targeting - choosing the right software Martin P. *Energy in Buildings, March 1989, 22-25.*

Provides practical advice to potential purchasers of monitoring and targeting (M and T) software on how to purchase and set up such systems. Recommends setting out the M and T goals. Supplies some questions to ask a prospective supplier of a standard system. Advises on the selection of a computer. Treats data input and coding for comparison of properties. Notes the type of yardstick that can be set and how it should be monitored. Provides a brief case study of energy saving measures in a town hall.

31 Low cost computer aided draughting in building services McLelland C., Baird I. *BSRIA Technical Note TN 1/87, 1987, 57pp. ISBN 0 86022 114 8. £15.00. (Not available from BSRIA's library).*

Considers the use of low cost (no more than £20 000) computer aided draughting (CAD) systems in building services. Aims to raise the level of awareness of the potential offered by such systems by 1) outlining the approach to introducing CAD into an organisation, 2) examining what the implications of such a step may be, 3) considering the capabilities and limitations of the various types of systems, 4) examining the features of 2-dimensional CAD software in relation to draughting work in building services, 5) specifying basic computer hardware requirements, 6) highlighting the practicalities of managing a CAD system. Section headings are - Conclusions and observations, Introducing CAD into the drawing office, Types of CAD system, CAD software, CAD hardware, Management of CAD systems, Data exchange.

32 First stop for workstations Pancucci D. *Health and Safety at Work, March 1994, vol.16, no.3, 19-22.*

Points out that under the Display Screen Equipment at Work Regulations 1992, employers are responsible for providing safe working conditions for staff whose main tasks involve the use of a computer terminal. Employers have to - 1) perform a workplace audit involving the assessment of each workstation and its environment, 2) give training in good practice and 3) provide for regular free eye examinations. Describes six software programs covering training and awareness, assessment tools and combined programs which seek to achieve both functions. Assesses the programs and gives contacts and pricing.

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33 Database of benchmarks for validating thermal programs of buildings Patronis J., Lomas K J. *Proceedings of BEP94, Building environmental performance -facing the future, University of York, April 1994, BEPAC, 177-188.*

States there is a range of benchmarks which could be used to evaluate thermal programs of buildings. These benchmarks are based on different testing procedures, namely analytic tests, intermodel comparisons and empirical validations. The diversity of the benchmarks coupled with a lack of a common data format and incompatibilities in the level of detail to which benchmarks have been documented pose serious limitations to their effectiveness and use by non-experts. A generic representation of all possible benchmarks would be advantageous. Reports how the Environmental Computer Aided Design and Performance group at De Montfort University Leicester are attempting to develop a relational database which can store in common format all the suitable benchmarks for validating thermal programs of buildings. Notes a prototype has been implemented using the FoxPro 2.5 relational database operating on a PC platform under Windows. The system includes a common tabular structure to describe the buildings, its site and the mode of operation, the ability to handle drawings of buildings and target results and climatic data in machine-readable form. States the information can be accessed and retrieved via a graphical interface which can be distributed to prospective database users at very low costs.

34 CAFM the why and the wherefore Pritchett M, *Buildings & Facilities Management for the Public Sector, September/October 1992, vol.1, no.5, 30-33.*

Looks at the growing use of computers to help manage facilities, and gives some guidance on how to assess and choose the right system.

35 Applications of computational fluid dynamics in building services engineering Setrakian A A. et al *Computational fluid dynamics - tool or toy? Seminar, London, November 1991, 33-37, Institution of Mechanical Engineers.*

Describes the advantages of using a customised computational fluid dynamics (CFD) software program designed for use in building services engineering. Details the minimum requirements of a building services CFD program. Presents case studies as example results of having such a code.

36 Optimising with CFD Seymour M. *Heating Air Conditioning, January 1992, 32-33.*

Outlines the characteristics of a new, industry-specific design tool called FLOVENT, which has been developed to help engineers perform detailed environmental analysis of buildings. States the package is user-friendly and utilises computational fluid dynamics to predict the air velocity, pressure, temperature, pressure and, where appropriate, the concentration of contaminants within a building. The predictions generated by the program can be viewed graphically, with diagrams showing flow patterns and temperature distributions on two or three dimensional views. States the results allow the designer to optimise the location and system control strategy for HVAC equipment. In new buildings, the position of smoke detectors, doors, windows, internal partitions and furniture can be determined in interests of safety and efficiency. Developed jointly by BSRIA and Flomerics, Flovent combines BSRIA's knowledge of the building services industry and Flomerics' specialist knowledge of computational fluid dynamics. Presents pictures generated by Flovent showing a typical situation faced by the building services engineer, which demonstrate the design-gains of its application.

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37 Computer-aided estimating systems reviewed Stephenson P. *Construction Computing, Summer 1991, no.34, Supplement 1-16.*

Looks at the present state-of-the-art of estimating systems and reviews features and capabilities computer-aided estimating now offers. Reviews ten established systems.

38 Computer-aided facilities management - the path to implementation Varcoe B J. *Property Management, 1992, vol.10, no.4, 378-388.*

Notes that facilities management has specialist requirements which combine a wide variety of functions and tasks to provide efficient workplace environments. States that this has proved to be a particularly difficult challenge to systems developers, and it has only been in recent years that applications of value (known as Computer-Aided Facilities Management - CAFM - systems) have emerged. Addresses the issue of how facilities departments should approach the potential benefits and capabilities offered by CAFM systems, and how they might determine whether or not an implementation of such a system is of value to their organisation.

39 Using computers for project management: a comprehensive study of project planning software Wager D M., Pittard S J. *Construction Industry Computing Association, 1991, 171pp.*

Provides the most comprehensive source of impartial information on current project planning software considered to be actively marketed in the UK construction industry.

40 Issues in the development of knowledge-based systems for building diagnostics Woods J E., Arora S. *ASHRAE Symposium. Environments for people. IAQ 92 San Francisco, October 1992, 75-82.*

Presents an overview of knowledge-based systems, their diagnostic strategies and their use for building diagnostics. Discusses the limitations of diagnostic expert systems and identifies issues that should be addressed in the future development of these systems.

41 Energy calculations for the non-domestic buildings sector -the use of semi-empirical models Wright A J. *Proceedings of BEP94, Building environmental performance -facing the future, University of York, April 1994, BEPAC, 355-360.*

Considers the problems of calculating energy use and maximum electrical demands in the non-domestic buildings sector. Reviews the shortcomings of simple manual techniques and detailed dynamic simulation for this purpose, in particular their treatment of non-HVAC loads. States that problems of model accuracy versus data input error suggest that the optimal model in practice lies between the simple and complex. Discusses the use of a semi-empirical approach taking the Esicheck program used in the Electricity Industry as an example. Considers possible applications in design, marketing, electrical Demand Side Management and in demonstrating compliance with the Building Regulations. Concludes that semi-empirical computing methods have so far been somewhat neglected but have much to offer.

ADDRESS LIST

AIR INFILTRATION & VENTILATION CENTRE

University of Warwick Science Park
Sovereign Court
Sir William Lyons Road
Coventry
CV4 7EZ

Tel: 01203 692050

Fax: 01203 416306

Enquiries to: Mr Martin Liddament

Position: Head of Centre

AMTECH COMPUTER SYSTEMS LTD

26 High Street South
Olney
Buckinghamshire
MK46 4AA

Tel: 01234 240088

Fax: 01234 241011

Enquiries to: Mr Mark Tindall

Position: Sales Director

ANGLIA COLLEGE ENTERPRISES LTD

Department of the Built Environment
Victoria Road South
Chelmsford
Essex
CM1 1LL

Tel: 01245 493131 Ext.3241/3258

Fax: 01245 269488

Enquiries to: Mr Peter Aylett

Position: Business Development Manager

APEX ENGINEERS

Park Heath
Cheswardine
Market Drayton
Shropshire
TF9 2NP

Tel: 01630 661313

Fax: 01630 661582

Enquiries to: Mr Steven Lewis

Position: Sales Manager

ASHFIELD, A.

20 Odecroft
Peterborough
Cams
PE3 7LX

Tel: 01733 260279

Fax: 01733 260279

Enquiries to: Mr Alan Ashfield

Position: Managing Director

ASSET MANAGEMENT CENTRE LTD

Ludworth Trout Farm
Marple Bridge
Cheshire
SK6 5NS

Tel: 0161 449 9520

Fax: 0161 449 9520

Enquiries to: Mr Graham Eade

Position: Managing Director

AVALON SOLUTIONS LTD

Avalon House
158 Saffron Road
South Wigston
Leicester
LE18 4UP

Tel: 01533 787150

Fax: 01533 477650

Enquiries to: Mr J R Talbot

Position: Director

B W ASSOCIATES

23 Fairways
Lyndhurst
Whitley Bay
Tyne & Wear
NE25 9YG

Tel: 0191 251 4735 **Mobile:** 0831 532491

Fax: 0191 251 4735

Enquiries to: Mr Brian Whitall

Position: Managing Consultant

ADDRESS LIST

BINARY COMPUTER SERVICES LTD

Binary House
202 Northolt Road
South Harrow
HA2 0EX

Tel: 0181 423 7676

Fax: 0181 423 7885

Enquiries to: Mr Barry Cottrell

Position: Sales & Marketing Director

BRITER COMPUTER SYSTEMS LTD

Market House
Lenten Street
Alton
Hants
GU34 1HG

Tel: Alton 01420 89898

Coventry 01203 466281

Fax: Alton 01420 541223

Coventry 01203 463087

Enquiries to: Mr Brian Rogers(Alton)

Mr K Balfe (Coventry)

Position: Managing Director/Sales Director

BRITISH GAS PLC

Solent Industrial Estate
Hedge End
Southampton
SO30 2GL

Tel: 01489 775313

Fax: 01489 775352

Enquiries to: Ms Julia Hodkin

Position: Senior Projects Officer

BRITISH STEEL, OPEN LEARNING DEVELOPMENT UNIT

PO Box 32
Sheffield Road
Rotherham
South Yorkshire
S60 1AG

Tel: 01709 371234, ext.5550

Fax: 01709 371234, ext.5552

Enquiries to: Ms Kirsten Blackburn

Position: Sales Administrator

BUILDING RESEARCH ESTABLISHMENT

Garston
Watford
Herts
WD2 7JR

Tel: 01923 664444

Fax: 01923 664400

BUILDING SERVICES COMPUTER SERVICE LTD

20 Abbey Street
Coleraine
County Londonderry
N.Ireland
BT52 1DU

Tel: 0265 57511/44036

Fax: 0265 57028

Enquiries to: Mr John McReynolds

Position: Product Manager

THE BUILDING SERVICES RESEARCH & INFORMATION ASSOCIATION

Old Bracknell Lane West
Bracknell
Berkshire
RG12 7AH

Tel: 01344 426511

Fax: 01344 487575

Enquiries to: Mr Stephen Loyd

Position: Head, Information Services

BUSINESS EDGE LTD

226 Portsmouth
Horndean
Waterlooville
Hampshire
PO8 9SY

Tel: 01705 599000

Fax: 01705 597788

Enquiries to: Mr Mike Creamer

Position: Managing Director

ADDRESS LIST

CABLE AM

8 St Johns Street
Biggleswade
Bedfordshire
SG18 0BT

Tel: 01767 316027

Fax: 01767 316027

Enquiries to: Mr Tony Stribling

Position: Partner

CAD-CAPTURE LTD

Whitebirk Estate
Blackburn
Lancashire
BB1 5UD

Tel: 01254 583534

Fax: 01254 665528

Enquiries to: Ms Julie Woodworth

Position: Sales Co-ordinator

CAMAXYS LTD

8 The Meadow
Meadow Lane
St. Ives
Cambridgeshire
PE17 4LG

Tel: 01480 497739

Fax: 01480 497759

Enquiries to: Mrs Sue Tostevin

Position: Director

CARRIER AIR CONDITIONING LTD

Priory House
Marsh Road
Alperton Lane
Wembley
Middlesex
HA0 1ES

Tel: 0181 991 2000

Fax: 0181 998 0993

Enquiries to: Mr Tony Nielsen

Position: Automated Design Engineer

CdC SOFTWARE LTD

Sales Department
374 North End Road
Fulham
London
SW6 1LY

Tel: 0171 386 7355

Fax: 0171 386 7270

Enquiries to: Mr Paul S McQuaid

Position: Sales & Marketing Director

CEDREC ENTERPRISES LTD

Business and Innovation Centre
Sunderland Enterprise Park
Riverside
Sunderland
SR5 2TA

Tel: 0191 5160160

Fax: 0191 5168159

Enquiries to: Mr Steven Armstrong

CHERITON TECHNOLOGY MANAGEMENT LTD

St Stephen's House
50 St Stephen's Place
Cambridge
CB3 0JE

Tel: 01223 69190

Enquiries to: Sales Manager

COMLINE LTD

Blakes House
98 Ickleford Road
Hitchin
Herts
SG5 1TL

Tel: 01462 453211

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Position: Director

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Enquiries to: Mr Colin Fleming

Position: Chairman



ACOUSTICS

1

Software Name: DECIBEL

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

DECIBEL is an interactive, menu-driven program for the analysis of room acoustics. The user may specify details of up to six receiver rooms surrounding a single source room where a maximum of ten noise sources may be defined. For each room the dimensions are entered along with the construction details and openings such as doors and windows. The user has access to a large database containing the acoustic properties of a wide range of materials and constructions compiled mainly from National Physical Laboratory data, which may be used to build up the room constructions and surface finishes.

Calculates the reverberant sound pressure level (SPL) within the source room at octave band centre frequencies between 63 Hz and 8 kHz based on the sound power level of the noise sources. The reverberant SPL within each defined receiver room is calculated based on the source room noise level (either calculated or specified in terms of an NC/NR rating or octave band levels) and the transmission loss of the intervening construction and openings. The results may be reviewed on the screen at any stage with optional printing to the output file.

Calculates the NC/NR rating of the reverberant SPLs for all rooms (dB and dBA) along with the reverberation times and total room absorption at octave band centre frequencies between 63 Hz and 8 kHz. The output from the program includes all the calculated results along with details of noise sources such as sound power level and room particulars such as size, surface finishes, construction and openings.

Allows the user to analyse a variety of situations amongst which are the effect on noise levels and reverberation times of altering the noise source layout, the room surface finishes and constructions, replacing sources with a larger number of quieter ones and introducing openings with a greater transmission loss such as sound reducing doors between rooms.

Basis: CIBSE Guide 1986, Section B12. ASHRAE Guide 1987, Chapter 52.

Computers: IBM 386/486 PCs, or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory.

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



ACOUSTICS

2

Software Name: HERTZ

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Checks if noise from industrial machinery is likely to cause complaints from local residents. Calculates noise transmitted from an open source, an enclosed plant room and from a duct system.

Basis: BS 4142 (1967)

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

3

Software Name: NOISE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Noise levels at grilles and in rooms. Used in conjunction with DUCTSIZE. Part 1 gives SPL at each grille - Dampers, attenuators and other noise sources can be included. Part 2 compares the SPL for each octave at a chosen point in a room against a maximum permissible value.

Basis: CIBSE Guide B12 1976

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory: 640K bytes

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



ACOUSTICS

4

Software Name: NOISE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes room noise levels due to noise from fan duct systems.

Basis: CIBSE Guide 1986 Section B12

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring ~~minimum~~ 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

5

Software Name: THE NOISE COMPANION

Version:

First Published: 1990

Company: Eurotech (01243 672891)

The Noise Companion enables employers to comply with the Noise at Work Regulations by training employees (and others in certain circumstances) who are likely to encounter excessive levels of sound, as defined in the Regulations, in the behaviour of sound, the risks involved, and their legal responsibilities to reduce damage to their hearing. Testing and record-keeping facilities allow employers to measure the level of understanding achieved by each learner.

Basis:

Computers: IBM PC (XT, AT, PS/2) or compatible with EGA/VGA monitor and Microsoft mouse

Operating System(s):

Memory:

Disc storage: 4M bytes

Copies sold UK:

World:

Price: £1,245

Training:



ACOUSTICS

6

Software Name: NOISE CONTROL

Version: 3

First Published: 1993

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn how noise is created and how the human ear reacts to sound. The legal requirements for controlling noise levels and methods of reducing noise are covered. Users will be able to: Explain how noise is produced; describe how noise travels to the human brain through the ear; explain the requirements of the Health and Safety at Work Act and the Noise at Work Regulations with reference to noise control. Outline various methods of reducing noise. State the objectives and aims of a responsible company hearing conservation policy.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes minimum

Disc storage: 732K bytes

Copies sold UK: 60

World:

Price: £120

Training:

7

Software Name: PANDA

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

PANDA is an interactive menu-driven program for the analysis of noise in ductwork systems. The program accepts a previously sized duct network from the INDUS program with additional information on duct fittings and room acoustic characteristics in order to calculate the resulting sound pressure levels in each space. The user may enter details of a terminal in a chosen 'critical' room, the spatial acoustic characteristics of which are selected from a variety of options. However, the program may also determine the attenuation required based on a number of terminals in many different rooms with diverse acoustic attributes and design criteria.

Once all the input data has been entered the program analyses the in-duct sound power level throughout the duct network. The noise attenuated and generated by each duct component is estimated and distributed, firstly on a downward pass from the fan to each terminal followed by an upward pass from each terminal to the fan and finally re-distributed back down to the terminal(s).

(entry continued)



ACOUSTICS

The room sound pressure levels are then determined from the sound power level at each terminal in the room and the acoustic characteristics of the space. At this stage the design and actual sound pressure levels in any room may be graphically reviewed together with the in-duct sound power level from the fan to any selected terminal.

The program will then determine the minimum required insertion loss and maximum permissible generated noise from a number of attenuators at positions specified by the user. Attenuator design constraints such as maximum length or specific manufacturers may be entered prior to the program selecting a number of suitable attenuators for each location. The user may then select an attenuator from the database and optionally enter additional dimensions, pressure drop and generated noise for inclusion in an attenuator schedule.

Basis: CIBSE Guide, Section B12 (1988). ASHRAE Systems and Applications Volume, Chapter 52 (1987) and the AIRAH Guide (1987)

Computers: IBM PC 386/486 or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training:

8

Software Name: PLANT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates noise levels in a room adjacent to a plant room containing either a boiler, an average noise source defined by the program, or a noise source defined by the user.

Basis: NR levels

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400 **World:** 1600

Price: P.O.A.

Training: Available on all programs



9

Software Name: AIR CHANGE RATE/CRACKAGE VENTILATION

Version: First Published: 1989

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

The program works on the basis of calculating the air flow and consequent heat loss occurring due to leakage around windows and doors. It operates on a selective procedure for several types of opening and crackage categories, with a direct input for crack length. The variables used are those given in the IDHE "Tables of U Values and Infiltration Factors".

Output gives ventilation rates in air changes per hour and air volume in litres per second, as well as ventilation heat loss at the defined conditions.

Basis: IDHE "Tables of U Values and Infiltration Factors"

Computers: IBM PC or compatible, Amstrad PCW Word processors, PSION

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK: 400

World: 450

Price: £60

Training: Full documentation supplied

10

Software Name: APHG

Version: First Published:

Company: Facet Ltd (0181 784 5768)

APHG calculates the cooling loads and internal temperatures for rooms in an air conditioned building. Each room analysed can be heated and/or cooled to a different setpoint or rooms can be unconditioned as required. The hours of operation of the plant can also be specified for each room.

The user first specifies details of the building location, design weather data, thermal properties of the building fabric and various schedules for hours of plant operation, occupancy, lighting etc. Then the rooms are defined by specifying the volume, floor environmental area, design environmental conditions, casual gains, air exchanges and fabric elements, cross referencing the schedules and fabric properties as appropriate.

(entry continued)



The calculations are performed for a month, or a range of months, specified by the user. When the program is calculating room temperatures and cooling loads, it takes into account the transfer of heat through internal partitions, floors and ceilings as well as the transfer through external fabric and due to infiltration.

Program output includes peak sensible and latent loads for all rooms in each month analysed, detailed hourly results for user selected rooms in some, graphical output of temperatures and loads (optional), loads summed into air conditioning zones (optional), loads summed for all defined rooms.

APHG is part of an integrated suite of thermal analysis programs. An extensive database of glazing materials is provided with the program but the user can add or modify his own data.

Basis: CIBSE Guide 1986 Sections A5 and A9

Computers: IBM 386/486 PCs or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

11

Software Name: BREEZE

Version:

First Published: 1991

Company: Building Research Establishment (01923 664444)

An interactive program for calculating the ventilation and intercell air flows in complex multi-celled buildings, for both refurbishment schemes and new buildings. The analysis program applies methods of network flow computation to calculate balanced mass flows and pressure differences throughout the building. Auxiliary results include volume rates equivalent to the analysed mass flows, and certain purely local volume flows arising from temperature effects. It has comprehensive help messages and on-screen control menu for drawing and data input operations.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

(entry continued)



Disc storage:

Copies sold UK:

World:

Price: £450 + VAT

Training:

12

Software Name: BREVENT

Version: 1

First Published: 1992

Company: Building Research Establishment (01923 664444)

A model to predict ventilation rates in dwellings. It is based on a set of equations that describe elements such as openings (e.g., trickle ventilators, air bricks), windows, extractors, combustion appliances and passive stack ventilation devices. It is a single-zone model, but becomes two zone when a ventilated subfloor space is included. Both input and output programs have extensive help facilities.

Basis:

Computers:

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £200 + VAT

Training: Trial disk available £10 (returnable)

13

Software Name: CADLINK PSYCHRO

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

Psychrometric air conditioning design can be quickly carried out with this package. Standard layouts for full fresh air, recirculation, VAV systems and many others provided. These can be modified, or layouts drawn from scratch. The engineer then enters known values such as external temperatures and heat gains, and desired values such as internal conditions. The software calculates air and heat flows, temperatures, humidity, enthalpy, etc., throughout the system.

(entry continued)



Basis: CIBSE Guide

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training:

14

Software Name: CHART

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

CHART is a rapid on-screen psychrometric chart analysis program. The first stage is to define a psychrometric system of heating, cooling, mixing or humidity control. From this data an initial chart is drawn on-screen. Using the mouse it is then possible to select points from the chart and move them, on-screen, with resultant loads and conditions being simultaneously calculated and displayed.

Basis: CIBSE

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK: **World:**

Price:

Training: Available



15

Software Name: CLIM

Version: 1

First Published: 1992

Company: Diamant Technical Software (0161 962 2708)

Gives climatic data for the following areas:-

Western Europe, Mediterranean countries, Eastern Europe and Middle East, Central Asia, Far East Asia, USA and Canada, South and Central America, Africa, Australia and New Zealand.

Basis: E.A. Pearce and C.G. Smith, World Weather Guide

Computers: All modern computers including lap-tops

Operating System(s): MSDOS 3-21 and above

Memory: 500K bytes

Disc storage: 360K bytes

Copies sold UK: 60

World: 30

Price: £60

Training: By phone or fax if needed

16

Software Name: CRACK

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes infiltration of air into a room.

Basis: ASHRAE Crack method for building components

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



17

Software Name: FLOVENT

Version: 1.401/Dec'94

First Published: 1990

Company: Flomerics Ltd (0181 941 8810)

Uses Computational Fluid Dynamics (CFD) techniques to predict the full three-dimensional air movement and associated heat-transfer processes by conduction, convection and radiation in (and around) buildings and structures. The effects of air viscosity, turbulence and buoyancy are taken account of to generate a highly detailed, accurate picture of the flow field in or around a building. Transient calculations, in which the heat capacity or 'thermal inertia' of the structure plays an important part, can also be performed.

Typical applications include the ventilation design of shopping malls, atria, offices, factories, telephone exchanges, pharmaceutical and semiconductor clean rooms, oil rigs.

Basis: Computational Fluid Dynamics (CFD)

Computers: IBM PC or compatible 486 or above, UNIX Workstations

Operating System(s): MSDOS 3.3 or above, UNIX

Memory: 4M bytes minimum

Disc storage: 10M bytes minimum

Copies sold UK: 35

World: 70

Price: £9,600 annual licence

Training: 2 day training course

18

Software Name: FREEVENT

Version: 2

First Published: 1983

Company: Diamant Technical Software (0161 962 2708)

Enables the calculation of number of air changes per hour in a building by consideration of the wind speed and the types and sizes of ventilation apertures available. Allows faulty ventilation systems to be pinpointed and evaluates whether there is a positive or negative air pressure in the building. Program also indicates a figure for heat loss due to free ventilation.

Basis: V.V. Baturin, "Fundamentals of Industrial Ventilation"

Computers: All modern computers incl. lap-tops

Operating System(s): BASIC and DOS 3-21

(entry continued)



Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 220

World: 230

Price: £60

Training: By phone or Fax if needed

19

Software Name: GRILLE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Enables side wall grilles to be sized and the throw and drop computed for a given room. A set of suitable solutions is presented from a database of manufacturers data.

Basis: Limiting grille velocity and air flow requirements

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

20

Software Name: INFIL

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes infiltration rates of outside air, primarily due to wind forces in accordance with CIBSE Guide Section A4.

Basis: CIBSE Guide, using crack lengths

Computers: IBM PC or compatible

Operating System(s): MSDOS

(entry continued)



Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

21

Software Name: MOIST FOR WINDOWS

Version:

First Published:

Company: Business Edge Ltd (01705 599000)

A Windows based program covering all aspects of psychrometric processes and thermodynamic properties of moist air. Any type of process may be plotted on the chart.

Basis:

Computers: IBM PC or compatible. Minimum Spec. 80386 processor - 16 MHz - VGA display, any dot matrix printer, inkjet or HP compatible laser printer

Operating System(s): Windows

Memory: 4M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

22

Software Name: OBSTRUCT

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

This program section is used to include the effect of shading from other buildings or the building itself if L shaped, on the solar gain for each room in the HEATGAIN calculation. Obstructing buildings can be divided into a number of separate blocks. The height within each block can be allowed to vary.

Basis: Geometry

(entry continued)



Computers: Microcomputer

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

23

Software Name: SHADOW

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

SHADOW is an interactive program which predicts the extent of shadows cast by one building onto another at any location around the globe and at any time during the year. The output of the program consists of a series of values of the percentage of shading on any defined area over a defined period of time. In addition, a graphical output is available to determine the position of any shadows cast over the defined area.

The results can be output in the form of a text file which also contains the full information on the input data, by generating plot files for directing to the graphics devices and by producing data files for use in the APACHE suite.

SHADOW can be used as a stand alone package or as integral part of the APACHE suite.

Basis: Vector transformations

Computers: IBM 386/486 PC or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



24

Software Name: SHADOW

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Determines the shading effect of nearby buildings and predicts for which hours of the day shading will occur at the specified location.

Basis: Geometric equations

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

25

Software Name: SOLAR

Version: 3

First Published: 1980

Company: Diamant Technical Software (0161 962 2708)

Given the geographical location of a window, its size and direction, calculates the daily average solar radiation through the window for a number of months or an entire year. The effect of varying window type (e.g. for double glazing) and the effect of solar control glasses may be examined.

Basis: Høglund and Stephenson, Stockholm

Computers: All current computer types incl. lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 380

World: 430

Price: £60

Training: By phone or Fax if needed



26

Software Name: SOLAR

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes the altitude and azimuth angles of the sun for any location.

Basis: Geometric equations

Computers: Microcomputer

Operating System(s): MSDOS, PCDOS

Memory: 512K bytes

Disc storage:

Copies sold UK: 1050

World: 1200

Price:

Training:

27

Software Name: SUMTEMP

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

This program calculates the internal summertime air or dry resultant temperature as in the CIBSE Guide. The temperatures are evaluated for each hour of the day for the specified orientations, exposed materials and internal gains, if the peak temperature exceeds a specified value, then a mechanical ventilation rate can be calculated to achieve this value. A summary printout can be given which includes for each room the maximum temperature for every date calculated.

Basis: CIBSE Guide A5 1979

Computers: Microcomputer

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



28

Software Name: SUNHEAT**Version:** 4**First Published:** 1985**Company:** Diamant Technical Software (0161 962 2708)

Solar heat arrives in three forms: direct heat, heat reflected from the sky and reflected heat from the ground. The magnitude of these is calculated, as well as maximum heat penetration through glazed areas and through solid wall and roof interfaces. Factors considered are latitude, orientation, inclination, wind velocity, shade, surface type, construction, thermal storage effect, solar resistant glass, screening of windows, internal and external temperature, etc. The sol-air temperature and time of maximum heat flow are determined.

Basis: G. Brown and E. Isfalt, Solar Radiation and Shielding Swedish Building Research Establishment

Computers: Microcomputer

Operating System(s): BASIC, MS-DOS 3-21

Memory: 500K bytes

Disc storage: 90K bytes

Copies sold UK: 280

World: 300

Price: £60

Training: By phone or Fax if needed

29

Software Name: VENT**Version:** 3.2**First Published:** 1986**Company:** Oasys Ltd (0171 465 3302)

VENT is a zonal air flow model that calculates the bulk air movements into and within a building. These are driven by wind pressure, buoyancy forces and purpose designed mechanical ventilation systems. It can be used to estimate infiltration, assess the potential for natural ventilation and trace the general pattern of air movement within a building. Results can be obtained of whole building air change rates, individual room air change rates, the air flow rate through each specified ventilation or leakage area. VENT can also carry out a steady state pollutant trace. In addition ventilation rates and space temperatures can be predicted as the consequence of convective heat sources within the zones. All data is entered via the BEANS database.

Basis: Basic Physics

(entry continued)



Computers: IBM PC or compatible

Operating System(s): MSDOS 3.3 onwards

Memory: 2M bytes minimum

Disc storage: 1M byte

Copies sold UK:

World:

Price: £750 including BEANS database

Training: By arrangement

30

Software Name: VENTAIR

Version: 3

First Published: 1987

Company: Diamant Technical Software (0161 962 2708)

Ventilation requirements of occupied living areas are calculated by assessing the need to dissipate carbon dioxide evolved and body odours released by occupants. It is able to work out the free ventilation rate by considering such factors as the nature and positions of gaps at doors and windows as well as existing ventilators. Gives recommended air change rates and ventilation capacities of mechanical ventilation for dissipation of internal pollutants. Special attention is paid to dissipation of tobacco smoke.

Basis: CIBSE Guide, ASHRAE, BRE Digest 206. D.J. Croome Air Conditioning and Ventilation of Buildings. P.O. Fangar Olf and Decipol units.

Computers: Current microcomputers and lap-tops

Operating System(s): PCDOS

Memory: 500K bytes

Disc storage: 75K bytes

Copies sold UK: 230

World: 250

Price: £60

Training: By phone or Fax if needed



Software Name: WINDOW

Version: 6.0

First Published: 1986

Company: Oasys Ltd (0171 465 3302)

Calculates the mean and cyclic solar gain factors for any glazing and shade combination specified. These are calculated for each hour of the day, rather than giving a cyclic solar gain factor. WINDOW also makes an hourly assessment of the glazing temperature and the heat gain to an average room per square metre of window. The program also calculates the short wave and long wave shading coefficients. The results can be displayed in tabular or graphical form. All data is entered via the BEANS database.

Basis: CIBSE Method

Computers: IBM PC or compatible

Operating System(s): MSDOS 3.3 onwards

Memory: 2M bytes minimum

Disc storage: 1M byte

Copies sold UK:

World:

Price: £500 including BEANS database

Training: By arrangement



32

Software Name: CHERITON ENERGY MANAGEMENT ACCOUNTING SCHEME AS DATABASE**Version: 1.00****First Published: 1993****Company: Cheriton Technology Management Ltd (01223 69190)**

Database to operate the procedures in "An Applications Manual for an Energy Management Accounting Scheme for Energy in Buildings". High resolution monitoring and target setting for buildings. Special feature is use of CUSUM in combination with linear regression and dog-leg and curve pattern degree day characteristics in buildings. Recurrent CUSUM for electricity. Database suitable for 10 or more buildings.

Basis: Database compiled in Clipper**Computers: IBM PC or compatible****Operating System(s): MSDOS 3 or higher****Memory: 1M byte****Disc storage: Hard disk 10M bytes free****Copies sold UK: 2****World: 2****Price: £3,500****Training: Optional**

33

Software Name: CHERITON ENERGY MANAGEMENT ACCOUNTING SCHEME AS SPREADSHEET**Version: 2.00****First Published: July 1993****Company: Cheriton Technology Management Ltd (01223 69190)**

Suite of spreadsheets to operate the procedures in "An Applications Manual for an Energy Management Accounting Scheme for Energy in Buildings". High resolution monitoring and target setting for buildings. Special feature is use of CUSUM in combination with best fit pattern characterisation. Control chart and budget tracking, heat balances, tariff checks. Spreadsheet operation suitable for up to approximately 10 sites.

Basis: Supercalc 4 or 5.5**Computers: IBM PC or compatible****Operating System(s): MSDOS****Memory: 640K bytes**

(entry continued)



BUILDING AUTOMATION

Disc storage: twin floppy or 1MB hard disc

Copies sold UK: 20

World: 20

Price: £425 + Basis

Training: Optional

34

Software Name: TEAM AMS (AUTOMATIC MONITORING SOFTWARE)

Version: 2.0

First Published: 1989

Company: Energy Auditing Agency Ltd (01908 690018)

TEAM AMS analyses half hourly data acquired automatically, through BEMS, data loggers or other automatic recording equipment. The monitoring, targeting and tariff costing capability offered by TEAM AMS helps to save energy and reduce energy costs. Features include data checker, tenant/cost centre billing and performance alarms.

Basis:

Computers: IBM PC or compatible

Operating System(s): Windows

Memory: 1M byte

Disc storage: 20M bytes

Copies sold UK:

World:

Price: £5,000 - £7,000

Training: 2 days

**Software Name:** CdC EASYVIEW**Version:** 2.0**First Published:** 1994**Company:** CdC Software Ltd (0171 386 7355)

CdC EASYVIEW is a Windows software package for the creation of user interfaces. It can be used to build interfaces to control and monitor hardware systems that are connected to the CdC ENGINE. No programming skills are needed to use the product. A growing number of CdC graphics libraries are available which have been designed specifically for use with CdC EASYVIEW. These libraries include animated and colourful graphics applicable to different building services systems. This means that complex graphics representing, for example, BMS, CCTV, or Fire systems, can be easily copied and pasted into the user interface. The graphics can then be activated by using straightforward dialogue boxes in order to connect them, via the CdC ENGINE, to the real objects that they represent.

Basis:**Computers:** IBM PC or compatible**Operating System(s):** Windows 3.11**Memory:** 16M bytes**Disc storage:** 100M bytes**Copies sold UK:** 50**World:** 30**Price:** £1,500**Training:** 2 day course: £495



CONTROLS

36

Software Name: CdC ENGINE

Version: 1.5

First Published: 1992

Company: CdC Software Ltd (0171 386 7375)

The CdC ENGINE provides a powerful man-machine interface, which sits on top of proprietary manufacturers equipment, allowing the graphical user interface to easily integrate any real-time building systems, including BMS, process control, fire and security, providing an integrated, intelligent building control environment.

Basis:

Computers: IBM PC or compatible

Operating System(s): Windows 3.11

Memory: 16M bytes

Disc storage: 100M bytes

Copies sold UK: 250

World: 150

Price: £2,950

Training: 2 day introductory course: £495



37

Software Name: AIRBASE**Version:** 1994**First Published:** 1979**Company:** Air Infiltration & Ventilation Centre (01203 692050)

AIRBASE is a computerised database, run by the Air Infiltration and Ventilation Centre, containing English abstracts of articles on air infiltration and related subjects. As such it covers all aspects of the uncontrolled flow of air through cracks and openings in the building envelope including natural ventilation rates, theoretical models for calculating infiltration, air leakage through components of a building (windows, doors, walls etc), measurement techniques and instrumentation. In addition, AIRBASE contains abstracts of papers on such topics as wind pressure on buildings, ventilation needs and the quality of air inside buildings, ventilation strategy and many others. AIRBASE is continually updated as new articles are received by the AIVC's library.

Basis:**Computers:** IBM PC or compatible with INTEL 286 processor**Operating System(s):** DOS 3.1 or higher, MS Windows**Memory:****Disc storage:** 20M bytes**Copies sold UK:****World:****Price:** £150 + VAT**Training:** User friendly manual

38

Software Name: THE BUILDINGS AND HEALTH DATABASE**Version:** 1994**First Published:** 1987**Company:** The Building Services Research & Information Association (01344 426511)

The Buildings and Health Database is a bibliographic (document references) database containing over 5,800 references on the following subjects.

Sick building syndrome and indoor air pollution. Legionnaires disease, Humidifier fever and other airborne diseases. Ventilation and indoor air quality. Radon, Nitrogen oxides, Carbon oxides and other inorganic pollutants. Formaldehyde and other organic pollutants. Asthma and allergy. Static electricity. Lighting. Noise. Passive smoking. Absenteeism. Medical, physiological and psychological studies.

(entry continued)



DATABASES

References obtained worldwide from journals, standards, conferences, seminars, books, monographs and reports covering the years from 1960.

The database is loaded on the PC. A new copy is sent every three months.

The database is searched using Archivist software which is supplied with manual and sample database. The sample database allows setting up of other personal databases.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 190K bytes

Disc storage: 10M bytes +

Copies sold UK: 12

World: 7

Price: £380 + VAT for 1st year.

Training: User's manual

39

Software Name: BUILDING SERVICES THE CIBSE JOURNAL INDEX

Version: 1994

First Published: 1992

Company: The Building Services Research & Information Association (01344 426511)

A bibliographic database providing abstracts of the main articles from 'Building Services. The CIBSE Journal'. Covering the period from 1978 a total of 1037 articles are indexed with abstracts and keyworded.

Basis: Building Services The CIBSE Journal

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 190K bytes

Disc storage: 1.5M bytes

Copies sold UK: 78

World: 6

Price: £21.15 (inc VAT)

Training: Simple instructions



40

Software Name: DATABASE OF ASHRAE PUBLICATIONS

Version: 1994

First Published: 1991

Company: The Building Services Research & Information Association (01344 426511)

A database to all published ASHRAE papers since 1980, produced by the Building Services Research & Information Association (BSRIA). Covering the contents of the ASHRAE Transactions, ASHRAE Journal, Standards, Guidelines and conference proceedings. The database gives an informative summary to each paper to help users decide which information is most appropriate to their needs.

Designed to run on an IBM PC or compatible computer the database comes as a set of disks and the Idealist software included, allows searching by subject, author, date or title of publication. A manual and thesaurus of keywords completes the package which provides an easy to use index to over 5,000 leading technical papers on HVAC & R technology. Annual editions will keep users abreast of all the technical advances reported in the ASHRAE publishing programme.

Basis: ASHRAE publishing programme

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes minimum

Disc storage: 10M bytes

Copies sold UK: 23

World: 404

Price: £110 to ASHRAE members, £175 to non-members

Training: User's Manual

41

Software Name: IBSEDEX

Version: 1994

First Published: 1980

Company: The Building Services Research & Information Association (01344 426511)

IBSEDEX is a comprehensive key to published information, allowing users to easily search 89,000 references from worldwide literature published since 1960 on all aspects of building services.

On any subject it provides details of books, reports, conference papers, journal articles and standards, with in most cases an informative summary of the contents and conclusions.

(entry continued)



DATABASES

IBSEDEX may be accessed directly on-line to BSRIA's computer or by international host service, ESA-IRS.

A microcomputer or teletype terminal can call it up on the telephone using an acoustic coupler or modem.

The database may be searched for any subject word, author, trade name, name of building or standards. All references are assigned keywords and faster searches can be done using these keywords only. A thesaurus of keywords is available.

Basis:

Computers: Any

Operating System(s): MSDOS 3.1 and above

Memory:

Disc storage:

Copies sold UK: 156

World: 13

Price: £150 + VAT (£100 + VAT BSRIA members)

Training: User's manual

42

Software Name: PROCEEDINGS OF THE INSTITUTE OF REFRIGERATION:
ELECTRONIC INDEX

Version: 1994

First Published: 1994

Company: The Building Services Research & Information Association (01344 426511)

Contains abstracts and keywording for all the papers published since 1900 in the Proceedings of the Institute of Refrigeration or conference proceedings, available at the data of issue.

Basis: Proceedings of the Institute of Refrigeration

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 1.5M bytes

Copies sold UK: 8

World: 8

Price: £40 + VAT

Training: Simple instructions



DUCT SIZING AND ANALYSIS

43

Software Name: AIRDUCT

Version: 2

First Published: 1985

Company: Diamant Technical Software (0161 962 2708)

Starting from the wall outlet the flow of air through ducting is calculated. User first feeds in the nature of the outlet grille used followed by a description of the ducting system. Up to 30 different duct sections, fitting types and take-offs can be considered for each calculation. Program allows for viscosity and density. Ducts can be circular, rectangular or a mixture of both. It gives flow velocity of air and the static pressure at each position in the system. Static and dynamic pressure at the fan end of the system are calculated.

Basis: CIBS Duct Sizing Specifications. Croome and Roberts, Warm Air Heating (Kut). Gosling, Applied Air Conditioning. V.V. Baturin, Fundamentals of Industrial Ventilation

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MS-DOS 3-21

Memory: 500K bytes

Disc storage: 81K bytes

Copies sold UK: 200

World: 220

Price: £60

Training: By phone or Fax if required

44

Software Name: CADLINK DUCTWORK

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

The engineer locates supply or extract grilles on the drawing, snapping to ceiling tiles if required. Ducts are drawn in to connect the grilles to a fan. The system calculates flows, velocities, pressure drops, etc., throughout the system, identifying the index run and calculating fan duty. Existing ducts may be fixed in size, and height restrictions entered. Excess pressure at terminals is calculated. Balancing is achieved by dampers or by allowing velocities in non-index runs to rise. Budget costs are available.

Basis: CIBSE Guide

Computers: Microcomputers

(entry continued)



DUCT SIZING AND ANALYSIS

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

45

Software Name: DUCSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

DUCSYS is a ductwork and scheduling system, the main features are:

Direct take-off from drawings. Bill of quantity input. Fully priced materials file with standard labour rates with TSI (Luckins) update facility. All standard specifications DW142, 17.5, DW152 plus facilities for individual client specifications. Schedules of rates in various formats. Labour and materials scheduling.

Basis:

Computers: IBM PC or compatible, B20s, UNIX machines

Operating System(s): MSDOS, BTOS, UNIX, BOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available

46

Software Name: DUCT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes friction losses in a duct system, when the ductwork has already been sized and air flow rates are known.

(entry continued)



DUCT SIZING AND ANALYSIS

Basis: CIBSE Guide and basic equations

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

47

Software Name: DUCT DESIGN PROGRAM

Version: V3.25

First Published:

Company: Carrier Air Conditioning Ltd (0181 991 2000)

The Duct Design Program uses the equal friction or static regain calculation method to determine duct sizes for round, rectangular and oval ducts. All pressure losses and required balancing is calculated according to the 1989 ASHRAE Handbook of Fundamentals. With the Duct Design Program, users may enter known sizes for pressure analysis making it easier to examine retrofit jobs and to check existing designs.

Aspect ratio and velocity limits can be used and also maximum and minimum size limits can be specified on a system wide or section by section basis. Additional features include the ability to consider duct leakage, calculate duct heat gain or loss, on-line help and calculator and also compile a customised material database.

Basis: ASHRAE Handbook of Fundamentals

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: Approximately 1.4M bytes

Copies sold UK: 250

World: Over 10,000

Price: £300 + VAT

Training: Extensive "hands-on" training seminars are held on a regular basis and are available free of charge to all licensed users



DUCT SIZING AND ANALYSIS

48

Software Name: DUCTLINK

Version: V2.15

First Published:

Company: Carrier Air Conditioning Ltd (0181 991 2000)

DuctLINK is a microcomputer based duct design program which simplifies the traditional process of designing and drawing HVAC duct systems.

The CAD system is used to produce a single line schematic duct layout. Junctions and diffuser outlets may be optionally specified. When the schematic drawing is complete, a DXF file is created.

DuctLINK uses the DXF file to calculate the duct sizes, air flow rates, and pressure losses. The calculations may be made for round, rectangular, or flexible duct, using either static regain or equal friction methods. When the calculations are complete, DuctLINK produces an output DXF file that contains the information for a double-line drawing representing the entire duct system. The completed drawing accurately depicts all sections of ducts, junctions, diffusers, text annotations, and an extensive Bill-of-Materials.

Basis: ASHRAE Handbook of Fundamentals

Computers: IBM PC or compatible

Operating System(s): DOS 3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: 2.9M bytes

Copies sold UK:

World:

Price: £700 + VAT

Training: Extensive "hands-on" training seminars are held on a regular basis and are available free of charge to all licensed users.

49

Software Name: DUCTSIZE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

For supply or extract ventilation ductwork, sizes the system and gives pressure drops, velocities, flows and damper pressure drops for a range of inlet velocities. Can accommodate most fitting types, and pre-fixed duct sizes. Ducts can be oval, rectangular and circular. A database of sizes to be included can be set up by the user to give equal friction,

(entry continued)



DUCT SIZING AND ANALYSIS

constant or reducing velocities. Excess pressures at the terminals can be given or the system can be balanced using dampers or by allowing the velocities in non-index circuits to rise. A budget cost for the system is also calculated.

Basis: CIBSE Guide C4 1977, HVCA DW142

Computers: Microcomputer

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

50

Software Name: DUCTSIZE

Version: 2

First Published: 1986

Company: Diamant Technical Software (0161 962 2708)

Taking into account fan pressure available, different air outlets, grilles, etc., varying bends and elbows, duct lengths, materials of construction as well as desired volume flow rate and temperature of air blown through, program can calculate internal duct dimensions. It can be used for circular and rectangular ducts. For a rectangular duct, user must specify the aspect ratio. Program can be used in conjunction with the program 'AIRDUCT' to calculate the dimensions of side stream take-offs of existing ventilating systems.

Basis: CIBS Duct sizing specifications. Croome and Roberts, Air Conditioning and Ventilation in Buildings

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MS-DOS 3-21

Memory: 500K bytes

Disc storage: 72K bytes

Copies sold UK: 200

World: 210

Price: £60

Training: By phone or fax if needed



Software Name: INDUS

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

INDUS copes with both supply and extract systems. The program offers a range of sizing approaches, either static regain, constant friction or constant velocity. The user selects the appropriate velocity and pressure loss gradients used in these sizing methods. INDUS can use circular, rectangular or flat oval ductwork or any combination of these types in any ductwork analysis. The program has a standard range of sizes built-in along with three other range options. These are an extended range of HVCA sizes, fixing ducts to any user defined size or generating your own ductwork tables (up to 50 circular sizes and a 50 by 50 array of rectangular ducts with a user defined maximum aspect ratio). There is also inbuilt K-factor information for bends, transitions and tees.

When calculating the flow in the ducts the user can define diversity on any combined flow section. The program accounts for temperature pickup through the system and allows for different duct insulation and surrounding air temperatures. There is also a facility to limit any duct section to a new velocity, maximum depth or width or to fix the size completely. When each route through the system has been analysed and the index path found the non-index routes can be resized if required to take out as much of the excess pressure as possible before selecting balancing dampers.

The program provides output for each section of duct - duct size, total k-factor based on input fitting codes, total pressure loss in the duct, pressure loss across balancing damper (if required), velocity, temperature.

The program provides output for the complete system - fan total pressure, fan static pressure, fan flowrate, fan air power, installed mass of ductwork, identification of the index path, an optional list of parts.

Basis: HVCA DW142. BSRIA Information Circular 26 1973.

Computers: IBM 386/486 PC or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



52

Software Name: ME DUCTWORK & AIR CONDITIONING

Version: 1.0

First Published: 1994

Company: Hevacomp Ltd (01142 556680)

Room cooling load, and airflow calculations link to duct layout and sizing, duct drawing in 2D and 3D all within AutoCAD environment.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS/Windows

Memory: 12M bytes

Disc storage: Part of complete program suite requiring minimum 25M bytes

Copies sold UK:

World:

Price: P.O.A.

Training: Available on all programs

53

Software Name: PITOT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Stores and analyses pitot static or anemometer readings of velocity.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



54

Software Name: STATIC

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Duct sizing using static regain method or equal velocity method.

Basis: Basic fluids equations

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

55

Software Name: TURBO

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Duct sizing using maximum pressure drop and maximum velocity. The program utilises a file system allowing easy retrieval of data.

Basis: Basic fluids equations.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



DUCT SIZING AND ANALYSIS

56

Software Name: VENT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Package of programs for sizing a complete system of ductwork. The program checks and stores data on file.

Basis: Basic fluids equations.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



ELECTRICAL

57

Software Name: CABLE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Selection of most economical cable sizes for all types of copper and aluminium cable in any single or 3 phase distribution system within or between buildings. Loads may be entered in kVA or Amps with a specified power factor. Cables are mounted using one of 5 installation methods. Corrections for temperature and bunching are included. The calculation automatically increases cable sizes to keep all circuits below the required volt drop. Cables are automatically paralleled if necessary. Voltages at each load are given and volt drops for each cable. Fuses and cables are sized and a budget costing is produced.

Basis: IEE Wiring Regulations 16th Edition.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

58

Software Name: CABLECAD

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

CABLECAD uses a 'mouse' to place boards, loads, and cables at the correct location. The loads on boards, motors etc., are simply typed in. At any stage a calculation can be performed and the results instantly displayed. A wide range of print-outs are available including a plot facility and designs can be exported to other CAD systems using the industry standard DXF format.

Basis: IEE Wiring Regulations 16th Edition

Computers:

Operating System(s): DOS, Windows

Memory:

(entry continued)



ELECTRICAL

Disc storage:

Copies sold UK:

World:

Price:

Training:

59

Software Name: CABLEMASTER

Version: 7.1

First Published: 1984

Company: Amtech Computer Systems Ltd (01234 240088)

CABLEMASTER is a BS7671 design program for electrical engineers. This program is suitable for both new distribution design and the retrospective checking of existing installations. It works from a simple, very intuitive drawing environment allowing data to be entered quickly. All calculations to the latest regulations are carried out and documentation for BS5750 and Electricity at Work Regulations can be produced in addition to single line diagrams. The software is supplied with a protection co-ordination package and includes extensive, manufacturer supported databases for cables and protecting devices.

Basis:

Computers: IBM PC (386 minimum) or compatible

Operating System(s): Windows

Memory: 4M bytes

Disc storage: 6M bytes

Copies sold UK: 1,000+

World: 1,500+

Price: £200 to £3,500

Training: £150/day

60

Software Name: CABLESIZE : SUB-MAIN & FUSECHECK

Version: 94.1

First Published: 1982

Company: Richard Twinch Design Ltd (01865 202108)

Cablesize is used to design from the transformers/supply to the Distribution Board (/s). It can deal with ring circuits right down to the Final Circuit. Includes PVC Non-Armoured and that the device will break the maximum available short circuit current and that the device will

(entry continued)



ELECTRICAL

Armoured and MICS etc. For the cable selected and tested in Sub-Main, Cablesize checks disconnect before the conductors are damaged. The program allows the type of device and/or cable to be changed. For the cable selected and tested in Sub main, Fusecheck checks, in accordance with Regulation 434, that the device will break the maximum available short circuit current and checks that the device will disconnect before the conductors are damaged. Should any of these conditions not be met the program allows the type of device and/or cable to be changed. Once the cable has been selected, designed and tested other cables can be added either, (1) in Parallel, where they share the same source conditions. or, (2) in Series where the Load End Conditions of the first cable becomes the Supply End Conditions for the next cable.

Basis: IEE Wiring Regulations 15th and 16th Edition

Computers: IBM PCs 286, 386, 486 or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 760K bytes

Copies sold UK: 50

World:

Price: £495 for 1st year (suite £1,175 for 5 years)

Training: £330 per day + VAT

61

Software Name: CADLINK ELECTRICS

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

This software lets the engineer place distribution boards, switches, sockets, etc., on the floor plan, and draw in the switching runs from the switch to luminaires. It calculates the length of cable from board to switch, and from switch to luminaires. Trunking, cable tray, etc., can also be drawn onto the plan.

Basis: Sketching Techniques

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



ELECTRICAL

62

Software Name: CADLINK WIRING

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

As the engineer draws a wiring schematic on the screen, the software makes it possible to calculate cable sizes, fault levels, disconnection times - in short all the requirements of the 16th Edition Wiring Regulations. Detailed diagrams can be produced, together with cable schedules, "fuseboard" charts, and test sheets.

Basis: IEE Wiring Regulations (BS7671)

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

63

Software Name: CAMAS

Version: 1994

First Published: 1985

Company: Superior Electric (01799 528227)

Stepper and Servo motor calculations for size and drive.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: £10

Training: self explanatory



ELECTRICAL

64

Software Name: CELSIUS, CABLE MANAGEMENT SOFTWARE

Version: V2.0

First Published: 1989

Company: Pinacl Communication Systems Ltd (01745 589200)

CELSIUS is a multiuser, design and documentation tool for the management of building and site cabling and its associated equipment, linking AutoCAD drawings to relational database information. Features include end to end circuit connectivity and schematics, asset and inventory data, comprehensive enquiries, cable routes and equipment locations in addition to functionality to manage ongoing moves and changes maximising the investment in corporate technology.

Basis:

Computers: IBM PC 386 compatible or above with maths coprocessor

Operating System(s): MSDOS 3.31 or above

Memory: 12M bytes

Disc storage: 10M bytes (excluding project data)

Copies sold UK: 160

World: 180

Price: On application

Training: Tailored to suit customer requirements

65

Software Name: ELEC - (ELECTRICAL CONTRACTORS PACKAGE)

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

16th Edition IEE wiring regulations. Protective device sizing, Cable sizing, CPC sizing, Earth loop impedance calculations. Disconnection time displays, max prospective short circuit calculation, let through and cable thermal capacities calculated. Discrimination checks, Motor surge currents and durations tested.

Print-outs include Fusecharts, Specification sheets, calculations file sheets, Test and installation reports with temperature correction factors for earth loop impedences. Quantities schedules. Schematic representation on screen and standard dot matrix printers. Device characteristics curves and discrimination curve overlays on screen. Annotated working schematic drawings (up to A0 size) can be automatically produced on a plotter. Cable and protective device data is accessible and extendible by the user. Adjustable devices can be defined.

(entry continued)



ELECTRICAL

Basis: IEE Wiring Regulations 16th Edition

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: 2.8M bytes

Copies sold UK: 1350

World: 1500

Price: P.O.A.

Training: Available

66

Software Name: ELECTRICAL DESIGN SUITE

Version: 1, IBM PC/compatibles. 2, PSION **First Published:** Ver.1,1995, Ver.2,1993

Company: Garth Munton (01275 462113)

A suite of three electrical design programs to run on PSION's series 3 or 3A PALMTOP (Version 2) or on any IBM PC/compatible (Version 1). The solid state disk also contains cable databases and design utilities. The design programs are files for the PSION spreadsheet, A format which allows instant "what if" calculations.

1. "LIGHT", using the Lumen method, provides LUX levels, with recommended numbers of luminaires, for one, two, three, or four lamp luminaires.
2. "LOAD", electrical database creation, keeps running totals of kW, KVA, power factor, amps etc., both "installed" and "after diversity".
3. "FAULT" origin (transformer or supply utility) and consecutive distributors. Input cable data (from database provided) to obtain 3 phase and 1 phase fault amps; earth fault loop impedance, and earth fault amps. Running total of impedances allows indefinite number of consecutive distributors.

Basis:

Computers: Version 1, IBM PC/compatibles. Version 2, PSION series 3 and 3A Palmtops

Operating System(s): Version 1, MSDOS. Version 2, DOS

Memory: Version 1, 10K bytes. Version 2, 30K bytes

Disc storage: Not required

Copies sold UK: 57

World: 6

Price: £89.95 + VAT.

Training: None required



ELECTRICAL

67

Software Name: ELECTRICAL INSPECTOR

Version: **First Published:**

Company: Custom Maintenance Systems (01208 77077)

A computer program which prints Test Certificates complying with BS 7671, the 16th Edition of the Wiring Regulations and other relevant regulations.

The program may be used for:

- Domestic, commercial and industrial installations.
- Completion* and *Periodic* inspections and tests.
- Small works and modifications.
- Petrol stations.
- Emergency lighting.
- Fire alarm systems.

For all premises, the program holds the *Particulars of the Installation* and details of the distribution boxes, switchgear and circuits which form the installation.

An optional program is available for using on a PSION Organiser so that details of an installation can be loaded from the office computer into the PSION prior to visiting site: inspection results can be transferred back to the office computer on completion of the work.

Basis:

Computers: IBM PC or compatible, PSION Organiser

Operating System(s):

Memory:

Disc storage:

Copies sold UK: **World:**

Price: £99.95 + VAT. PSION Organiser module £49.95 + VAT

Training:



ELECTRICAL

68

Software Name: ELECTRICALC

Version: 3.2

First Published: 1989

Company: Trend Computers & Software (01454 412138)

Cable sizing and IEE Wiring Regulations design program. Calculates size of phase and circuit protective conductors, as well as determining protective device values, actual volt drops, disconnection times, earth fault loop impedances, short circuit currents and earth fault currents. Detailed circuit printouts can be produced. A context sensitive help facility provides immediate access to information and data relating to any specific part of the program thereby eliminating the requirement for an operating manual. A version of the program is also available for use on the Atari Pocket Computer enabling designs and verifications to be carried out on site.

Basis: IEE 16th Edition Wiring Regulations

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 128K bytes

Disc storage: 200K bytes

Copies sold UK:

World:

Price: £105

Training: If required

69

Software Name: THE ELECTRICITY COMPANION

Version:

First Published: 1991

Company: Eurotech (01243 672891)

An interactive, computer-based training package designed to train management and workforce in their responsibilities under the Electricity at Work Regulations 1989. Structured in short, conceptual modules allowing the tutor to tailor the training to any individual's needs, it also has testing and record-keeping facilities which enable the tutor to judge the level of each learner's understanding of the Regulations.

Basis:

Computers: IBM XT or compatible

Operating System(s): MSDOS

(entry continued)



ELECTRICAL

Memory:

Disc storage: 2.5M bytes

Copies sold UK:

World:

Price: £885

Training:

70

Software Name: ERACS

Version: II

First Published: 1991

Company: ERA Technology Ltd (01372 367000)

ERACS is a comprehensive, graphics based, Power System Analysis Suite of software with the functional aspects of:

- 1) High quality, fast, interactive, mouse-driven graphics and data entry. Full plotting facilities included.
- 2) Load Flow Analysis.
- 3) Short Circuit Analysis.
- 4) Harmonic Penetration and Impedance Analysis.
- 5) Transient Stability Analysis.
- 6) Protection Co-ordination Analysis.

It is applicable to both small scale and large scale installations.

Basis:

Computers: 386 or better

Operating System(s): DOS 3.3 or higher

Memory: 2M bytes +

Disc storage: 10M bytes

Copies sold UK: 60

World: 80

Price: From £8000 depending on options

Training: 1 day courses



ELECTRICAL

71

Software Name: FAULT

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Used with the CABLE program to calculate (throughout the cable network) the appropriate fault levels for 3-phase symmetrical short-circuit faults. Correction at which fault levels are likely to be exceeded are marked. Fault levels at every junction point and load are given.

Basis: IEE Wiring Regulations 16th Edition

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

72

Software Name: FIELD16

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

FIELD16 is an interactive electrical design and analysis program based on the 16th Edition of the IEE Wiring Regulations.

FIELD16 can analyse a wide variety of electrical installations at various stages of design, from an early stage with a basic cable network and provisional loads, to a final stage with all boards specified, detailed loads, spare capacity and diversity.

Loads are entered under several types, including lighting, heating, cooking, motors, socket outlets, and non-classified for loads which do not easily fit any other category. Spare ways can also be entered.

A database of protective device and cable data is provided, covering all the types found in the Regulations, and using cable resistance data from the relevant British Standards. The database can be easily extended by users, e.g. for special circuit breakers and cables. Standard motor data are also available, although motor data can always be entered by the user if a motor is not standard.

(entry continued)



ELECTRICAL

After summing the loads for each phase vectorially, and including third harmonic contributions to the neutral current, FIELD16 selects or checks the protective devices, which must be suitable for design current, inrush current and discrimination. The program then selects or checks the cables, which must cope adequately with the design current, the voltage drop requirements, and short circuit and earth fault thermal effects. The calculations involve the vectorial summation of short circuit and earth fault resistances, corrected to the relevant temperatures, and checking the thermal effects and trip times produced by the fault currents. FIELD16 also checks the sizes of protective conductors and is able to select sizes for some of these. The protective devices are subjected to further checks for breaking capacity and discrimination.

A summary of the input data is always given on the output. In addition to this, several output options are available, a general load summary, an analysis of the equipment by load, schedules of loads distribution equipment, protective devices and cables, and, for each circuit on each item of distribution equipment, schedules of loading, design data such as impedances and fault currents, and installation data.

Basis: IEE Wiring Regulations 16th Edition.

Computers: IBM 386/486 PCs or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training:

73

Software Name: FINAL CIRCUIT

Version: 94.1

First Published: 1983

Company: Richard Twinch Design Ltd (01865 202108)

This program will carry out all calculations for Final Circuits as required by Regulations:

434-4 and 436-6 concerning protection against short circuit current. 413-4 and 471-36 concerning circuit disconnection times. 543-2 concerning circuit protective disconnection times. 522-8 concerning circuit voltage drop.

Input and output are similar to those required both for SUB-MAINS and FUSECHECK together and include calculations for Circuit's Maximum Length before either the maximum voltage drop or the maximum disconnection time is exceeded or either the phase or the conductors fail the short circuit or earth loop fault tests.

(entry continued)



ELECTRICAL

Final Circuit includes specification of the Distribution Board, and allows calculations for each of the specified ways. Manufacturers blanks can be inserted during the initial specification. Subsequently the Final Editor can 'pick' them up and substitute a new circuit. Additional ways can also be added, which is done by first inserting a 'blank' and then specifying the new way in its place.

Basis: IEE Wiring Regulations 16th Edition

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 312K bytes

Copies sold UK: 50

World:

Price: £395 for 1st year (suite £1,175 for 5 years)

Training: £330 per day + VAT

74

Software Name: I.T APPLIANCE TESTING

Version: 1.07

First Published: 1992

Company: Custom Maintenance Systems (01208 77077)

Computers and electrical equipment require special care when testing for electrical safety. This program has been specially written for this task and may be used with traditional test instruments or the Seward IT 1000 appliance tester.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 500K bytes

Disc storage: 5M bytes

Copies sold UK: 23

World:

Price: £250 single user

Training: £175 - £575 dependant on location



ELECTRICAL

75

Software Name: ME ELECTRICAL

Version: 1.0

First Published: 1994

Company: Hevacomp Ltd (01142 556680)

Layout and drawing of electrical systems with full analysis for compliance with IEE Regulations. Operates within AutoCAD environment.

Basis: IEE Wiring Regulations

(entry continued)

Computers: IBM PC or compatible

Operating System(s): MSDOS/Windows

Memory: 12M bytes

Disc storage: Part of complete program suite requiring minimum 25M bytes

Copies sold UK:

World:

Price: P.O.A.

Training: Available on all programs

76

Software Name: MOTOR CONTROL CENTRES

Version: 94.2

First Published: 1989

Company: Richard Twinch Design Ltd (01865 202108)

This program will carry out all calculations for Motor Circuits as required by Regulations: 434-4 and 436-6 concerning protection against short circuit current. 413-4 and 471-36 concerning circuit disconnection times. 543-2 concerning circuit protective disconnection times. 522-8 concerning circuit voltage drop.

Input and output are similar to those required both for SUB-MAINS and FUSECHECK together and include calculations for Circuit's Maximum Length before either the maximum voltage drop or the maximum disconnection time is exceeded or either the phase or the conductors fail the short circuit or earth loop fault tests. It is possible to enter loads in either horse-power, Kilowatts or amps.

MCC includes specification of the panel, and allows calculations for each of the specified ways. Blank ways can be inserted during the initial specification. Subsequently the Editor can 'pick' them up and substitute a new circuit. Additional ways can also be added, which is done by first inserting a 'blank' and then specifying the new way in its place.

(entry continued)



ELECTRICAL

Basis: IEE Wiring Regulations 16th Edition

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 337K bytes

Copies sold UK: 30

World:

Price: £295 for 1st year

Training: £330 per day + VAT

77

Software Name: SUBCIRC

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

SUBCIRC enables the design engineer to analyse all types (lighting, sockets, standard sockets, cooking, stationary equipment, etc.) of single or three phase final circuits, giving the size of fuses, cables and CPCs. Entries are checked to ensure that all circuits conform to the IEE Wiring Regulations, and any potential problems are highlighted. A wide choice of printed reports may be produced on request - fuse charts, detailed analyses of each board (taking full account of diversity), commissioning details and quantities. The program is fully integrated with CABLE, accessing the same database, enabling the whole system to be designed within the same package, thus avoiding duplication of effort.

Basis: IEE Wiring Regulations 16th Edition.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



ELECTRICAL

78

Software Name: TRUNKING AND CONDUITSIZE

Version: 94.1

First Published: 1982

Company: Richard Twinch Design Ltd (01865 202108)

Trunkingsize sizes cable trunking in accordance with the trunking and cable factors recommended in Appendix 12 (Tables 12E and 12F). Sizes cable trunking for cables up to 120 sq.mm using the space factor method as Appendix 12 and Regulation 529-7, which recommends that in order to ensure an easy pull of cables into trunking, a space factor of 45% is not exceeded. This program contains the overall diameters of B.I.C.C. single core p.v.c. insulated copper cables (6491X) to BS 6004 and 6746 and the internal areas of G.E.C. Walsall Ltd. heavy gauge steel trunking. The program uses this information to calculate the actual factor used in a trunking and recommends a trunking size given the numbers of cables required to install.

Conduitsize sizes cable conduits in accordance with the cable and conduit factors recommended in Appendix 12 (Tables 12 A,B,C, and D). The program will indicate the minimum size of conduit that can contain a specific number of cables, given the cable sizes, the conduit length, and the number of bends and/or double sets in the conduit length.

Basis: IEE Wiring Regulations 15th and 16th Edition

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 260K bytes

Copies sold UK: 50

World:

Price: £95 for 1st year

Training: £330 per day + VAT

79

Software Name: TRUNKSIZE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

A highly interactive module that enables rapid choices of the most appropriate conduit size or trunking dimensions to be made, the method used in this calculation is taken from the IEE Regulations (16th Edition). The numbers of each size of cable are given by the engineer. The computer works out the size of conduit required. For trunking, the engineer specifies the dimensions and the cables to be installed. The computer displays the percentage filled.

(entry continued)



ELECTRICAL

Basis: IEE Wiring Regulations 16th Edition

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

80

Software Name: AHEAD

Version: 1

First Published: 1994

Company: EnTech Energy Consultants Ltd (0171 833 3353)

AHEAD - Analysis of Half-hourly Energy and Associated Data. It has been specially developed for "100kW" sites and others with half-hourly metering and gives the Energy Manager automated analysis of consumption and costs on the following day, with explicit guidance to help cancel out wastage, find new opportunities for real energy savings and manage energy costs at the lowest possible level.

Reports daily by exception on premises where energy wastage appears to have occurred on the previous day, enabling swift corrective action to be taken and savings to be maximised. Monthly summary reports can also be produced which detail the daily consumption for that month.

AHEAD data can also be used to "pre-validate" invoices - however complex the contract pricing structure, the cost of the preceding month's electricity by lunch time on the first working day of the month.

AHEAD is available as a Bureau Service or stand-alone system

Basis:

Computers: PC 486-66+

Operating System(s): MS-DOS 6.2, Windows 3.11

Memory: 8M bytes

Disc storage: 20M bytes + 200K bytes/location

Copies sold UK: 45

World: N/A

Price: P.O.A.

Training: Included



ENERGY REQUIREMENTS

81

Software Name: AIRCOND

Version: 3

First Published: 1986

Company: Diamant Technical Software (0161 962 2708)

Determines the cooling load in premises situated in hot countries, as well as in temperate zones during the summer. Loads from solar radiation, air convection, people and machinery are summed and the total cooling load determined. Also, when passing external air through a chiller, water vapour is condensed. If an inadequate volume of air is passed through the chiller the air is cooled below the freezing point of water. Gives warning of such conditions. Program balances out the supply and disposal of water vapour so that the internal relative humidity is maintained at a pre-determined level.

Basis: D.J. Croome, B.M. Roberts, Air conditioning of Buildings. IHVE Guide 1970. CIBS Guide 1978. BRE Digest 206

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 75K bytes

Copies sold UK: 250

World: 280

Price: £60

Training: By phone or fax if needed

82

Software Name: APSS

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

APSS calculates the expected annual energy consumption of the HVAC systems in a building. The program also summates the annual electrical consumption for lighting and equipment from the schedules and levels of use defined by the user. The program uses finite difference techniques to model the transmission and storage of heat in the building fabric and simultaneously analyses the performance of the HVAC systems using a six minute time step.

The user first specifies details of the building location, design weather data, thermal properties of the building fabric (thickness and material of each layer) and various schedules for hours of plant operation, occupancy, lighting etc. Then the rooms are defined by specifying the volume, floor area, casual gains, air exchanges and fabric elements, cross referencing the schedules and fabric properties as appropriate. Finally, the user must describe the HVAC systems giving details of the room terminal devices, the air distribution network, and air handling units, auxiliaries, central plant and controls.

(entry continued)



ENERGY REQUIREMENTS

The calculations are performed for any number of days up to a whole year. The simulation takes account of the fresh air loads, fan efficiencies, distribution losses, central plant part load efficiencies, pumps heat recovery and controls.

Program output includes, hourly room temperatures and energy balances (optional), hourly psychrometrics at selected points in the system (optional), monthly and annual heating/cooling loads, monthly and annual fuel consumption of central plant, monthly and annual total building fuel consumption.

APSS is part of an integrated suite of thermal analysis programs.

Basis:

Computers: IBM PC or compatible 386/486

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 3M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

83

Software Name: BASE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Combined energy data for all the thermal load programs. Greatly reduces data entry time when data has been entered for say a heatgain calculation, heatloss and summertime temperatures can be output without further data entry. Information is entered on two different forms, one for overall building and material parameters and the second for data on each room.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PC DOS, Windows

Memory:

(entry continued)



ENERGY REQUIREMENTS

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

84

Software Name: BENC2

Version: 6.0

First Published: 1986

Company: Oasys Ltd (0171 465 3302)

BENC2 provides a simple method for calculating the energy demands and targets for a new building with only heating and natural ventilation.

The output is presented in the form specified in the code worksheets. All data is input via the BEANS database.

Basis: CIBSE Building Energy Code part 2

Computers: IBM PC or compatible

Operating System(s): MSDOS 3.3 onwards

Memory: 2M bytes minimum

Disc storage: 1M byte

Copies sold UK:

World:

Price: £500 including BEANS database

Training: By arrangement

85

Software Name: BILLTRAK

Version: 1.2

First Published: 1992

Company: Grimster Associates Ltd (01628 34315)

Current year billing indicator. Provides in-house capability for monitoring unit electricity prices and market alternative contracts. Consumption and budgets are derived from supplier bills. Gives reports and graphics. Option for linking this software to the pool pricing evaluator (Pooltrak).

Basis:

(entry continued)



ENERGY REQUIREMENTS

Computers: IBM PC or compatible

Operating System(s): DOS version 3 or higher

Memory: 640K bytes conventional + expanded if available

Disc storage:

Copies sold UK: 8

World: 0

Price: £650

Training: Included

86

Software Name: BRE-ADMIT

Version:

First Published: 1984

Company: Building Research Establishment (01923 664444)

A program for the prediction of building temperatures and heating/cooling loads using the admittance method. The package contains a manual for the suite of programmes, a programmer's guide, a theory paper and data stored on a disk file. The programs are written in BASIC. The programs are interactive, prompting the user for each piece of relevant information, and have been developed to manage data input and subsequent editing.

Basis: BRE Admittance Method

Computers: IBM PC or compatible

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £100 + VAT

Training:



ENERGY REQUIREMENTS

87

Software Name: CADLINK ENERGY

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

Rooms are taken off by pointing to room corners, walls and windows. The software then calculates heat gains, heat losses, internal summertime temperatures, temperatures, energy consumption, and partial plant effects.

Basis: CIBSE Guide

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

88

Software Name: CARE

Version: 6.02

First Published: 1988

Company: Cable AM (01767 316027)

An energy monitoring and targeting system to handle energy use in buildings. The system is written in Faxpro for DOS allowing the minimum of input while providing a wide range of reports and displays for varying levels of user comprehension. The system handles all fuels plus water. CARE is designed as an occasional use system needing the minimum of understanding to use.

The system can be fully supported via telephone help or on-site and off-site assistance. A bureau service is also available. The latest version is network compatible and can be set to accept electronic data.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS or PCDOS

Memory: 640K bytes

(entry continued)



ENERGY REQUIREMENTS

Disc storage: 2.2M bytes

Copies sold UK: 16

World:

Price: £500 - £2,000

Training: As required

89

Software Name: CIBS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Checks a design for compliance with Part 2 of CIBSE Energy Code. The program computes the likely energy consumption of a building.

Basis: CIBSE Energy Code Part 2

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

90

Software Name: CONSUME

Version: 6

First Published:

Company: Cymap Ltd (01179 299332)

Using the building database set up in the BASE package, CONSUME will calculate the heating and cooling energy consumption over a full year. Calculations may be carried out on a room-by-room basis, or for the building as a whole. Full account is taken of shading due to obstructing buildings or window recesses. Weather data for any part of the world may be used. Running costs can be compared for various fuel types and building design parameters.

Basis:

(entry continued)



ENERGY REQUIREMENTS

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

91

Software Name: CONV2

Version:

First Published: 1993

Company: Seltek Instruments Ltd (01920 871094)

CONV2 gives the ability for load profile data, as supplied by Regional Electricity Companies, to be easily converted into Hawk Reporter format, enabling load profile data to be easily displayed and printed in a comprehensive report with facilities for cost and tariff analysis, Maximum Demand, Power Factor and Phase Balance.

See also Hawk Reporter.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or above

Memory: 640K bytes

Disc storage: Hard disk 240K bytes minimum

Copies sold UK:

World:

Price: £350

Training: £75



ENERGY REQUIREMENTS

92

Software Name: DEMAND

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

This program enables the engineer to determine within a few minutes whether a building will meet the target requirements of the CIBSE Energy Code (part 2A) for energy consumption. The effects of any alterations to the design of the building are constantly monitored on the screen, allowing the user to see at a glance the effects of installing double glazing (for example) or improving the wall insulation. Consumption over the year can be determined for a variety of different fuel types.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

93

Software Name: DIRECTOR

Version: 3.0

First Published: 1988

Company: Kingsmen Consultants (01435 865527 or 01403 251973)

A dedicated energy (water or similar parameters) flow, analysis, reporting and presentation package: utilising a combination of database and spreadsheet techniques. Data is stored in Lotus-compatible files. Optional automatic (and/or manual) data acquisition is available at either scheduled intervals (or on demand) from single/multiple, local or remote interfaces. The software generates realistic performance targets from entered historic and current data for the basic parameter and associated dependent variables (e.g., weather, occupancy, environmental, production). Performance indicators (including CO₂/SO₂ pollution emissions) are automatically calculated and graphically plotted for appraisal in managerial techniques such as 'management by objectives'. Maintenance data can be entered for associated performance indices. The software is modular, ranging from simple to complex.

Basis:

(entry continued)



ENERGY REQUIREMENTS

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: Minimum 1M byte

Disc storage: 2M bytes (program) + data storage

Copies sold UK: 4 **World:** 5

Price: £1,200

Training: 1 day minimum @ cost

94

Software Name: DYNAMAT

Version: 3.03

First Published: 1991

Company: Energy Control Consultants Ltd (01628 664056)

DYNAMAT is a sophisticated yet easy to use energy Monitoring and Targeting package, for analysing information from all types of energy and utility supplies. DYNAMAT begins by creating a database of all meters and utility accounts. Any size of estate can be handled to any level of detail through a unique hierarchical tree structure. As meter readings are entered, they are automatically checked for common errors.

DYNAMAT then monitors the consumption against a target which can be based on weather or production information. The target can be based on past performance, or a "theoretical" target can be entered from an energy audit or computer model of the site. Guideline and CUSUM charts highlight the effect of energy saving measures or changes in consumption.

A wide range of standard and specialised reports are available, such as the NHS Korner returns and NPI calculations for local authority buildings. Additional software modules are available for collecting data from a portable data capture unit or automatically from a BEMS. The software can be customised to any specific requirement.

DYNAMAT is a standalone program, but can interact with ECCL's ENAUD system.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS 3.3 or later. Windows 3.1 for automatic input

Memory: 640K bytes

Disc storage: 2M bytes

Copies sold UK: 150 **World:** 150

Price: £799 + VAT

Training: £250 per man day - optional



ENERGY REQUIREMENTS

95

Software Name: ENAUD

Version: 3.0

First Published: 1985

Company: Energy Control Consultants Ltd (01628 664056)

A detailed energy auditing system. Information can be entered directly or downloaded from EMIS Database. ENAUD Modules include: Areas and volumes, boiler efficiency, pipe heat loss, building heat loss, lighting, electrical equipment, domestic hot water, gas appliances. Functions include: Site energy audit to within 5% of measured consumption, assessment of energy saving measures, preparation of energy cost reduction programme, calculation of theoretical consumption target to enter in DYNAMAT M & T software.

Basis: SUPERCALC 4 or LOTUS 1-2-3

Computers: IBM PC or compatible

Operating System(s): MSDOS 2.1 or later

Memory: 640K bytes

Disc storage: 10M bytes for large site

Copies sold UK: 2

World: 2

Price: £500 per module + VAT

Training: Optional £232/day

96

Software Name: ENCHP

Version: 2.11

First Published: 1989

Company: Energy Control Consultants Ltd (01628 664056)

Multi-stage software for assessing viability of Combined Heat and Power schemes. Comprises two stages:-

Stage 1: Requires 12 months' bills for electricity and boiler fuel, tariff details and basic description of site. Calculates simple payback period and annual cash flow for a range of financing schemes.

Stage 2: Requires same information as stage 1, plus a weeks' monitored information from main energy flows on site. Calculates detailed monthly cash flows for a range of financing schemes.

Basis: SUPERCALC 4 or 5 or LOTUS 1-2-3

(entry continued)



ENERGY REQUIREMENTS

Computers: IBM PC or compatible. Requires Supercalc or Lotus 1-2-3 spreadsheet

Operating System(s): MSDOS 2.1 or later

Memory: 640K bytes

Disc storage: 150K bytes per site

Copies sold UK: **World:**

Price: £195 + VAT

Training:

97

Software Name: ENERGY

Version: 11.0 **First Published:**

Company: Hevacomp Ltd (01142 556680)

Predicts annual heating energy requirements and fuel costs using the degree day method.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400 **World:** 1600

Price: P.O.A.

Training: Available on all programs

98

Software Name: ENERGY CALCULATOR

Version: 1.10 **First Published:** 1989

Company: Energy Advisory Services Ltd (01908 510596)

Basic BREDEM program for calculating energy consumption in domestic dwellings. Emulates (exactly) the worksheets included in BSI Design Guide for Refurbishment of Dwellings and worksheet in BRE IP 13/88. Program written, produced and sold under licence to BRE. Endorsed by BRE.

(entry continued)



ENERGY REQUIREMENTS

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 128K bytes

Disc storage: 200K bytes

Copies sold UK: 60

World:

Price: £225 + VAT

Training: Unnecessary

99

Software Name: ENERGY DESIGNER

Version: 3.52

First Published: 1985

Company: Energy Advisory Services Ltd (01908 510596)

Design tool for architects and builders who wish to evaluate energy performance of dwellings. Fast revision cycle enables changes to be evaluated in seconds. Based on BREDEM and endorsed by BRE. Used to evaluate more than 3,000 dwellings in Milton Keynes. Currently main program used in National Home Rating Scheme. The program delivers the SAP (Standard Assessment Procedures) as well as BEPI (Building Energy Performance Index) and CO₂ emissions for each dwelling.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 256K bytes

Disc storage: 350K bytes

Copies sold UK:

World: 100

Price: £475 + VAT

Training: Unnecessary (except for NHER)



ENERGY REQUIREMENTS

100

Software Name: ENERGY TARGETOR

Version: 2.52

First Published: 1989

Company: Energy Advisory Services Ltd (01908 510596)

Comprehensive tool for evaluating refurbishment options. Incorporates complete energy performance analysis, condensation analysis, temperature performance (in cold snaps), evaluation of costs and savings of all conservation and condensation measures, energy targeting system and detailed breakdown of where energy costs incurred. Energy calculations based on BREDEM and endorsed by BRE. Condensation calculations based on BS 5250 (1989). Program developed in part by grant from Department of the Environment. Also used as one of programs to deliver National Home Energy Rating. Includes on-line help, macro facility and complete filing manager for data files. It also now delivers the SAP (Standard Assessment Procedure) which is the standardised government energy rating.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 450K bytes RAM

Disc storage: 700K bytes

Copies sold UK: 100

World:

Price: £1500 + VAT

Training: Available on request, only essential for NHER

101

Software Name: GASTRAK

Version: 1.1

First Published: 1992

Company: Grimster Associates Ltd (01628 34315)

Natural gas supply evaluator. Deals with all British Gas schedules and options. Key market indicators used to forecast price advantages for interruptible contracts using alternative fuels. Will also evaluate gas supplier options.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS version 3 or higher

Memory: 640K bytes conventional + expanded if available

(entry continued)



ENERGY REQUIREMENTS

Disc storage:

Copies sold UK: 6

World: 0

Price: £750

Training: Included

102

Software Name: HAWK REPORTER

Version: V III

First Published:

Company: Seltek Instruments Ltd (01920 871094)

Hawk Reporter Analysis and Reporting Software is designed for Energy Professionals who need to analyse and formally present survey results in an easily understood format. The software includes daily and weekly load profiles in full graphic detail, statistical analysis of Maximum Demand, Load Factor and other relevant detail. Unit cost allocation and full tariff comparison facility make this a very comprehensive and cost effective report generating software.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or higher

Memory: 640K bytes

Disc storage: Hard disk preferred. Minimum 2M bytes

Copies sold UK:

World:

Price: £475

Training: £75

103

Software Name: HOURLY ANALYSIS PROGRAM (HAP)

Version: V3.00

First Published: 1987

Company: Carrier Air Conditioning Ltd (0181 991 2000)

Hourly Analysis Program (HAP) is two programs in one. One part estimates design cooling and heating loads for commercial buildings to facilitate HVAC system design. The other part estimates annual energy use and operating costs so the performance of HVAC system design alternatives can be compared.

(entry continued)



ENERGY REQUIREMENTS

HAP V3.00, introduces the concept of system-based design, a technique which considers specific air handling system features when performing load estimating and system sizing calculations. This is important because many systems have unique features which require special sizing procedures.

In HAP V3.00, general load estimating and system-based design start with the basics. Access to design weather data for hundreds of cities is available. The ability to define specific wall, roof and window constructions. Features for defining building design, layout and operation in as much or as little detail as necessary. The process then continues by allowing the user to specify the type of system and controls used to deliver cooling and heating to the building. As much or as little detail as desired can be used. Sizing procedures then are tailored to the system choice to provide high-quality output listing for room loads and air flow rates, system coil loads and fan air flow rates, and component load details.

Energy analysis is the technique of simulating building loads and HVAC equipment performance over the course of a year to estimate energy use and operating cost. By simulating performance for all 8760 hours in a year, HAP can provide the most accurate estimates of energy use and operating cost available. This is because HAP's simulations use actual hourly weather data and consider the true hour-to-hour and day-to-day dynamic behaviour of the building and its equipment. Considering these factors is crucial when comparing performance differences between alternate system designs, controls or types of equipment.

Basis: ASHRAE endorsed Transfer Function Methodology

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 540K bytes conventional RAM

Disc storage: Minimum of 4M bytes

Copies sold UK: Approx. 200

World: Over 10,000

Price: £950 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available free of charge to all licensed users

104

Software Name: INSUL

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes the energy and cost saving implications for a building if additional insulation, multiple glazing or weather stripping are installed.

(entry continued)



ENERGY REQUIREMENTS

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

105

Software Name: JACKDAW AUTOMATIC DEGREE-DAY SYSTEM

Version: 2

First Published: 1989

Company: Vilnis Vesma & Co (01531 821350)

Automatic calculation of local heating and cooling degree-days. Variable base temperatures, and variable time spans from one day to 3 months. Outside temperature sensor, daylight sensor, data logger and cables included.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS 2 and later. DR DOS 5

Memory: 512K bytes

Disc storage: 450K bytes

Copies sold UK: 62

World: 73

Price: £550

Training:



ENERGY REQUIREMENTS

106

Software Name: K2 - DYNAMIC THERMAL MODELLING

Version: 2.0

First Published:

Company: Hevacomp Ltd (01142 556680)

System provides full dynamic modelling of heat flow using finite difference mathematical modelling, hour by hour Meteorological Office weather data including CIBSE weather year, hour by hour profiling facilities for plant, occupancy and heat gains with day of week scheduling enabling different operating schedules for each day of the week. Dynamic modelling of heat gains, heat losses, summertime temperatures, annual energy, maximum heat gains and summertime temperature. Various modelling strategies allows selection of the type of model to reflect the accuracy of available data. Includes a large database of basic fabric and glass data plus a constructions database. All databases can be extended. Complex shadow analysis to determine effects of surrounding buildings. Modelling of hour by hour plant performance. Dynamic modelling of building contents and furniture. Daylight modelling from weather data enabling controlled lighting systems to be examined. Graphics presentation.

Basis: Finite Difference

Computers: IBM PC or compatible with VGA Graphics

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 2.0M bytes

Copies sold UK: 40

World: 40

Price: £3,000. Optional extra module for Plant Simulation + £1,000

Training: Available

107

Software Name: MONTRAK

Version: 1

First Published: 1993

Company: Grimster Associates Ltd (01628 34315)

Monitoring and Targeting features which include Budgeting and Accounting, Billing Audit and electronic data transfer facilities. Covers all fuels plus water. Uses variety of equations including CUSUM models.

Basis:

Computers: IBM PC or compatible

(entry continued)



ENERGY REQUIREMENTS

Operating System(s): DOS version 3 or higher

Memory: 640K bytes conventional + expanded if available

Disc storage:

Copies sold UK: 5

World: 0

Price: £1,750

Training: Included

108

Software Name: OILTRAK

Version: 1.3

First Published:

Company: Grimster Associates Ltd (01628 34315)

Transport and heating oils evaluator. Database of Rotterdam, dollar and future market with independent price data. Used to monitor budgets, assess out-turn costs and forecast future prices. Compares different forms of contract to give total costs.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS version 3 or higher

Memory: 640K bytes conventional + expanded if available

Disc storage:

Copies sold UK: 7

World: 0

Price: £750 + £155 for monthly update of market place

Training: Included

109

Software Name: POEM - POINT OF USE ENERGY MONITORING

Version:

First Published:

Company: Datum Solutions, The National Grid Company plc (01322 295300)

POEM is a Windows based monitoring and targeting system providing a range of cost saving benefits from waste detection to forecasting capital returns.

POEM applications use data collected from a flexible hierarchy of site measurement devices which can include meters for gas, electricity, water, steam and oil.

(entry continued)



ENERGY REQUIREMENTS

POEM Bill Allocation software enables cost information to be directly aligned to consumption, activities and processes. This can then be used to make comparisons, evaluations, manage resources, develop alternative strategies, option pricing and much more.

POEM consumption/cost analysis software incorporates accurate data with normalisation factors such as floor area or degree days in order to measure the efficiency of buildings, identify areas of poor performance and scope for improvement.

Basis:

Computers: IBM 486 or compatible PC

Operating System(s): Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: According to site

Training: Full training and support for software and hardware

110

Software Name: POOLTRAK

Version: 1.2

First Published: 1992

Company: Grimster Associates Ltd (01628 34315)

Pool pricing evaluator. Gives published raw demand and prices data for electricity pool trading; evaluates pool related offers and establishes out-turn costs for existing contracts.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS version 3 or higher

Memory: 640K bytes conventional + expanded if available

Disc storage:

Copies sold UK: 5

World: 0

Price: £900 + £155 for monthly update diskette

Training: Included



ENERGY REQUIREMENTS

111

Software Name: POWRCALC

Version: 2.1

First Published: 1990

Company: Vilnis Vesma & Co (01531 821350)

Technical calculations for the energy manager:

- * U values.
- * Heat loss from buildings.
- * Heat loss from surfaces.
- * Optimum insulation thickness.
- * Combustion efficiency check.
- * Local heating and cooling degree days.

Spreadsheet-style input with instant recalculation. Pop-up help screens.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS 2 and later. DR DOS 5

Memory: 512K bytes

Disc storage: 450K bytes

Copies sold UK: 60

World: 65

Price: £50

Training:

112

Software Name: REGULATIONS CALCULATOR

Version: 1.03

First Published: 1989

Company: Energy Advisory Services Ltd (01908 510596)

Official BRE program that automates the "Energy Target" method of meeting the 1990 Building Regulations (thermal requirements for dwellings). Endorsed by BRE and sold under licence to them. In the REGS CALC II update for the 1995 Building Regulations, the program also produces the elemental method and delivers a SAP (Standard Assessment Procedure) thus satisfying requirements for all of Part L of the new Buildings Regulations.

Basis:

Computers: IBM PC or compatible

(entry continued)



ENERGY REQUIREMENTS

Operating System(s): MSDOS and Windows

Memory: 115K bytes

Disc storage: approx. 256K bytes

Copies sold UK: 100

World:

Price: £245 + VAT

Training: Unnecessary

113

Software Name: REPORTER

Version: 5+

First Published: 1987

Company: Apex Engineers (01630 661313)

REPORTER, supported by Reporter tools package, accepts energy logged data from a wide variety of data loggers, utility meter loggers, electricity recorders and utility data files. Data is simply selected by the user for a detailed analysis for statistical and graphical presentation including: load profiling, phase balance analysis, unit cost pricing, tariff analysis, cost centre analysis, power factor savings, what-if options. REPORTER supports laser, dot matrix and inkjet printers, offering full colour presentation if required. A 'full survey' report for client presentation is available at a keystroke.

Basis:

Computers: IBM PC or compatible from 8088 to Pentium

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 4M bytes

Copies sold UK: 1000+

World:

Price: £475

Training: Available upon request



ENERGY REQUIREMENTS

114

Software Name: SITETRAK

Version: 1.2

First Published: 1992

Company: Grimster Associates Ltd (01628 34315)

Utilities Monitor. Package covering gas, water and electricity. Helps to budget, track and forecast costs for multiple sites. Stores consumption profiles. Management Reports and Graphs cover site, group and business scenarios.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS version 3 or higher

Memory: 640K bytes + expanded if available

Disc storage:

Copies sold UK: 4

World: 0

Price: £1,250

Training: Included

115

Software Name: SPIEL

Version: V4.7

First Published: 1982

Company: Ecotech Design (01142 680982)

Simulation of building thermal performance, summary of energy consumption, for assessment of Energy Conservation Opportunities. Calculation of heating/cooling plant sizes, zone heating demands, lighting and hot water consumption, internal gains from occupants and plant. Calculation of costs of all energy consumption from different fuels, including calculations of efficiency of heating and cooling plant. Used for plant sizing, radiator sizing, window sizing for daylighting and energy (solar gain) balance. Data input extremely "user-friendly" from database libraries selected by cursor from on-screen options of building use types, fuel/heating systems; emitter (radiator) types; cooling types; building geometry input from CAD (Scribe Modeller).

Basis: Dynamic hourly simulation of multi-zone network

Computers: IBM PC, AT, PS2 or compatible

Operating System(s): MSDOS or Windows

Memory: 500K bytes

(entry continued)



ENERGY REQUIREMENTS

Disc storage: 360K bytes

Copies sold UK:

World:

Price: Public domain - cost of material + documentation (100 pages)

Training: Can be arranged

116

Software Name: TARITRAK

Version: 1

First Published: 1993

Company: Grimster Associates Ltd (01628 34315)

Tariff analysis software. Reports on alternative tariff costs and assesses whether sites can qualify for 100kW market. Profile prepared for tender or enquiry invitation. Tariff look-up tables easily maintained by user and can be created for 100kW contracts evaluations.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS version 3 or higher

Memory: 640K bytes conventional + expanded if available

Disc storage:

Copies sold UK: 5

World: 0

Price: £750 + £155 for annual UK tariff update

Training: Included

117

Software Name: TCIBS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates the maximum permissible energy consumption for a building as defined by CIBSE Energy Code Demand Targets.

Basis: CIBSE Energy Code

Computers: IBM PC or compatible

Operating System(s): MSDOS

(entry continued)



ENERGY REQUIREMENTS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

118

Software Name: TEAM - ENERGY ACCOUNTING SOFTWARE

Version: 6.2

First Published: 1984

Company: Energy Auditing Agency Ltd (01908 690018)

TEAM Energy Accounting software for energy management analyses information from invoices, meter readings, UKDCS and EDI. A range of high quality graphical and tabular reports are available and modules include tariff analysis, contract tariff analysis, CUSUM and environmental auditing. An EDI program has been released which can eliminate the need for keyboard entry of data. Help desk training and a bureau service is also available.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS or Windows

Memory: 500K bytes - 10M bytes

Disc storage: Dependent on data (minimum 20M bytes)

Copies sold UK: 300

World:

Price: £1,000 to £8,000

Training: 1 or 2 days

119

Software Name: TEAM TARIFF ADJUDICATION

Version: 2.1

First Published: 1990

Company: Energy Auditing Agency Ltd (01908 690018)

The TEAM Tariff Adjudication software is used during electricity supply contract negotiations and for optimising costs during electricity use.

(entry continued)



ENERGY REQUIREMENTS

During electricity supply negotiations contract tariff structures can be entered using simple English commands and overlaid with site energy use profiles. What if calculations are then undertaken to display the cheapest and most favourable contract and also cost savings.

Data is acquired from pulsed meters, data loggers, BEMS, portable meters. Load profiles can be displayed and analysed against variables such as production and temperature etc. Tenant billing, cost centre allocation, forward forecasting, pool pricing are further features incorporated in the software.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS or Windows

Memory: 1M byte

Disc storage: 20M bytes

Copies sold UK: **World:**

Price: £3,000 - £5,000

Training: 1 day

120

Software Name: THERM

Version: 6.2

First Published:

Company: Oasys Ltd (0171 465 3302)

THERM calculates the mean and hourly energy flows through fabric and into/out of rooms. It can be used for winter heating, summer cooling, and summer temperature calculations. All calculations procedures are based on CIBSE methods. Results are available in tabular or graphical form. All data is input via the BEANS database.

Basis: CIBSE method

Computers: IBM PC or compatible

Operating System(s): MSDOS 3.3 onwards

Memory: 2M bytes minimum

Disc storage: 500K bytes

Copies sold UK: **World:**

Price: £1,250 including BEANS database

Training: By arrangement



ENERGY REQUIREMENTS

121

Software Name: TOTAL

Version: 2

First Published: 1980

Company: Diamant Technical Software (0161 962 2708)

All heat losses and gains from a building are summed and correlated with degree day values for the area, the solidity of the building, which affects transient conduction, and the time of the year. Program gives a monthly figure for heat requirements. U-values used are obtained from other appropriate programs.

Basis: Summation of results of U-VALUE, FLOOR, LIVING, WINDOW, SOLAR

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MSDOS 3-21

Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 350

World: 380

Price: £60

Training: By phone or fax if needed

122

Software Name: VERSE - VERSATILE REPORTING SOFTWARE

Version:

First Published:

Company: Datum Solutions, The National Grid Company plc (01322 295300)

VERSE software supports a wide spectrum of management functions, including contract evaluation, verification of supplier invoice and budgetary control, enabling users to purchase energy more competitively. The expectation for savings in procurement easily exceeds 10%, achieved through wider sourcing capability, improved requirement forecasting and ability to identify, check and allocate costs.

Basis:

Computers: IBM 486 or compatible PC

Operating System(s): Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Full training and support for software



123

Software Name: CEDREC**Version:** **First Published:** 1994**Company:** CEDREC Enterprises Ltd (0191 5160160)

CEDREC (Comprehensive Environmental Directory of Regulation in Europe with Commentary) is a computer database of UK and EU environmental legislation. Provides users with summaries and explanations of legislation, and directs them to the full text where appropriate. Updated quarterly to accommodate frequent changes to legislation, the database includes sections on Air, Noise, Water, Solid Waste, Dangerous Substances, and Town and Country Planning. Each section is further sub-divided into more specific topics. It can be accessed by either a comprehensive keyword search or menu system. Contains comprehensive cross-referencing and allows users to jump between related topics. The database can be used to compile a register of legislation, which is a requirement of BS 7750, and also makes an ideal training tool. Users can print out sections of information, or "copy and paste" text into a word processor to form part of a report.

Basis:**Computers:** IBM 386 PC or compatible**Operating System(s):** Windows**Memory:** 2M bytes**Disc storage:** 2M bytes**Copies sold UK:** **World:****Price:** £599 for 1st year (inc updates), £199 renewal (inc updates)**Training:** Available on request

124

Software Name: PEMS**Version:** 2.3 **First Published:** 1992**Company:** Pira International (01372 376161)

PEMS is a software program for conducting comprehensive environmental life cycle assessments of products, processes or activities

It utilises both spreadsheets and databases and has a transparent methodology using best practice recommendations as specified in the SETAC Code of Practice for life cycle environmental studies.

(entry continued)



The model enables the user to create new life cycle inventories incorporating site specific data and/or using data from within the built-in databases. The user can modify and update standard and user created systems.

From inventory, the user is then able (if it is desirable) to conduct impact assessment determinations.

Basis:

Computers: IBM PC or compatible

Operating System(s): Windows 3.1

Memory: 4M bytes

Disc storage: 2-12M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



ESTIMATING

125

Software Name: BEAVER

Version:

First Published: 1979

Company: Construction Management Computing (01705 373961)

Features of the BEAVER program are: Cost modelling, Elemental estimating, Estimating on drawing and specification, Bills of quantities estimating, Budget preparations and analysis, Cost control, Production information, Management accounts, and Financial accounts.

Basis:

Computers:

Operating System(s): Most

Memory:

Disc storage:

Copies sold UK:

World:

Price: £1,000+

Training: On application

126

Software Name: BIDMASTER PLUS 5

Version: 5

First Published: 1979

Company: Estimation Ltd (0121 704 3221)

Program is available for electrical, mechanical, and ductwork estimators and is suitable for commercial and industrial use. Available either as a single or multi-user system, BIDMASTER allows input of materials direct from take-off via specialist keyboard and take-off probe or by electronic digitiser and unique take-off stylus, eliminating the need for codes. Collates all materials into priced/labour summary from which tender summary and final selling price is established. Bid and final selling price can be spread back over all materials to produce bills of quantities and schedules of rates. Able to handle input from unpriced bills of quantities. File maintenance allows users to customise or add to standard materials listings. Complete with standard range of trade priced materials and labour times - including auto price update facility.

Basis:

Computers: IBM PC or compatible, IBM 6150, IBM RS 6000

Operating System(s): DOS and Xenix/UNIX, AIX, Networks, Windows environment

(entry continued)



ESTIMATING

Memory: 512K bytes per user

Disc storage: 12-16M bytes

Copies sold UK:

World: 9500 +

Price: Dependent on platform. P.O.A.

Training: Included in purchase price

127

Software Name: BRITER ESTIMATING SYSTEM

Version: VIXEN 9.01

First Published: 1982

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Estimating System, is a single or multi-user estimating system designed specifically for the Building Services Contractor - Electrical or Mechanical. Linked to TSI for prices but still allowing the user to create his own items, including preferential discounts and fitting times.

Sophisticated modelling facilities enables the estimator to use his experience to "fine tune" an estimate once Prime Costs have been established. Printed output includes estimate, bill of quantities, quantified schedule of rates, materials required lists, labour analysis, etc.

Other features include simple price look-up, "mini-quote" facility for small works and analysis of work gained and lost. The program may be used as a stand-alone module or as part of a totally integrated system in which case it would automatically update the Briter Costing and Purchase Order Systems.

A reduced version of the VIXEN estimating program, VIXEN II, is available as a single user DOS program. This is designed for use by the smaller contracting companies.

Basis:

Computers: With INTEL or RISC processors

Operating System(s): ULTRIX, RISC O/S, OSF/1

Memory: 500K bytes per user

Disc storage: Fixed disk

Copies sold UK: 600+

World:

Price: From £1,750 depending on number of users. VIXEN II, £700

Training: In-house or on-site



ESTIMATING

128

Software Name: DORES (District Office Rapid Estimating System)

Version:

First Published:

Company: Building Research Establishment (01923 664444)

Fully integrated approximate estimating system based on current PSA schedule, but which can be used as a stand-alone system without reference to the schedule. Uses easy-to-operate menu-driven system which follows traditional estimating methods.

Basis:

Computers:

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £400 + VAT

Training: User manual

129

Software Name: DUCTWORK

Version:

First Published: 1980

Company: Ensign Advanced Systems Ltd (01162 538820)

Ductwork Estimating System will produce estimates to a variety of specifications (SMACNA, DW142, 17.5, AES6008, SABS) at all pressures, automatically and will allow for a job priced, for example as 142 to be compared with 17.5 for costs and materials etc. The system will automatically produce manufacturing lengths for straight duct from direct input from the drawing via a scale pen and generate the correct gauge, flanges, supports, turning vanes, etc. Bought out items price lists are stored for access whilst estimating.

Following completion of the take-off/or input direct from a bill in either extra over or full rates, the system will produce - net cost analysis of labour and materials, mark up to selling price as required, bill of quantities relating to selling price inclusive or exclusive of supports.

This bill can be - tonnage, fill rates, extra over.

If the input was from a client Bill then the output will be in the same format including page references and collections.

(entry continued)



ESTIMATING

Basis:

Computers: IBM PC or compatible with take-off pen, scale pen or digitiser tablet as required

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Included

130

Software Name: ELECTRICAL

Version:

First Published: 1981

Company: Ensign Advanced Systems Ltd (01162 538820)

Developed and designed to assist the electrical engineer specifically in taking materials off in the quickest manner whilst accounting for ancillary items for little or no extra effort. All materials are stored with trade prices, up-dated by Luckins if required, with labour constants for installation. Materials can be grouped together for ease of take-off and rate production e.g. grid switches complete with variables only asked for at estimate input stages, trapeze brackets, cable in tray etc. The no code touch tablet allows the engineer to select items by description to take-off and the scale pens will automatically measure linear items whilst the tick pens will count units, e.g. socket outlets, switches, luminaires, directly into the estimate.

Systems can be sectioned, such as power, lighting etc for pricing purposes and where two floors are similar then there is only need to take off one floor and copy into the second. The facility of adjusting quantities is then presented on the visual display unit.

Printouts include - labour required by section, cost by section, materials required by job and section, materials target prices, quantified.

Basis:

Computers: IBM PC or compatible with take-off pen, scale pen or digitiser tablet.

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Included



ESTIMATING

131

Software Name: ENGINEERING ECONOMIC ANALYSIS PROGRAM

Version: V2.00

First Published: 1988

Company: Carrier Air Conditioning Ltd (0191 991 2000)

The Engineering Economic Analysis Program is a software tool used to evaluate the long term economic performance of alternative building and HVAC system designs. The software program permits consideration of investment and operating costs, investment financing and rates of cost escalation. Study calculations provide useful information on cash flows, payback periods and savings-to-investment ratios. Results are provided on either a present worth or actual value basis. The program is intended for use in basic life cycle cost studies. Its capabilities make it suited for both simple and complex analyses.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: 488K bytes

Copies sold UK: Approx. 250

World: Over 10,000

Price: £100 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available free of charge to all licensed users.

132

Software Name: ESTI - MATE

Version: V.01

First Published: 1994

Company: Worldwide Software Ltd (01692 581545)

Estimating software with choice of databases either:- Hutchins' Priced Schedules for Building or POMI for Major Works Contracting Building or Civil Engineering or Mechanical and Electrical or SMM7 for Building.

Software designed for first time users, offers menu estimating with reliable published price book databases that can be modified by the user to suit local circumstances. Produces printed estimates and lists of materials and labour required for the project.

Basis: Price books

Computers: IBM PC or compatible

(entry continued)



ESTIMATING

Operating System(s): MSDOS V3.3 +

Memory: 512K bytes

Disc storage: 15M bytes

Copies sold UK: 300+

World: 300+

Price: £299 Educational discounts available

Training: Not required

133

Software Name: ESTIMATE

Version: 6.3

First Published: 1988

Company: Construction Software Ltd (0181 660 2685)

The Estimate package is a suite of programs for the preparation of estimates for buildings. Use can be at any stage in building design but the program has particular application at the feasibility and scheme design stages of a project when the design decisions with major cost effect are made. Input by the user to produce an estimate may be as brief or as detailed as the availability of data permits.

The quantities for the estimate may be entered by the user or generated by the program from a sophisticated mathematical model produced for the building. Various alternatives exist to produce the model. All derive from data that is easily obtainable at any design stage.

The rates for the estimate may be entered by the user, drawn from the standard Schedule Rates or derived from Cost Analysis of Building Projects held in Data Banks.

"Elements" of a building are used as the basic discipline under which the programs operate. (These are the standard sub-divisions of a building as used by the Building Cost Information Service of the RICS).

The estimates are produced by the program through the multiplication of Element Quantities by Element Rates, suitably amended for time, location, contingencies etc.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: Not significant

Disc storage: Not significant (on hard disk)

Copies sold UK: 120

World: 25

Price: £975

Training: If required



ESTIMATING

134

Software Name: ESTIMATING

Version: 6.0

First Published: 1993

Company: SEC Database Ltd (01905 640064)

An estimating software system for electrical contractors. Includes a 39,000 electrical product database.

Basis:

Computers:

Operating System(s): MS-DOS etc.

Memory: 512K bytes

Disc storage: 27M bytes

Copies sold UK: 620

World: 140

Price: £395

Training: £125 per day

135

Software Name: ESTIMATING SOFTWARE PACKAGE V4 -ESP5

Version: V-ESP5

First Published: 1979

Company: Prestige Data Systems Ltd (01905 779828)

Estimating software to provide estimates for all contracting industry environments. Full detailed estimate/costing options, schedules of rates, bills of quantities, material procurement lists, cost analysis reports. Easy to use software, electronic measuring devices for take-off and measuring, ready to use databases, extensive backup and support facilities.

The software is stated as producing up to 10 times as many quotes per person than the manual method.

Interfaces exist to the Prestige Contractors Accounts Packages, Sales Ledger (retentions), Purchase Ledger, Stock Control, Payroll (714/715's), Nominal Ledger, Job/Contract Costing, Enquiry Systems, Service Maintenance Systems etc.

Basis:

Computers: Most popular microcomputers and networks

Operating System(s): DOS, Novell etc

(entry continued)



ESTIMATING

Memory: 1M byte

Disc storage: 40M bytes

Copies sold UK: 1400

World: 1480

Price: ESP5 £1850-4950. Acc's module £350-450. J/costing £695-1,500

Training: 2 days estimating, 1 day other systems

136

Software Name: FCG BULDEST

Version: 6.12

First Published: 1989

Company: FCG Computer Systems Ltd (01442 231166)

A fully integrated module to the FCG Buildax suite of financial software BuildEst is designed to aid the estimating and surveying departments with preparing enquiries and pricing estimates.

With quick access to libraries covering SMM7, minor works, CESMM, and composites the estimators have up-to-date information at their finger-tips.

BuildEst facilitates the use of optical character readers (O.C.R) for input of bills and digitiser take-off for working from drawings and specifications.

BuildEst is integrated into Buildax accounts, costing, purchase order processing, valuations, stock control, sub-contract enquiries and orders.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS, UNIX, Xenix

Memory: 2M bytes

Disc storage: 40M bytes

Copies sold UK: 200

World:

Price: P.O.A.

Training: Available on site



ESTIMATING

137

Software Name: INSULATION

Version:

First Published: 1984

Company: Ensign Advanced Systems Ltd (01162 538820)

Insulation program was designed primarily for installers of H & V work, but is now used by contractors working on industrial and petrochemical as well. The system allows standard specifications to be stored, along with material costs and labour norms. The engineer can take off from a drawing with the help of a measuring pen to scale off lengths of pipe and a tick pen to count off fittings. The system also allows for ductwork insulation and vessels. A net price of materials and labour is produced for each area or service, then allowing the facility to "mark-up" the tender with on-costs and profit.

A useful document produced by the system is a material summary of each tender, presented in the form of method of measurement and method of purchase. This can be used for ordering and also for contract control by a supervisor.

The ultimate printout of this system is the final schedule produced as a lettered bill allowing the customer to use his own company stationery and saving engineers and typists time.

Basis:

Computers: IBM PC or compatible with take-off pen, scale pen or digitiser tablet as required

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Included



ESTIMATING

138

Software Name: LECSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

LECSYS is an electrical services estimating and engineering programme of works system. The main features are:

Direct take-off from drawings. Bill of quantity input. Fully priced materials file with standard labour rates with TSI (Luckins) update facility. Assemblies of individual items allow fast input. Schedules of rates in various formats. Labour and materials scheduling.

Basis:

Computers: IBM PC or compatible, B20s, UNIX machines

Operating System(s): MSDOS, BTOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available

139

Software Name: MANIFEST

Version:

First Published: 1982

Company: Manifest (01234 824801)

Computer assisted estimating with valuations and production of bills of quantities. Allows traditional estimating logic and full user control while saving time and effort, providing more information with speed and accuracy. Suitable for any type of work in any country.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS, PCDOS

Memory: 640K bytes

Disc storage: 10M bytes

Copies sold UK: 600

World: 125

(entry continued)



ESTIMATING

Price: £1,250+

Training: Included

140

Software Name: MECHANICAL

Version:

First Published: 1980

Company: Ensign Advanced Systems Ltd (01162 538820)

The system, developed and improved over many years includes features such as, basic price file of materials and labour norms, Luckins up-date, labour rates, up to 120 different trade discount, radius and fares and the facility to independently load any area, section, group of materials or individual material for schedule of rates production. The system allows for a choice of input methods from conventional typing via the keyboard using either figure numbers or the fast search via part of the item description. A copy facility allows similar floors or house types to be taken off once only and amended on screen.

A touch tablet allows the engineer to simply point at the item description to select any material for take off, and scaling pens take off linear items direct into the estimate, whilst a tick pen is used to count and mark fittings.

Where a group of items is normally associated together e.g. a cylinder tank kit or pre-insulated pipe etc. then these items can be taken off as one entry and the system will cost all of the materials necessary for the total unit price.

Having taken off the materials then net costs can be viewed and adjusted on the computer screen to arrive at a selling price. The system will now produce a range of bills bringing together sub-sections in whatever order you require. The option is now available to adjust unit rates prior to printing. Prints available include - net contract cost and labour required, materials enquiry lists to suppliers, note target buying prices for materials, schedule of unit rates, quantified schedule of rates.

Basis:

Computers: IBM PC or compatible with take-off pen, scale pen or digitiser tablet.

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Included



ESTIMATING

141

Software Name: MECSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

MECSYS is a mechanical services estimating and engineering programme of works system. Accurate and consistent estimating results from well proven costs of the individual elements of an estimate which are then pulled together to price each section of a contract. The "feel" so important to an estimator is catered for by means of flexible loading facilities in line with standard industry practice. The main features are:

Direct take-off from drawings. Bill of quantity input. Fully priced materials file with standard labour rates with TSI (Luckins) update facility. Assemblies of individual items allow fast input. Schedules of rates in various formats. Labour and materials scheduling.

Basis:

Computers: IBM PC or compatible, B20s, UNIX machines

Operating System(s): MSDOS, BTOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available

142

Software Name: PIPEMATE

Version: 1

First Published:

Company: Comline Ltd (01462 453211)

PIPEMATE automatically calculates the man-hours based only on input from a bill of materials. It will calculate mass and surface areas using its extensive built-in database of piping components. The program produces detailed piping bills of materials, piping material costs, and estimates. It will maintain separate tender, contract award and construction details that allow easy comparison. Keeps track of purchase orders and actual deliveries. Uses metric and/or US units. After all estimates are made, the information can be used to produce submission-quality tender documents. A free demonstration disk is available.

Basis:

(entry continued)



ESTIMATING

Computers: PC

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 15M bytes

Copies sold UK: **World:**

Price: £2,370

Training: No

143

Software Name: PLUMBING

Version: **First Published:** 1980

Company: Ensign Advanced Systems Ltd (01162 538820)

This system is designed for quotes to be produced mainly from a pre-billed job. As such it will access materials costs on a single material basis e.g. terrain tube and fittings and also on a composite basis e.g. tube inclusive of fittings in the running length.

The system will develop a net materials, net labour cost and allow for loading by a percentage or value to arrive at a unit rate for selling prices. The system will now type and letter the bill as per the enquiry showing exclusions and take totals to a collection. Near identical areas can be copied and edited on the screen.

The facility exists to take off direct from a drawing and to turn this into a bill.

Printouts include - labour required for each section, materials required for each section, materials buying list, net materials target prices, quantified schedule of rates.

Basis:

Computers: IBM PC or compatible with take-off pen, scale pen or digitiser tablet as required.

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK: **World:**

Price: P.O.A.

Training: Included



ESTIMATING

144

Software Name: QUICK QUANT

Version: 1.1

First Published: 1991

Company: Construction Software Ltd (0181 660 2685)

Quick Quant is an automated measurement system to increase efficiency in taking off dimensions for a building structure. Automated measurement is a method of generating construction dimensions directly from entered measurements or numbers. The program includes nearly forty example routines ranging from simple foundation measurement to Cut and fill, drainage calculations, etc.

The user may set up personal measurement routines without knowledge of programming. Measurement of construction is undertaken by applying the dimensions of a structure to well defined measurement rules to produce quantities. Quick Quant offers a system to establish and store these measurement rules for any element. When the data is subsequently recalled from a file, quantities are obtained by the entry of building measurements.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: Not significant

Disc storage: Not significant on hard disk

Copies sold UK: 45

World: 5

Price: £400

Training: If required

145

Software Name: SOLUTION

Version: 1.1

First Published: 1994

Company: Construction Software Ltd (0181 660 2685)

The SOLUTION program endeavours to answer 'what can we get for the monies available', which is usually the clients first question. In simple terms it may be regarded as a reverse estimating process where the first question asked in the program is the total amount available for construction. The next questions request the values to be reserved for Contingencies, External works, and the like. After these values are deducted, the residual value may be distributed by mathematical modelling between the quantities and quality of the structure. Data on the number of storeys, floor to floor height, Footprint area, etc., need to be entered.

(entry continued)



ESTIMATING

For comprehension of the myriad of solutions possible for a structure, the modelling results are displayed in graphics form with horizontal axis as the gross floor area and the vertical axis for shape. Traces on the graph offer 10 different forms of construction. Selection of a building solution is made by moving a cursor around the graph to bargain off the three primary variables of gross floor area, shape and construction quality.

Basis:

Computers: IBM 386 PC or compatible

Operating System(s): MSDOS

Memory: Not significant

Disc storage: Not significant (Hard disk)

Copies sold UK: 10

World:

Price: £425

Training: If required

146

Software Name: TIPDATA MECSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

Accurate and consistent estimating results from well proven costs of the individual elements of an estimate which are then pulled together to price each section of a contract. The main features are:

Direct take-off from drawings. Digitised input. Bill of quantity input. Fully priced materials file with standard labour rates with TSI (Luckins) update facility. Assemblies of individual items allow fast input. Schedules of rates in various formats. Labour and materials scheduling.

Basis:

Computers: IBM PC or compatible, UNIX machines

Operating System(s): UNIX, MSDOS

Memory: 1M byte

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available



ESTIMATING

147

Software Name: WESSEX CONSTRUCTION SOFTWARE

Version:

First Published: 1985

Company: Wessex Software UK Ltd (01202 735332)

Advanced estimating and take-off software supported by industry standard cost databases. BOQ pricing module utilises intelligent OCR scanning system. Digitiser automated take-off. Fully integrated modules available for sub-contractors analysis and valuations incorporating still video camera linked to computer to trap site images.

The system operates under Microsoft Windows allowing direct links with spreadsheets i.e., Lotus, Symphony, Excel etc., and Project Planning packages where fully resourced Gant Charts can easily be produced.

In addition Wessex estimating software links intelligently to the powerful job-costing, accounts and payroll software, a state of the art, easy to use system produced specifically for the construction industry and its working methods.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS, Novell, Windows

Memory: 640K bytes minimum (8M bytes Windows)

Disc storage: 20M bytes minimum (100M bytes Windows)

Copies sold UK: Over 1,000 **World:** Over 1,000

Price: On application depending on requirements/modules

Training: Available from Wessex training centre and on-site

**Software Name: APFA****Version:****First Published:****Company: Facet Ltd (0181 784 5768)**

APFA calculates the thermal performance characteristics of composite building fabric elements. It can also be used to analyse the water vapour transfer characteristics of the fabric and to identify possible condensation problems.

The user specifies the material and thickness for each solid layer or the thermal resistance and thickness for each air gap in the composite fabric element. Default surface resistances are calculated in the program, but can be overridden by the user if required. If condensation calculations are required, the user must specify a set of inside and outside design conditions for each fabric element.

The results include a list of the following characteristics for each fabric element - the U-value, the admittance (Y-value), the decrement factor time lag, the decrement factor, the surface factor. For glazing, the following results are calculated - the U-value of the glass, the directly transmitted component of solar gain, the inwardly retransmitted component of solar gain.

When condensation analysis is required for opaque fabric, the results include a list of dry bulb temperatures, saturated and actual pressures at the interfaces between each layer. Vapour flow rates and rates of condensation. For glazing, the program calculates the inside surface temperature of the glass and compares it with the corresponding dew point temperature of the inside air.

APFA is part of an integrated suite of thermal analysis programs. An extensive database of building materials (including many types of glass) is provided with the program but the user can add and modify his own data. The fabric analysis program can produce an input file compatible with other programs in the APACHE suite.

Basis: CIBSE Guide 1986 Section A3 Appendix 5. CIBSE Guide 1986 Section 10.**Computers: IBM 386/486 PC or compatible****Operating System(s): MSDOS****Memory: 4M bytes RAM and 4M bytes paging memory****Disc storage: 1.5M bytes****Copies sold UK:****World:****Price: P.O.A.****Training:**



149

Software Name: CADLINK BUILDING**Version: 7.15****First Published:****Company: Cymap Ltd (01179 299332)**

By allowing the engineer to enter details of the building structure - design parameters, external temperatures, U-values, etc., - this program forms the basis of the CADLink range of Mechanical services software. It allows global changes and "what if" calculations to be made rapidly.

Basis: CIBSE Guide**Computers: Microcomputer****Operating System(s): Windows****Memory: 8M bytes RAM****Disc storage: 20M bytes****Copies sold UK:****World:****Price: P.O.A.****Training:**

150

Software Name: CONDCURE**Version: 3****First Published: 1984****Company: Diamant Technical Software (0161 962 2708)**

The Knoche equation is used for standing water surfaces, biological data for humans and latent heat considerations for other surfaces. Ventilation effects of existing building structures and sources of natural ventilation are examined and the additional power ventilation needed to keep the relative humidity of an area below that for condensation to occur, is found.

Basis: Data issued by Swedish Building Research Establishment. S. Glasstone, Textbook of Physical Chemistry.

Computers: Microcomputers and lap-tops**Operating System(s): BASIC and MSDOS 3-21****Memory: 500K bytes****Disc storage: 70K bytes****Copies sold UK: 250****World: 270**

(entry continued)



FABRIC ANALYSIS

Price: £60

Training: By phone or fax if needed

151

Software Name: DAMPNESS

Version: 5

First Published: 1978

Company: Diamant Technical Software (0161 962 2708)

For any wall or roof system, the program determines whether condensation is likely to occur, where, and how bad it is going to be. Analyses temperature and vapour pressure distribution and assesses the risk of interstitial condensation by comparing dewpoint temperatures.

Basis: Data issued by Swedish Building Research Establishment. S. Glasstone, Textbook of Physical Chemistry.

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MSDOS 3-21

Memory: 500K bytes

Disc storage: 84K bytes

Copies sold UK: 380

World: 400

Price: £60

Training: By phone of fax if needed

152

Software Name: ECONOMY

Version: 3

First Published: 1980

Company: Diamant Technical Software (0161 962 2708)

Program determines the most economic U-value to be used for a building interface such as wall, roof, window, floor. The U-value to be found is dependent on variables such as nature and cost of fuel used, efficiency of heating appliance, initial cost of insulation, interest charges, inflation, government subsidy, area, altitude, etc. Program can be used to determine maximum sum one should spend to make fitting of multiple glazing a viable proposition.

Basis: William H. McAdams, Heat Transmission. Macmillan equations.

Computers: Microcomputers and lap-tops

(entry continued)



Operating System(s): BASIC and MSDOS 3-21

Memory: 500K bytes

Disc storage: 80K bytes

Copies sold UK: 350

World: 370

Price: £60

Training: By phone or fax if needed

153

Software Name: ENERGY/1 : THERMAL INSULATION & CONDENSATION

Version: 6.2

First Published: 1981

Company: Richard Twinch Design Ltd (01865 202108)

Calculates U-values (including solid and suspended floors) based on a user-amendable database of up to 750 Materials including K-value, Vapour Resistance, Manufacturers details etc. Will select insulant thickness to meet Building Regulations (or other target). Specification carried forward to Risk Analysis section which checks Condensation Risk, Differential Movement, Equivalent Moisture Content and Cold-Bridging, including analysis of Composite Sections (e.g., window/steel frame junction).

Basis: BS 5250 (1989), Building Regulations Part L, CIBSE Guide

Computers: IBM PC, Macintosh

Operating System(s): MSDOS : Windows 3.1 : MAC under soft PC

Memory: 640K bytes

Disc storage: 500K bytes

Copies sold UK: 80

World:

Price: £395 1st year. £150 p.a. thereafter or £795 for 5 years

Training: £330 + VAT per day



154

Software Name: FABRIC**Version:** 6.0**First Published:** 1986**Company:** Oasys Ltd (0171 465 3302)

This program can be used to examine fabric elements individually and in composite construction in detail. The various parameters of U-values, admittance etc., can be displayed. The effects of slope and orientation, climate and exposure can be studied. FABRIC can also be used to examine the possibility of condensation occurring. Results are displayed in tabular and graphical form. All data is input via the BEANS database.

Basis: Basic Physics**Computers:** IBM PC or compatible**Operating System(s):** MSDOS 3.3 onwards**Memory:** 2M bytes minimum**Disc storage:** 1M byte**Copies sold UK:****World:****Price:** £500 including BEANS database**Training:** By arrangement

155

Software Name: JPA SAP FOR WINDOWS**Version:** 1.0**First Published:** 1995**Company:** JPA Technical Literature (0191 281 8393)

SAP performs Standard Assessment Procedure Calculations in line with Approved Document L of the Building Regulations. The program was developed in conjunction with Marley Building Materials and provides a quicker and more reliable method of producing SAP ratings than hand calculations.

Basis: Approved Document L**Computers:** IBM PC or compatible**Operating System(s):** MSDOS + Windows 3.1**Memory:** 2M bytes**Disc storage:** 1M byte**Copies sold UK:****World:**

(entry continued)



Price: £295

Training: Optional - £350 per day + expenses

156

Software Name: JPA UVALUE FOR WINDOWS

Version: 1.03

First Published: 1995

Company: JPA Technical Literature (0191 281 8393)

Uvalue calculates U-values for roofs, walls and floors (other than ground floors) using the proportional area calculation method described in the Building Regulations Approved Document L. The program is supplied with a database of common building materials as well as an expanding selection of manufacturers' materials. As of 1st March 1995, the manufacturers who have agreed to supply their product data are Marley Building Materials, Lafarge Plasterboard, Rockwool and Dow Construction Products; more manufacturers will be added in time and supplied free of charge to users.

Basis: Approved Document L

Computers: IBM PC or compatible

Operating System(s): MSDOS + Windows 3.1

Memory: 2M bytes

Disc storage: 1M byte

Copies sold UK: 5

World: 5

Price: £295

Training: Optional - £350 per day + expenses

157

Software Name: MAT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Condensation check, admittance, decrement factor, time lag and surface factor calculations using database store of construction types.

Basis: CIBSE Guide, condensation to current British Standard

Computers: IBM PC or compatible

Operating System(s): MSDOS

(entry continued)



FABRIC ANALYSIS

Memory: 512K bytes

Disc storage:

Copies sold UK: 1350

World: 1500

Price: P.O.A.

Training: Available

158

Software Name: MATS

Version: 6

First Published:

Company: Cymap Ltd (01179 299332)

Calculates the u-value, admittance, decrement factor and time lag for a slab of up to 20 layers. Will then proceed to determine whether interstitial condensation or ice formation may occur and where. A number of commonly used materials are already stored in the program but others may be added.

Basis: CIBSE A3 1980, A10 1977.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

159

Software Name: RHLIMIT

Version: 4

First Published: 1980

Company: Diamant Technical Software (0161 962 2708)

The maximum relative humidity permissible in a room or dwelling depends on the construction of walls, roofs and floor interfaces. The main factors are insulation and vapour barriers in correct places. Program analyses a wall or roof structure and gives a limiting value for relative humidity to eliminate surface and interstitial condensation.

(entry continued)



FABRIC ANALYSIS

Basis: Data Issued by Swedish Building Research establishment. S. Glasstone, Textbook of Physical Chemistry.

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MSDOS 3-21

Memory: 500K bytes

Disc storage: 72K bytes

Copies sold UK: 350

World: 370

Price: £60

Training: By phone or fax if needed

160

Software Name: ROOM

Version: 4.6

First Published: 1986

Company: Oasys Ltd (0171 465 3302)

ROOM is a dynamic thermal analysis program. It is intended to be used to calculate the thermal and comfort conditions within a single space, for a typical day in a selected month, under dynamic thermal loading. The numerical model is based on an explicit finite difference method for unsteady heat flows within the building fabric. Internal radiation exchange between surfaces is carried out using a radiosity method. Solar gains are calculated using standard optical theory and exact sunpatching. Results are provided in tabular, graphical or contour plot form. All data is entered via the BEANS database.

Basis: Basic Physics

Computers: IBM PC or compatible

Operating System(s): MSDOS 3.3 onwards

Memory: 2M bytes minimum

Disc storage: 1M byte

Copies sold UK:

World:

Price: £1,750 including BEANS database

Training: By arrangement



161

Software Name: THERMALOPE**Version:** 1.0**First Published:** October 1994**Company:** Ride Computer Drafting Ltd (0161 491 6665)

THERMALOPE carries out a building envelope thermal analysis with reference to the materials you have input and outputs the calculated U-values and other data which can be used in various ways. It operates from a fully editable product and component database of over 700 items. Condensation checks are carried out in accordance with BS 5250:1989 and trade-off calculations as Building Regulations Part L can be performed. Thermal bridging elements can be incorporated enabling these to be easily accounted for. Reports can be printed out and a comprehensive manual and on-line hypertext help screens are included. THERMALOPE is ready for the revised Building Regulations and a free upgrade will be issued to all registered users.

Basis: CIBSE Guide A3, BRE IP 3/90, BS 5250:1989, Building Regulations Part L**Computers:** IBM PC or compatible**Operating System(s):** MSDOS 3.1 and above**Memory:** 640K bytes RAM, requires 525K bytes Free**Disc storage:** 3M bytes minimum free**Copies sold UK:****World:****Price:** £499 + VAT**Training:** Manual + help screens, hot line available

162

Software Name: U-VALUE**Version:** 5**First Published:** 1978**Company:** Diamant Technical Software (0161 962 2708)

Able to calculate the U-value of any kind of wall or roof in a building allowing for wind speed, nature of surface etc. Effective U-value of the pike is also found. Uses stored thermal conductivity values or user can override stored values.

Basis: William H. McAdams, Heat Transmission.
Data from Handbook of Chemistry and Physics.

Computers: Microcomputers and lap-tops**Operating System(s):** BASIC and MSDOS 3-21

(entry continued)



FABRIC ANALYSIS

Memory: 500K bytes

Disc storage: 100K bytes

Copies sold UK: 400

World: 430

Price: £60

Training: By phone or fax if needed

163

Software Name: U-VALUE CALCULATOR

Version: 4.0

First Published: 1987

Company: Energy Advisory Services Ltd (01908 510596)

Comprehensive stand-alone program for calculating u-values of all building elements and for assessing industrial condensation risk. U-value calculations based on CIBSE procedures with allowance for up to 2 materials per layer. Includes database of 250 materials and has slots for additional 70 materials to be added by user. Condensation risk assessed by BS 5250:1989 procedures. Displays graphs of vapour pressure and temperatures. Also calculates ground floor u-values for any shape of floor, with or without insulation.

Basis: CIBSE Guide, BS5250, Macey/Billington formula

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 150K bytes

Disc storage: approx 300K bytes

Copies sold UK:

World: 150

Price: £125 + VAT

Training: Unnecessary

164

Software Name: UVAL

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates u-values for any type of building structure.

Basis: CIBSE Guide 1980

(entry continued)



FABRIC ANALYSIS

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

165

Software Name: WINDOW

Version: 4

First Published: 1980

Company: Diamant Technical Software (0161 962 2708)

Calculates U-value of a window which may be single or multiple glazed. Allowance is made for different types of window frame and standards of workmanship, and also for window position. Analysis can account for the type of curtains and how long they are drawn. Program gives separate day and night U-values.

Basis: Data from Pilkington Bros. PLC, St Helens. Theory - William H. McAdams, Heat Transmission.

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MSDOS 3-21

Memory: 500K bytes

Disc storage: 62K bytes

Copies sold UK: 400

World: 420

Price: £60

Training: By phone or fax if needed



FACILITIES MANAGEMENT

166

Software Name: ARCHIBUS/FM

Version: 6.1

First Published: 1984

Company: Mass CAFM Systems Ltd (0181 332 0233)

Computer aided facilities management software for: Design management, space management, furniture and equipment management, telecoms and cable management, property and lease management, building operations management.

Basis: AutoCAD (Version 12 or 13)

Computers: IBM PC or compatible, or Sun workstations

Operating System(s): MSDOS, Windows or Unix

Memory: 12M bytes +

Disc storage: 100M bytes +

Copies sold UK: 500

World: 40,000

Price: £1175+ (modular)

Training: 5 days @ £375/day

167

Software Name: BRITER SERVICE RECORDS SYSTEM

Version: VIXEN 4.01

First Published: 1988

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Service Records system has been designed to meet the needs of the increasing number of Building Services contractors who provide both regular and ad hoc service facilities to their customers, whether in the fields of H & V, Fire Alarms, Security or any other Planned Maintenance service.

The system allows for clients with any number of site locations and for each site an unlimited schedule of equipment and plant items may be recorded. Details of equipment include manufacturer, installation date and guarantee.

Allows for any number of visits to a site with a wide variety of visit frequencies. When visits are completed the site records are automatically updated, invoices are produced including any extras, and the history file of faults is maintained. Service charging may be based on a wide variety of options, depending on the customer and the nature of the maintenance, e.g., annually in advance on a fixed price basis or subject to labour and materials charges in arrears based on an agreed schedule of rates and material prices.

(entry continued)



FACILITIES MANAGEMENT

Reports include managers and engineers schedules for work in advance, comprehensive fault history and performance/time analysis, and work completed/not completed.

Basis:

Computers: With INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIXOS, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M bytes per user

Disc storage: Fixed disk

Copies sold UK: 50+ **World:**

Price: From £800 depending on number of users

Training: In-house or on-site

168

Software Name: CALMS

Version: **First Published:** 1983

Company: William Holder & Partners (01372 463188)

Complete Facilities Management software for buildings to include:-Facilities management, Maintenance management, Estate management, Vehicle management, Asset management, Network & Communications management, Contracts management, Defects monitoring for new projects.

Database of 25 M bytes available for over 6,000 specific facility maintenance instructions and their times to complete the work, to cover:- mechanical, electrical, building, painting, designing, medical equipment etc.

Basis:

Computers: IBM PC or compatible, Novell, LAN

Operating System(s): MSDOS

Memory: 8M bytes

Disc storage: 1-600M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training: Yes



FACILITIES MANAGEMENT

169

Software Name: EMIS (ESTATE MANAGEMENT INFORMATION SYSTEM)

Version: 3.09

First Published: 1989

Company: Energy Control Consultants Ltd (01628 664056)

Estate database, based on asset register and offering functions including:-

Maintenance planning, cleaning and decorating contracts, asset valuation, capital charging to NHS reform requirements, capital replacement programme, condition appraisal, functional suitability.

EMIS can export to and import from WIMS, and can also be accessed through the DRAWBASE CAD system.

Basis: dBase III.PLUS or IV

Computers: IBM PC or compatible

Operating System(s): MSDOS 2.1 or higher

Memory: 640K bytes

Disc storage: Up to 10M bytes for a large site

Copies sold UK:

World:

Price: £3,800 + VAT (includes RMBYRM software)

Training: Optional - 2 days @ £232 per day + VAT

170

Software Name: GENESIS FACILITIES MANAGEMENT

Version: V3.0

First Published: 1987

Company: Leonardo Computer Systems Ltd (01734 753477)

GENESIS is a sophisticated computer aided facilities management package linking graphical data and database information in one seamless environment. It knows as much about a design environment as users can tell it and understands the consequences of a change in the design. Allowing full 'what if' calculations, it is ideal for space analysis and asset management.

Basis: Vector

Computers: IBM PC or compatible

Operating System(s): DOS, Windows

(entry continued)



Memory: 1M byte

Disc storage: 4M bytes

Copies sold UK: 200

World: 700

Price: £3,950

Training: Available on daily basis

171

Software Name: MMS

Version:

First Published:

Company: Engineering Technology (01332 799777)

MMS has been tailored to suit site services departments with responsibilities for refrigeration, air conditioning, water services, control equipment, lighting and power distribution, heating, fire detection and prevention and plumbing and drainage. MMS helps control asset management through the recording of all asset and equipment details, work specifications, depreciation and history. The main features are:

Complete asset register. Planned preventative and corrective maintenance. Equipment schedules and full contract history. Integrated invoicing for service work. Multiple labour rates. Fully priced materials file with standard labour rates with TSI (Luckins) update facility. Labour and materials scheduling.

Basis:

Computers: IBM PC or compatible, B20s, UNIX machines

Operating System(s): UNIX, MSDOS, BTOS

Memory: 1M byte

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available



172

Software Name: PremFINANCE**Version:** V.1.0**First Published:** 1993**Company:** Bernard Williams Associates (0181 460 1111)

premFINANCE is a facilities financial management system that establishes an approach that recognises that in today's commercial environment it is not good enough merely to perform adequately within budgetary constraints. There is a fundamental need to strive for continual improvement; to contribute positively to business by providing the right level of performance, through financial management that seeks to optimise value for money in every organisational respect. premFINANCE enables these objectives through:-

- Detailed budgeting
- Strategic cost planning
- Lease management
- Real time reporting
- Accounts reconciliation
- CAD/FM system integration
- Contract & contractor management
- Spend period control
- Building management
- Change management
- Value management
- Performance benchmarking
- Cost centre charging

Basis: Database application**Computers:** IBM PC or compatible**Operating System(s):** MSDOS**Memory:** 640K bytes (480K available) RAM**Disc storage:** 2M bytes system plus data files**Copies sold UK:** 5**World:****Price:** £5,000 + VAT (discounts for multiple purchases)**Training:** By arrangement

173

Software Name: RMBYRM (ROOM BY ROOM)**Version:** 3.16**First Published:** 1988**Company:** Energy Control Consultants Ltd (01628 664056)

Portable computer-based estate surveying program linking to EMIS Estate database and ENAUD energy auditing suite. Contains modules for:-
Building constructions and U-values, room areas - volumes and heat loss, lighting, heating appliances, electrical equipment, domestic hot water, gas appliances, capital assets, etc.

(entry continued)



FACILITIES MANAGEMENT

RMBYRM can export to WIMS or any other asset management system, and also download any existing asset register and review against items found in rooms.

Basis: Standalone program

Computers: IBM compatible notebook PC

Operating System(s): MSDOS 2.1 or higher

Memory: 640K bytes

Disc storage: Up to 10M bytes for a large site

Copies sold UK: **World:**

Price: £3,800 for EMIS package

Training: Optional - 2 days @ £232 per day + VAT



FIRE AND SMOKE

174

Software Name: ALARM

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates sound levels from fire alarms as a guide to locating.

Basis: BSRIA Application Guide 1/81

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

175

Software Name: ASKFRS

Version:

First Published: 1988

Company: Building Research Establishment (01923 664444)

An interactive program, comprising a manual and disk, to help fire engineers quantify various fire scenarios using common algebraic expressions and a materials database. In two parts, part 1 provides ten types of calculation and part 2 describes ASKFRS. The program is written in FORTRAN-77.

Basis:

Computers: VAX, IBM PC or compatible

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £100 + VAT

Training:



FIRE AND SMOKE

176

Software Name: FIRE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Based on the BSRIA Application Guide "Locating Fire Alarm Sounders for Audibility", this program enables users to ensure that a fire alarm will produce an acceptable noise level. The attenuation of any type of partition may be taken into account.

Basis: BSRIA Application Guide 1/81

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

177

Software Name: FIRE PREVENTION

Version: 3

First Published: 1992

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn how to improve fire prevention and control within their organisation in order to reduce injuries and financial loss incurred as a result of fires. Users will be able to: Explain the need for fire prevention and control. Describe the legislation relating to fire and its connection with other safety laws. Outline the basic principles of fire and combustion. Outline the basic fire prevention measures. Outline fire extinguisher methods. Outline fire control methods.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes minimum

Disc storage: 504K bytes

Copies sold UK: 70

World:

(entry continued)



FIRE AND SMOKE

Price: £120

Training:

178

Software Name: QUICKEST

Version: 2.0

First Published: 1986

Company: A. Ashfield (01733 260279)

Estimation of gridded roof and/or in-rack protection for sprinkler systems within buildings at early design stage of project. Requires minimum of input data to compare different mains/ranges layouts/spacings/sizes and allows users to quickly compare different schemes.

Passes quantities lists onto spread-sheet type costing program to permit budget prices to be worked out.

Basis: LPC Rules for Automatic Sprinkler Installations

Computers: IBM PC XT/AT/PS/2 or compatible

Operating System(s): MSDOS V3.3 upwards

Memory: 512K bytes

Disc storage: 1M byte

Copies sold UK: 40

World: 10

Price: £250

Training: Unnecessary - full manual provided

179

Software Name: SMOKE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes pressurisation and air flow rates for smoke control. Analyses closed door and open door conditions, considers accommodation, stairs, lobbies and lifts.

Basis: BS 5588

Computers: IBM PC or compatible

Operating System(s): MSDOS

(entry continued)



FIRE AND SMOKE

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

180

Software Name: SPRAY

Version: 1.4

First Published: 1989

Company: A. Ashfield (01733 260279)

Full hydraulic calculation of water spray/deluge/drencher/foam fire protection systems. Up to 2,500 pipes to 1,000 operating heads/nozzles of any pipe network using up to 99 different head K factors and user definable database of pipe types and fittings. Can produce a node/flow/pressure diagram and include hose reels/hydrants/MJCs/orifice plates. Uses simple node numbering method.

Basis: Spray protection rules, NFPA 13/15 and FM requirements

Computers: IBM PC XT/AT/PS/2 or compatible

Operating System(s): MSDOS V3.3 upwards

Memory: 640K bytes

Disc storage: 1M byte

Copies sold UK: 100

World: 180

Price: £1,000

Training: Unnecessary - full manual provided

181

Software Name: SPRINKLE

Version: 1.5

First Published: 1985

Company: A. Ashfield (01733 260279)

Full hydraulic calculation of terminal, looped, gridded or roof/rack sprinkler system in accordance with the LPC Rules for Automatic Sprinkler Installations. Produces printout acceptable to reviewing authorities including a node/flow/pressure diagram. Uses simple

(entry continued)



FIRE AND SMOKE

node numbering method to identify pipework and operating heads in most unfavourable/favourable design areas and can size pipes/balance to pump curves/determine orifice plates.

Basis: LPC Rules, NFPA 13 and FM Requirements

Computers: IBM PC XT/AT/PS/2 or compatible

Operating System(s): MSDOS V3.3 upwards

Memory: 640K bytes

Disc storage: 1M byte

Copies sold UK: 150

World: 30

Price: £750

Training: Unnecessary - full manual provided



182

Software Name: ACCIDENT INVESTIGATION

Version: 2

First Published: October 1992

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn how to improve their ability to carry out investigations of accidents at work. Users will be able to define what constitutes an accident, determine why and when accident investigation should take place and who should conduct them, identify key elements in the cause of an accident, describe principles for conducting interviews to obtain information about an accident, select methods for preventing accident recurrence and complete a standard accident investigation form.

Basis:

Computers: IBM PC or compatible. EGA (640 x 200) resolution

Operating System(s): DOS 3.3 or greater

Memory: 512K bytes

Disc storage: 660K bytes

Copies sold UK: 50

World:

Price: £120 + VAT

Training:

183

Software Name: ACCIDENT RECORDING (ARRAN)

Version: 5.0

First Published: 1990

Company: Norton-Waugh Computing Ltd (01952 850333)

The Accident Recording, Reporting and Analysis system simplifies accident recording procedures, reduces the time and costs incurred in producing statutory documents (for example the F2508) and provides a convenient method of storing, retrieving and analysing accident details and trends. A graphics option providing facilities to produce line graphs, pie or bar charts is also available.

Basis:

Computers: IBM PC or compatible

Operating System(s): MS or PC DOS (3.0 or greater)

Memory: 640K bytes RAM

(entry continued)



HEALTH AND SAFETY

Disc storage: 10M bytes Hard disk (or greater)

Copies sold UK: 100+

World:

Price: £90 + VAT

Training: £250/day (seldom required)

184

Software Name: ASSESSING MANUAL HANDLING OPERATIONS

Version: 1

First Published: 1994

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

The course gives the information necessary to carry out assessments on manual handling operations and to identify appropriate risk reduction methods.

Basis:

Computers: IBM PC or compatible. EGA (640 x 200) resolution

Operating System(s): DOS 3.3 or greater

Memory: 512K bytes

Disc storage: 800K bytes

Copies sold UK: 2

World:

Price: £120 + VAT

Training:

185

Software Name: CAMHEALTH - ACCIDENTS/INCIDENTS REPORTING SYSTEM

Version: 3.0

First Published: 1992

Company: CamAxys Ltd (01480 497739)

CamHealth - Accident Management System is designed to help all employers comply with the format, recording and reporting procedures of the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1986) with the minimum of administrative effort. CamHealth provides facilities for the recording and reporting of all incidents, accidents, dangerous occurrences and notifiable diseases in a format consistent with the regulations. In addition to the formal reporting requirements, CamHealth provides comprehensive facilities for data analysis, performance monitoring and claims progression and tracking. The CamHealth - Accident Management System integrates with other CamHealth systems to form a single standard for Safety, Health and Environmental Management.

(entry continued)



HEALTH AND SAFETY

Basis:

Computers: PCs, minis, mainframes that support ORACLE

Operating System(s): Based on ORACLE relational database

Memory: Minimum 6M bytes

Disc storage: 80M bytes

Copies sold UK: 15

World:

Price: £3,000 to £20,000

Training: Included

186

Software Name: CAMHEALTH - COSHH MANAGEMENT SYSTEM

Version: 3.0

First Published: 1989

Company: CamAxys Ltd (01480 497739)

CamHealth - COSHH Management System is designed to help all employers comply with regulations for the control of substances hazardous to health (1988), with the minimum of administrative effort. CamHealth maintains records of all hazardous substances and their use in the workplace together with assessments of risk to health. CamHealth prompts for and records exposure monitoring, health surveillance, control measure maintenance and employee training. The CamHealth - COSHH Management System integrates with other CamHealth systems to form a single standard for Safety, Health and Environmental Management.

Basis:

Computers: PCs, minis, mainframes that support ORACLE

Operating System(s): Based on ORACLE relational database

Memory: Minimum 6M bytes

Disc storage: 80M bytes

Copies sold UK: 100

World: 105

Price: £4,500 to £30,000

Training: Included in maintenance



187

Software Name: CAMHEALTH - ENVIRONMENTAL MANAGEMENT SYSTEM**Version: 3.0****First Published: 1991****Company: CamAxy Ltd (01480 497739)**

CamHealth - Environmental Management System is designed to help all employers comply with key aspects of the Environmental Protection Act (1990) with the minimum of administrative effort. CamHealth maintains records of work activities together with details of material usage, prescribed processes and substances, waste streams, emissions, authorisations and potential pollutants. CamHealth prompts for and records environmental risk assessments, environmental monitoring and employee training. CamHealth has facilities for recording a history of all waste movements and waste disposal. The CamHealth - Environmental Management System integrates with other CamHealth systems to form a single standard for Safety, Health and Environmental Management.

Basis:**Computers: PCs, minis, mainframes that support ORACLE****Operating System(s): Based on ORACLE****Memory: Minimum 6M bytes****Disc storage: 80M bytes****Copies sold UK: 10+****World:****Price: £4,500 to £30,000****Training: Included**

188

Software Name: CHEMTRAK**Version: 2.0****First Published: 1992****Company: Environmental Science Ltd (01438 361112)**

ChemTrak enables users to easily access hazard information on chemicals, and organise record keeping as required by COSHH regulations. It also enables users to perform rapid and accurate classification of substances and preparations in accordance with CHIP 2 regulations.

(entry continued)



HEALTH AND SAFETY

It contains a protected database of chemical information for approximately 1600 chemicals covered in the CHIP Approved Supply List. This includes physical data, hazard data, first aid directions, etc. The information will be regularly updated with plans to expand the database up to 5000 chemicals as contained in the RSC DOSE catalogue. Users can add their own records to a non-protected database. A separate module allows results from air or biological monitoring to be recorded in a searchable database.

Classification of preparations is achieved by selecting constituent components from the protected and/or database. Relevant data is automatically inserted into tables and Conventional Method formulae are automatically applied as appropriate. Using this procedure, calculations normally taking hours are completed accurately, in seconds. A graphical representation of labels is provided including CHIP symbols and phrases.

Basis:

Computers: IBM PC or compatible (AT)

Operating System(s): DOS 3.0 or higher

Memory: 640K bytes (540K bytes minimum)

Disc storage: 12M bytes minimum

Copies sold UK: 10

World:

Price: £5,500 (5 user network licence)

Training: 1 day

189

Software Name: COSHH

Version: 5.0

First Published: 1989

Company: Norton-Waugh Computing Ltd (01952 850333)

A comprehensive and user friendly COSHH recording system covering areas such as substance details, employee details, control machinery, locations, processes and assessments. It provides multi-level security, on-line help, user defined lists for standard phrases, search facilities on part or full codes, multi-part hazard data sheets (with editing and copying) facilities to assist in initially building the substance database) and facilities for basic employee details, health records and training details. Its menu driven design allows the smaller user to utilise the parts of the system that are applicable to their particular operation.

Basis:

Computers: IBM PC or compatible

Operating System(s): MS or PC DOS 3.0 or greater

Memory: 640K bytes

(entry continued)



HEALTH AND SAFETY

Disc storage: 10M bytes Hard disk or greater

Copies sold UK: 100+

World:

Price: £90 + VAT

Training: £250/day (seldom required)

190

Software Name: COSHH (Control of Substances Hazardous to Health)

Version: 3

First Published: 1992

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will be briefed on the actions that are necessary to comply with the COSHH Regulations. Users will be able to: State the aim of the COSHH Regulations. Describe the properties that cause a substance to be considered hazardous under COSHH. Explain the purpose of the assessment procedures. Describe the procedure for evaluating risks. State how "adequate control" of substances is achieved. Outline the methods for maintaining control measures. Describe the situations where monitoring and health surveillance is required. State the circumstances that require appropriate information, instruction and training to be given.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes minimum

Disc storage: 721K bytes

Copies sold UK: 70

World:

Price: £120

Training:



191

Software Name: CUSTOM Permits-to-work

Version:

First Published:

Company: Custom Maintenance Systems (01208 77077)

With increasing attention being paid to Health and Safety in the workplace, there is a need to ensure that all contractors and members of staff who are required to work in hazardous environments are aware of the safety precautions which must be taken. It is essential that the worker is given authoritative documents - a Permit-to-Work - and that there is total traceability of all Permits which have been issued.

The program provides facilities required to issue, print and manage Permits-to-Work. It includes

Facilities to create a library of standard Permit formats so that the Permits-to-Work which are issued reflect local conditions and operating procedures.

Permit formats for all types of hazardous working environments - buried services confined spaces, etc.

A system of control so that an operator of the software can only issue categories of Permit for which he has been authorised.

Printed Permits-to-Work showing period of validity, and the names of the persons issuing and receiving them.

Reports which list Permits-to-Work which have expired, Permits which are still open and Permits which have been closed.

Basis:

Computers: IBM PC or compatible

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £49.95 + VAT

Training:



HEALTH AND SAFETY

192

Software Name: CUSTOM SAFETY MANAGEMENT

Version: 3.18

First Published: 1991

Company: Custom Maintenance Systems (01208 77077)

An Equipment Register holds details of all plant and equipment whose safety is to be monitored. The equipment covered by the system can be electrical or any other items covered by the Health and Safety at Work Act 1974 or the Electricity at Work Regulations 1989.

Standard libraries of safety tests, set up by properly qualified personnel, can ensure that those carrying out the tests conform to approved procedures.

The system has facilities for issuing Test Sheets which list the items to be tested, which carry details of the tests and which have space for recording the test results. Where an Appliance Tester has facilities for connection to a computer, it is possible for the CUSTOM system to read test results directly, saving the time necessary for the manual input of test figures.

There is a detailed history for each item, showing details of all tests carried out, of tests which have been missed with reasons and of all repair work which has been completed.

There are many user-friendly features in this CUSTOM system: these include:-ease of operation by engineering staff, HELP! screens for every operation and at every data entry point, HELP! information can be modified by the Maintenance Manager, Personnel Menus may be created for individual users, any operation can be modified to meet specific requirements, systems can grow from single user to multi-user supporting any number of users, link to portable Appliance Test equipment.

Basis:

Computers: IBM PC or compatible

Operating System(s): PCDOS, MSDOS, Concurrent-DOS, Novell, LAN MANAGER

Memory: 500K bytes

Disc storage: Basic requirement 2M bytes + an average of 500K bytes per asset. This would hold up to two years' histories

Copies sold UK: 500

World:

Price: £495 single user

Training: £175-575 per day dependent on location



193

Software Name: DATApeep

Version: **First Published:**

Company: Custom Maintenance Systems (01208 77077)

Experience shows that there are frequently occasions on which the test engineer wishes to check the information stored within the appliance tester to confirm that a particular appliance has been tested or that a specific appliance received a certain test, or that the data held is not corrupted in any way. Sometimes problems arise with the Download operation.

DATApeep allows the downloading of information held in an appliance tester to a floppy disc for review by browsing through the data on-screen or by printing it out to give a hard copy.

Basis:

Computers: IBM PC or compatible

Operating System(s):

Memory:

Disc storage:

Copies sold UK: **World:**

Price: £39.95 + VAT

Training:

194

Software Name: ELECTRICAL APPLIANCE MONITORING (TEAMS)

Version: 3.0 **First Published:** 1992

Company: Norton-Waugh Computing Ltd (01952 850333)

The Electrical Appliances Monitoring System assists organisations in complying with the Electricity at Work regulations. It caters for equipment at multiple sites and locations and allows the client to define the tests to be conducted, their frequency and the tasks performed. The system enables the client to enquire/report on equipment and test details for numerous selection criteria.

Basis:

Computers: IBM PC or compatible

Operating System(s): MS or PC DOS 3.0 or greater

Memory: 640K bytes

(entry continued)



HEALTH AND SAFETY

Disc storage: 10M bytes Hard disk or greater

Copies sold UK: 100+ **World:**

Price: £90 + VAT

Training: £250/day (seldom required)

195

Software Name: ELECTRICITY AT WORK REGULATIONS 1989

Version: 1 **First Published:** 1994

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

The course will prove useful to all engineers, technicians, electricians and managers with responsibility for electrical systems.

Basis:

Computers: IBM PC or compatible. EGA (640 x 200) resolution

Operating System(s): DOS 3.3 or greater

Memory: 512K bytes

Disc storage: 770K bytes

Copies sold UK: 1 **World:**

Price: £120 + VAT

Training:

196

Software Name: HEALTH AND SAFETY AT WORK ACT 1974

Version: 3 **First Published:** 1992

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn the fundamentals of the 1974 Health and Safety at Work Act, its implications and its implementations.

Users will be able to: Explain who is responsible for safety at work. Describe the provisions contained within the Act. Explain how the various parts of the Act relate to each other. Describe how the Act is implemented and applied.

Basis:

(entry continued)



HEALTH AND SAFETY

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes minimum

Disc storage: 385K bytes

Copies sold UK: 65

World:

Price: £120

Training:

197

Software Name: LEGIONELLA AND THE TREATMENT OF WATER SYSTEMS

Version: 2

First Published: 1993

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will be aware of the problem of Legionella associated with water supplies, the legal requirements for proper care and control of water systems and the best practice for preventing outbreaks of the disease. Users will be able to: Outline the origin, cause and effects of Legionella. Explain the relevance of Health and Safety at Work legislation and the Control of Substances Hazardous to Health Regulations to Water Systems. Recommended standards for safe water systems. Highlight the importance of good housekeeping, chemical and biological control in water systems.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes minimum

Disc storage: 802K bytes

Copies sold UK: 20

World:

Price: £120

Training:



HEALTH AND SAFETY

198

Software Name: MANUAL HANDLING

Version: 2

First Published: 1992

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn how the European Commission Directive on Manual Handling has influenced the Health and Safety Executive Regulations designed to improve safety at work by avoiding the risk of injury during manual handling operations.

Basis:

Computers: IBM PC or compatible. EGA (640 x 200) resolution

Operating System(s): DOS 3.3 or greater

Memory: 512K bytes

Disc storage: 800K bytes

Copies sold UK: 45

World:

Price: £120 + VAT

Training:

199

Software Name: OFFICE INSPECTOR

Version:

First Published:

Company: Custom Maintenance Systems (01208 77077)

OFFICE INSPECTOR was developed in response to the Health and Safety Executive's two booklets for checking portable appliances in LOW RISK areas - offices and tourist accommodation are specifically mentioned.

It gives people the training and guidance which they require to carry out thorough visual inspections recommended by the HSE.

The pack contains:

A comprehensive checklist of over 40 different checks, covering appliances of all types.

A manual which contains detailed, illustrated, inspection guides.

A pad for recording inspection results and details of new appliances.

(entry continued)



HEALTH AND SAFETY

An easy to use computer program which holds details of all appliances and of their inspection histories. The program includes a diary of when checks are due.

Basis:

Computers: IBM PC or compatible

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £49.95 + VAT

Training:

200

Software Name: OFFICE SAFETY

Version: 2

First Published: 1993

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn the dangers and hazards associated with an office environment. Users will be able to: Identify the responsibilities for their own and other's safety. Describe the different types of accidents that occur in an office. Highlight the areas where office accidents are most likely to occur. Explain the advantages of good housekeeping. Identify possible fire hazards in the office.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes

Disc storage: 1.3M bytes

Copies sold UK: 120

World:

Price: £120

Training:



HEALTH AND SAFETY

201

Software Name: PRINCIPLES OF HEALTH AND SAFETY

Version: 4

First Published: 1993

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will obtain knowledge of occupational health and safety subjects to a level that will equip them to follow the syllabus of the Institute of Occupational Safety and Health leading to the NEBOSH requirements. Users will be able to: Implement a safety management to introduce appropriate safe working systems, procedures and training. Install measures for the control and prevention of the risk. Explain the benefit of good hygiene. Control environmental hazards. Implement safety inspections, accident investigations and information recovery and control. Adopt correct procedures for the health and safety of contractors. Implement the objectives of the relevant UK Acts and Regulations.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes

Disc storage: 4.3M bytes

Copies sold UK: 15

World:

Price: £250

Training:

202

Software Name: RISK ASSESSMENT (RISK)

Version: 3.0

First Published: 1993

Company: Norton-Waugh Computing Ltd (01952 850333)

This quantitative RISK Assessment recording system provides facilities for recording hazard analysis and evaluating the degree of risk in different areas of the workplace. The system calculates a rating for each assessment based on weightings applied to any identified hazards with regard to frequency, level of harm, scope, factors increasing risk and factors decreasing risk.

Basis:

Computers: IBM PC or compatible

Operating System(s): MS or PC DOS 3.0 or greater

(entry continued)



HEALTH AND SAFETY

Memory: 640K bytes RAM

Disc storage: 10M bytes Hard disk or greater

Copies sold UK: 100+ **World:**

Price: £90 + VAT

Training: £250/day (seldom required)

203

Software Name: SAFETY 1ST

Version: 5 **First Published:** 1990

Company: Shire Systems Ltd (01703 224111)

A system designed to help plan and control a variety of statutory safety checks and procedures.

It is used for keeping track of portable appliance testing (compatible with Seaward PAT1000/IT1000), electrical cabling, air extraction systems, inspection of ladders and lifting tackle, emergency lighting and emergency generation systems, pressure release mechanisms, etc.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS and Novell

Memory: 640K bytes

Disc storage: Programs 1M byte, Data 2M bytes/1000 items

Copies sold UK: 10,000 **World:**

Price: £495 (+ VAT)

Training: Comprehensive manual, provided



204

Software Name: SHARP

Version: 2.35

First Published: 1990

Company: SRC (Consultants) Ltd (01925 831000)

Sharp is an integrated auditing and management package that can be used by Health and Safety professionals and Environmental Advisers to measure the performance of health, safety or environmental management systems.

The package encompasses the latest legislation and EC directives to the Environment and Health and Safety covering most industries. Sharp has the capability of producing management reports from audits, together with the facility to present structured comments and action plans incorporated in a tracking system which highlights priority actions and deadlines.

Basis:

Computers: Minimum of IBM 386 PC

Operating System(s): Windows 3.1 + MS Excel

Memory: Minimum 4M bytes

Disc storage: 2M bytes

Copies sold UK: 40

World: 3

Price: P.O.A. Single system or bespoke packages on request

Training: Auditor courses plus software support

205

Software Name: THE SIX PACK

Version: 1

First Published: 1994

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

This course enables the user to become familiar with the main requirements of the recent series of six sets of regulations which came into effect, as a result of the EC Directives on 1 January 1993. The regulations are:

- 1 Management of health and safety at work
- 2 Workplace (health, safety and welfare)
- 3 Provision and use of work equipment
- 4 Personal protective equipment
- 5 Manual handling operations
- 6 Health and safety (display screen equipment)

(entry continued)



HEALTH AND SAFETY

Basis:

Computers: IBM PC or compatible. EGA (640 x 200) resolution

Operating System(s): DOS 3.3 or greater

Memory: 512K bytes

Disc storage: 500K bytes

Copies sold UK: 5

World:

Price: £120 + VAT

Training:

206

Software Name: WORKING WITH VDUS

Version: 2

First Published: 1993

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

Users will learn how VDU workstations can be made safe and comfortable places of work by following the requirements of the Health and Safety (Display Screen Equipment) Regulations 1992 and will be guided through an analysis of their own workstation. Users will be able to: Explain the recommended best practice for VDU equipment, workstations and working arrangements. Describe areas of possible health risk and explain how these risks can be avoided, state the Health and Safety (Display Screen Equipment) Regulations 1992 Requirements for VDU Workstation Equipment, Design and Working Practices. Identify any areas where VDU equipment, workstations and working practices do not comply with the regulations. Analyse their own workstation and produce a hard copy of the results which can be used to determine areas for improvement.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or later

Memory: 512K bytes

Disc storage: 980K bytes

Copies sold UK: 210

World: 20

Price: £295

Training:



HEATING DESIGN

207

Software Name: APHL

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

APHL calculates the steady state design heat loss of a building. The program also offers optional calculation of plant size ratios for intermittently heated buildings, net annual heat requirements, compliance with Part L2/3 of the UK Building Regulations.

The user specifies details of the thermal characteristics of all walls, windows, roofs etc. (these can be calculated in the APACHE Fabric Analysis program if required). The areas and orientations of all external fabric, the areas and adjacent conditions for all internal fabric, the volume, floor area, indoor design temperature and heat emitter radiant fraction for each room in the building. The outside design air temperature must also be specified by the user.

When the program is calculating the heat load for each room it takes account of the heat loss through internal partitions, floors and ceilings as well as the loss through external fabric and due to infiltration. Where an adjacent space is warmer than the room, the user has the option to include or not include the heat gain to the room.

Program output includes the following information for each room, outside and inside air temperature, room environmental temperature and design temperature, heat losses due to external fabric/internal fabric/air infiltration from outside/air infiltration from other rooms, heat loss per unit volume, heat loss per unit floor area, total heat loss.

Output also includes the total building heat loss and information related to any of the optional calculations outlined above. APHL is part of an integrated suite of thermal analysis programs.

Basis: CIBSE Guide 1986 Section A9. CIBSE Guide 1986 Supplement A9/1. CIBSE Guide 1986 Section B18. UK Building Regulations Part L2/L3.

Computers: IBM 386/486 PC or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



HEATING DESIGN

208

Software Name: BLDGLOSS

Version: **First Published:** 1989

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

Designed to calculate total heat loss from multistorey domestic and small commercial buildings. In addition the program will produce the average or mean 'U' value of the building, the external component surface areas, the building volume and the mean ventilation rate.

Basis: IDHE "Tables of U Values and Infiltration Factors"

Computers: IBM PC or compatible, Amstrad PCW

Operating System(s): MSDOS

Memory: 120K bytes

Disc storage:

Copies sold UK: 400 **World:** 450

Price: £110

Training: Full documentation supplied

209

Software Name: CADLINK PIPEWORK

Version: 7.15 **First Published:**

Company: Cymap Ltd (01179 299332)

This software allows the engineer to place radiators or other emitters onto the drawing, and to draw in the flow and return pipework to supply them. The program then calculates pipe sizes, with flows, pressure drops, and velocities throughout the system. Schedules of radiators and pipes can be produced, with bills of quantity if required.

Basis: CIBSE Guide

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training:



Software Name: DECSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

DECSYS is a design calculations system for use by mechanical and electrical engineers. The system covers all aspects of building service engineering, and the software is based on CIBSE standards, where applicable. Standard information such as radiator data, light fittings, NEDO, pipe and duct data are stored on disk, with the facility for users to add their own information and change existing data. The system can also be worked with HevaCAD to take-off from drawings manually with a digitiser or as a DXF file. The design and calculations can then be graphically represented and amended and down-loaded (e.g., as a DXF file) into a computer aided draughting system such as CADSYS or AutoCAD to generate the fully detailed working drawings. The main features are:

Direct take-off from drawings via digitiser or in a DXF file. Heat gain and losses calculation. Duct and pipe sizing. Lighting and electrical calculations (16th Edition). Graphical representation via HevaCAD. Designer's package. Full NEDO program to build project valuations along with management applications such as discounted cash-flow to evaluate alternatives.

Basis: CIBSE Guides

Computers: PCs, UNIX machines

Operating System(s): UNIX, MSDOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available



211

Software Name: DESIGN DATABASE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Design Database enables a building to be set-up as a series of rooms, each room having data for room dimensions, wall types, design conditions, etc. From this common base of data, load calculations can then be carried out for any or all of the rooms. This enables data to be set-up once only and this single set of data to be used to produce heat losses, heating energy consumption, CIBSE, Carrier and ASHRAE heat gains, Summertime temperatures, Cooling energy, Lighting design and Psychrometrics. Any changes in room data can be simply and quickly made and the effect on load calculations can be immediately observed.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

212

Software Name: ENERGY/2 : TRADE-OFF

Version: 4.1

First Published: 1984

Company: Richard Twinch Design Ltd (01865 202108)

Calculates Heat Losses to Part L1 which gives the designer freedom to vary the type of construction used, provided a certain minimum standard is maintained represented by the concept of the notional building. To reach this standard one element is traded-off against another. TRADE-OFF is designed to give the designer maximum freedom of choice. It allows adjustments on a room by room basis calculating radiator sizes for each room if wanted - or will deal with a whole building in one 'go'. Automatically deals with Mono and Double-pitched roofs as well as Dormer Windows. Windows and doors are held on a related database which includes cost information (if required). Windows can be cross-referenced from this database, or put in either as a percent of floor or wall area for use at an early design stage.

(entry continued)



HEATING DESIGN

Basis: Part L1 of Building Regulations 1995 and Part J2 Scottish Building Regulations

Computers: IBM PC or compatible, Apple Macintosh

Operating System(s): MSDOS : Windows 3 : Soft PC (on Macintosh)

Memory: 640K bytes

Disc storage: 360K bytes

Copies sold UK: 20

World:

Price: £295 for 1st year. £125 p.a. thereafter.

Training: £595 for 5 years.

213

Software Name: ENVIRONMENTAL CALCULATIONS

Version:

First Published: 1989

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

The program calculates various options of heat requirement, structural insulation and system operating cost. Calculations cover: a) 'U' values from K factors. b) Insulation thickness required to upgrade an existing 'U' value. c) The environmental temperature within a building. d) Factual and 'dewpoint' temperatures. e) The average 'U' value of external components of a structure. f) Heat losses expected from a structure at stated conditions and the expected fuel bills for the heating season.

Basis: IDHE "Tables of U Values and Infiltration Factors/Conductivities & Resistances"

Computers: IBM PC or compatible, Amstrad PCW word processors, PSION

Operating System(s): MSDOS

Memory: 100K bytes

Disc storage:

Copies sold UK: 400

World: 450

Price: £75

Training: Full documentation supplied



HEATING DESIGN

214

Software Name: FLOOR

Version: 4

First Published: 1980

Company: Diamant Technical Software (0161 962 2708)

Heat losses through various types of floor are calculated taking into account the average soil temperature of the area for the time of year. Allowance is made for heat losses at the wall/floor interface. Useful for underfloor heating systems.

Basis: Theory: William H. McAdams, Heat Transmission. Data: Handbook of Chemistry and Physics. BRE Publications.

Computers: Microcomputer and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 65K bytes

Copies sold UK: 400

World: 420

Price: £60

Training: By phone or fax if needed

215

Software Name: HEAT LOSS CALCULATION

Version:

First Published: 1986

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

The program undertakes calculation of heat loss from properties under any of three classifications: bungalows, chalets and houses. It may also be used for small commercial and industrial buildings. Allowance may be made for a) single or double glazing, b) ventilation heat losses, c) heat transfer through internal partitions and where applicable floors/ceilings.

Basis: IDHE Tables of U Values

Computers: IBM PC or compatible, Amstrad PCW word processors, PSION

Operating System(s): MSDOS

Memory: 80K bytes

Disc storage:

Copies sold UK: 600

World: 650

Price: £65

Training: Full documentation supplied



HEATING DESIGN

216

Software Name: HEATCALC

Version: 3.2

First Published: 1989

Company: Trend Computers & Software (01454 412138)

Space heating design program. Calculates heating requirements for domestic and small to medium sized commercial and industrial premises. The program establishes the heat losses from individual rooms or areas and calculates the direct heating requirement in kilowatts. The sizing of off-peak storage heaters can also be established.

A comprehensive database covers all types of building structures normally encountered, but the facility also exists to use specific 'U' values if required.

A detailed design printout is available. A context sensitive help facility provides immediate access to information and data relating to any specific part of the program thereby eliminating the requirement for an operating manual. A version of the program is also available on a pocket computer for use on site surveys.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 128K bytes

Disc storage: 200K bytes

Copies sold UK:

World:

Price: £95

Training: Yes, where required

217

Software Name: HEATING CALCULATOR

Version: 2.0

First Published: 1989

Company: Energy Advisory Services Ltd (01908 510596)

Sizes radiators and boilers for domestic and commercial dwellings. Two layer data entry system allows common data (room temperatures, air change rates, u-values, flow temperatures etc.) to be stored in set-up files that can be recalled for use with different jobs. Room data entered via graphic interface showing room plan. Accurate calculation of room heat losses taking account of interroom heat flows. Includes database of standard radiators for automatic sizing.

(entry continued)



HEATING DESIGN

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 150K bytes RAM

Disc storage: 256K bytes

Copies sold UK: 50

World:

Price: £125 + VAT

Training: Unnecessary

218

Software Name: HEATLOSS

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Suitable for assessing the heat losses for a series of rooms in a complete dwelling, which itself forms part of a larger block or just separate rooms in a building. Corrections are included for intermittent plant operation, the relative percentage of convective and radiant heating and the hours of preheating.

Basis: CIBSE Guide A5 1979

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory: ' "

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



HEATING DESIGN

219

Software Name: HEATLOSS-RADSELECT

Version: **First Published:**

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

Combines the facility of heat loss calculation together with a menu for radiator selection, from a choice of leading manufacturers. It operates with room by room heat loss, built up from the appropriate U values for each part of the structural component. The results give accurate individual figures for each room together with the total for the building.

When the initial heat loss calculation is completed the user is asked to choose the make of radiator, followed by the height required and the pattern type. This produces an immediate response showing the length of radiator, or if not suitable, the opportunity to reselect using a different height or pattern. At the same time the required room heat loss is displayed, together with the scheduled radiator output.

When the program run is finished, a complete schedule of all radiators is produced with sizes and the manufacturers order code. This can be printed out and sent to the supplier to avoid errors in orders.

Basis: IDHE "Tables of U Values and Infiltration Factors"

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK: **World:**

Price: £130

Training: Full documentation supplied

220

Software Name: HEATSTOR

Version: 1 **First Published:** 1993

Company: Diamant Technical Software (0161 962 2708)

Tanks or other vessels with rectangular, spherical or cylindrical shape are filled with various heated or refrigerated fluids. The program is able to evaluate the duration needed for the contents to cool or warm up to a specified temperature, depending upon the degree of insulation used and the nature of the fluid in the vessel.

(entry continued)



HEATING DESIGN

Basis: W.H. McAdams, Heat Transmission and other text books

Computers: All modern computers including lap-tops

Operating System(s): MSDOS 3-21 and above

Memory: 500K bytes

Disc storage: 74K bytes

Copies sold UK: 2

World: 2

Price: £60

Training: By phone or fax if needed

221

Software Name: HLOSS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates the design heat losses from a building on a room by room basis.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

222

Software Name: ME HEATING

Version: 1.0

First Published: 1994

Company: Hevacomp Ltd (01142 556680)

Heating systems design within AutoCAD. Part of full suite, sold in modules.

Basis: CIBSE

(entry continued)



HEATING DESIGN

Computers: IBM PC or compatible

Operating System(s): MSDOS/Windows

Memory: 12M bytes

Disc storage: Part of complete program suite requiring minimum 25M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training: Available on all programs

223

Software Name: PART 95

Version: 12.00

First Published: 1994

Company: Hevacomp Ltd (01142 556680)

Checks for compliance with Part L of the Building Regulations, 1995.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS/Windows

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 15M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training: Available on all programs

224

Software Name: PARTL

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Checks a design for compliance with PartL of the Building Regulations defining the maximum amount of glazing that is permitted and the maximum u-values.

Basis: Building Regulations, Part L

Computers: IBM PC or compatible

(entry continued)



HEATING DESIGN

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

225

Software Name: QUANTUM LOSS

Version:

First Published:

Company: Business Edge Ltd (01705 599000)

Part of the fully interactive Quantum Suite of programs, these products incorporate very advanced building heat gain and heat loss results using the CIBSE Admittance Procedure which takes account of all energy flows due to dry bulb, mean surface, environmental and dry resultant levels.

These products employ key CIBSE data tables together with sophisticated calculation routines for solar gains, radiant losses/gains and many other factors.

Quantum Gain & Loss allows full manipulation of zone and floor loads, essential for multi-split DX and chilled water system design.

Quantum Weather Modules are available for other countries and Quantum is also supplied in other languages.

All projects are stored on disk and extensive results printout facilities are available to support quotations. Compatible with Versatemp Option Product Selection Module.

Demo disk available.

Basis: CIBSE data tables

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 10M bytes

Copies sold UK:

World:

Price: From £250 according to options

Training: Yes



226

Software Name: RLOSS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Sizes radiators based on heat loss data fed in manually or taken from HLOSS. The program uses radiator information stored in a separate file.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

227

Software Name: STORE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Sizes storage or direct heaters for domestic and non-domestic premises. Also calculates the number of storage heaters required.

Basis: Electricity Council Booklet EC 4666/11.84

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



228

Software Name: THERMAL

Version: 1.3

First Published: 1987

Company: JPA Technical Literature (0191 281 8393)

THERMAL calculates U-values, predicts condensation risk and calculates build-up for roofs and walls. U-values can also be calculated for solid and suspended ground floors. "Trade-off" to the 1990 Building Regulations can be performed as can basic UA heat loss calculations. The industry standard user interface uses pull down menus and pop up windows to ensure ease of use and understanding. Demonstration copies are available on request. A version running under AutoCAD is also available at the same price.

Basis: BS:6229, BS:5250, CIBSE A3, Building Regulations

Computers: IBM PC or compatible

Operating System(s): MSDOS 3 or higher

Memory: 256K bytes

Disc storage: 360K bytes

Copies sold UK: 40

World: 42

Price: £295 + VAT + delivery

Training: Optional - £350 per day + expenses

229

Software Name: TWOPIPE-DOMCOM

Version:

First Published:

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

The program caters for the sizing of pipework, together with radiators if required, for two pipe installations for both domestic and commercial systems. It allows for the use of copper or screwed iron piping in sizes from 15mm to 50mm.

The program offers facilities for:-

1. The calculation of suitable pipe sizes, with calculation of the mass flow rates, water velocities and hydraulic losses for TWO PIPE hot water installations.
2. If required, the sizes and patterns of Stelrad ELITE pattern radiators which will produce the necessary outputs. This facility is further enhanced in that the user may reject the originally chosen height-pattern for each output until a suitable radiator length is presented.

(entry continued)



HEAT GAINS

231

Software Name: BLOCK LOAD

Version: V2.13

First Published: 1991

Company: Carrier Air Conditioning Ltd (0181 991 2000)

Block Load is a powerful, fully featured HVAC load estimating program suitable for commercial buildings of any size. The program takes the building data users supply and returns information needed to complete HVAC work. From quick "block" loads to detailed zone load information. A detailed breakdown of the zone loads (wall, roof, glass loads, etc) and system loads (ventilation, plenum loads, fan heat gain, etc), are available for analysing various system designs. Also provides coil selection information such as total and sensible kilowatts, supply air flow rate, and coil inlet and outlet conditions. It helps select a fan or diffusers, with zone and system air flow rates. There are lots of handy "rule of thumb" check figures, such as the system watts per square metre, l/s per square metre and overall building U-value.

Basis: ASHRAE endorsed Transfer Function Methodology

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: Approximately 1M byte

Copies sold UK:

World:

Price: £350 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available, free of charge, to all licensed users.

232

Software Name: BLOCK LOAD LITE

Version: V1.00

First Published: 1992

Company: Carrier Air Conditioning Ltd (0181 991 2000)

Block Load Lite is a comprehensive load estimating program designed for sizing commercial single-zone HVAC equipment. Block Load Lite uses project building data to provide equipment sizing information needed to complete HVAC work. Provides equipment selection information such as total and sensible kilowatts, the supply air flow rate, and coil inlet and outlet conditions. The program helps selection of fan or diffusers based on the system air flow rates. All the basic thermal load results are available to check over or provide to a

(entry continued)



HEAT GAINS

client. Provides also handy "rule of thumb" check figures such as the system watts per square metre, l/s per square metre, and overall building U-value.

Basis: ASHRAE endorsed Transfer Function Methodology

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: Approximately 0.9M byte

Copies sold UK: **World:**

Price: £175 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available, free of charge, to all licensed users.

233

Software Name: CARRY

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Heat gains using Carrier Guide Method. Utilises storage factors.

Basis: Table driven. Carrier Guide.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



HEAT GAINS

234

Software Name: FAST

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

FAST is a rapid design analysis program. Room data is setup, summertime temperatures and heat gains are immediately displayed. The program performs in an interactive way to display the effect of design changes on the room condition or load and can be used to assess the effect of construction, air change, orientation or other variables.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Available

235

Software Name: GAIN

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Heat gains to CIBSE Method.

Basis: CIBSE Guide A2, A5 and A9

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



HEAT GAINS

236

Software Name: HEATGAIN

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Calculates the total cooling load and heat gains for a series of rooms in a building as in the CIBSE Guide. These calculations are carried out for each hour of a selected day for the specified latitude, size and material orientations, exposed materials and internal gains for the rooms, which can be grouped in up to 10 zones. This can be repeated for several dates and the program will summarise the room peaks, zone peaks and building totals for them.

Basis: CIBSE Guide A5 1979

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

237

Software Name: LIVING

Version: 4

First Published: 1981

Company: Diamant Technical Software (0161 962 2708)

Analyses heat gains and losses in a building due to the presence of people, the effects of opening doors and windows, ventilators, and run-off hot water. Data are correlated with month of the year and geographical area, as these affect the degree-day value used. Program examines heat from different classes of people by age and sex and by domestic animals.

Basis: CIBSE Guide. BRE publications. Barrow, Physical Chemistry of the Life Sciences

Computers: Microcomputers and lap-tops

Operating System(s): BASIC and MSDOS 3-21

Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 380

World: 400

(entry continued)



HEAT GAINS

Price: £60

Training: By phone or fax if needed

238

Software Name: QUANTUM GAIN

Version:

First Published:

Company: Business Edge Ltd (01705 599000)

Part of the fully interactive Quantum Suite of programs, it incorporates building heat gain and heat loss results using the CIBSE Admittance Procedure which takes account of all energy flows due to dry bulb, mean surface, environmental and dry resultant levels.

It employs key CIBSE data tables together with sophisticated calculation routines for solar gains, radiant losses/gains and many other factors.

Quantum Gain & Loss allows full manipulation of zone and floor loads, essential for multi-split DX and chilled water system design.

Quantum Weather Modules are available for other countries and Quantum is also supplied in other languages.

Demo disk available.

Basis: CIBSE data tables

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 10M bytes

Copies sold UK:

World:

Price: From £250 according to options

Training: Yes



HEAT GAINS

239

Software Name: SUMMER

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Prediction of summertime room temperatures based on CIBSE Heat Gain Method.

Basis: CIBSE Guide Sections A5 and A9.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

240

Software Name: SYSTEM DESIGN LOAD PROGRAM

Version: V1.00

First Published: 1993

Company: Carrier Air Conditioning Ltd (0181 991 2000)

The System Design Load Program introduces the concept of system-based design, a technique which considers specific air handling system sizing calculations. Because many systems have unique features which require special sizing procedures.

In the past, HVAC load estimating programs calculated room loads and air flow rates and system air flow rates and coil loads without considering system specifics. This data is useful for general studies and for preliminary design when the system type is not known. This program still offers these capabilities, but also provides the option of going a step further to tailor system sizing data to specific air handling designs and controls.

In the System Design Load Program, general load estimating and system-based design start with the basics. Access to design weather data for hundreds of cities is available. The ability to define specific wall, roof and window constructions. Features for defining building design, layout and operation in as much or as little detail as necessary. The process then continues by allowing the user to specify the type of system and controls used to deliver cooling and heating to the building. As much or as little detail as desired can be used. Sizing procedures then are tailored to the system choice to provide high-quality output listing

(entry continued)



HEAT GAINS

for room loads and air flow rates, system coil loads and fan air flow rates, and component load details.

Basis: ASHRAE endorsed Transfer Function Methodology

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 540K bytes conventional RAM

Disc storage: Minimum of 2.5M bytes

Copies sold UK:

World:

Price: £625 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available, free of charge, to all licensed users.



INTEGRATED CAD

241

Software Name: 4BASE

Version: 1.01

First Published: 1991

Company: Cad-Capture Ltd (01254 583534)

4BASE is a powerful low cost, electronic document management system for personal computer networks. 4BASE handles any size of document and allows users to index documents in exactly the way they want, making them easy and quick to retrieve. There are no practical limitations to the number of documents which may be stored in 4BASE. The modular design means that databases may be kept manageable. At any stage of 4BASE, database information and/or the actual document may be printed. The system includes extensive reporting functions for generating smart tabular reports of any database information which may be viewed on screen or sent to the printer. The updating of database information in 4BASE is provided by password protected system administration functions. 4BASE is fully menu-driven and has a built-in help facility.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: £995

Training:

242

Software Name: 4VIEW

Version: .35

First Published: 1991

Company: Cad-Capture Ltd (01254 583534)

4VIEW is a powerful software package which allows users to view any size of drawing at any standard PC without any special hardware requirements. The drawing may be generated by scanning or from AutoCAD. The software views CCITT Group 4 compressed master files without the need for graphic adapters, extra memory or decompression cards. AO master files in this format are then equivalent vector files in AutoCAD. 4VIEW featuring icons and menus allows zooming and panning the drawing dynamically and printing to dot-matrix, laser, thermal or electrostatic plotters. 4VIEW may be linked to existing drawing databases in order to view the drawing at any PC or network.

(entry continued)



INTEGRATED CAD

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage:

Copies sold UK: 70

World: 75

Price: £595

Training:

243

Software Name: ARCHITECTS PRODUCTIVITY PACK

Version: 2.73

First Published: 1989

Company: Leonardo Computer Systems Ltd (01734 753477)

ARCHITECTS PRODUCTIVITY PACK is a totally integrated 2D package aimed at the small to medium size project. It contains parametric symbol libraries to draw walls, doors, windows, stairs and elevations. Ideal for those users who need CAD as part of their work but do not need to use it full-time or wish to employ a CAD operator. All items are easily accessible from pull-down menus, or simple one touch keyboard function key commands. Drawing conventions, symbols and layers default to accepted UK standards, although the user can change any parameter as required.

Basis: 2D vector

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 2M byte

Disc storage: 1M byte

Copies sold UK: 2000

World: 60,000

Price: £1,400

Training: Available on daily basis



244

Software Name: AUTOVIEW**Version:** 1.12**First Published:** 1988**Company:** Cad-Capture Ltd (01254 583534)

AUTOVIEW is a software package which runs within AutoCAD. AUTOVIEW enables users to load master images from just about any scanner into an AutoCAD drawing. It allows combining multiple images within one drawing and editing and manipulating the image, using standard AutoCAD commands. For example turn on, off, cut, clip, change its colour, zoom, pan, scale, rotate, and stretch. This method will allow users to generate AutoCAD drawings with greater accuracy and fewer errors.

Basis:**Computers:** IBM PC or compatible**Operating System(s):** DOS**Memory:** 640K bytes**Disc storage:****Copies sold UK:** 200**World:** 230**Price:** £790**Training:**

245

Software Name: BSL**Version:** 2.0**First Published:****Company:** Hevacomp Ltd (01142 556680)

Building services library for detail drawing of all mechanical and electrical building services with the AutoCAD drawing environment. Can work on either 2D or full 3D.

Basis:**Computers:** IBM PC or compatible**Operating System(s):** MSDOS**Memory:** As AutoCAD**Disc storage:** As AutoCAD**Copies sold UK:** 100**World:** 100**Price:** P.O.A.**Training:** Available



INTEGRATED CAD

246

Software Name: BUILDING SERVICES ENVIRONMENT (B.S.E.)

Version: **First Published:**

Company: Estimation Ltd (0121 704 3221)

A package offering building services contractors an industry specific computer aided design (CAD) system, enabling them to automate the drawing and design process.

B.S.E. allows contractors to produce working drawings, builders work drawings and record drawings, or to undertake complete design and build projects.

The program incorporates a library of British standard building services symbols which may be placed, moved and manipulated onto an architectural layout, without the need for any codes or typing skills.

B.S.E. is based on AutoCAD and is fully compatible with all major CAD packages. It may be operated independently or in conjunction with other systems in the Estimation range.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS Xenix/UNIX, Windows

Memory: 2M bytes

Disc storage: 10M bytes +

Copies sold UK: **World:**

Price: P.O.A.

Training: Included in purchase price

247

Software Name: C-FONTS

Version: **First Published:**

Company: Cad-Capture Ltd (01254 583534)

C-Fonts are high quality text fonts, generated by Cad-Capture, supplied as shape files for AutoCAD. C-Fonts emulate all popular text styles supplied both in fill and outline formats. The facility to automatically kern characters ensures proportional spacing occurs between all characters. In addition to the resident library of text styles, Cad-Capture will generate high quality custom text fonts to suit image or purpose.

(entry continued)



Basis:

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: £25

Training:

248

Software Name: CADLINK QUICKPLAN

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

Quickplan enables the engineer to read in drawings from virtually all CAD systems. Simple modifications can be made to existing drawings. Drawings can be created from scratch if required.

Basis: Sketching techniques

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



249

Software Name: CADLINK SERVICES ENVIRONMENT**Version:** 7**First Published:****Company:** Cymap Ltd (01179 299332)

CADLINK reads in floor/plans created in CAD Systems by DXF files with the floor plan on the screen, heat loss, heat gain, summer temperature and energy consumption calculations can be performed very quickly. With these figures known pipework, and ductwork can be positioned on the design and all the necessary calculations performed. Lighting calculations can also be done on the floor plan and all the resulting design can be transferred back into any draughting system capable of reading DXF files.

Basis: CIBSE**Computers:** Microcomputers**Operating System(s):** MSDOS, PCDOS, Windows**Memory:****Disc storage:****Copies sold UK:****World:****Price:** P.O.A.**Training:**

250

Software Name: DESIGNCAD 2D**Version:** DOS-Ver 6.03, Windows-Ver 7.0 **First Published:****Company:** P.M.S. (Instruments) Ltd (01628 38036)

DESIGNCAD 2D is a complete drafting and design CAD package. It can read and write files from all popular CAD packages, including AutoCAD. It supports the following: DXF, HPGL, X, Y co-ordinates, Postscript, IGES, PCX. ASCII, GEM, as well as the ability to output to packages such as Wordperfect and Pagemaker.

DESIGNCAD 2D offers a programming language so users may create their own commands to fit their particular needs. Users may customise their own on-screen icon menus so they may point and click their most often used commands and symbols. The package includes extensive dimensioning and text capabilities, with the added ability to calculate areas, perimeter, or acres of any shape.

Basis:

(entry continued)



INTEGRATED CAD

Computers: IBM PC or compatible

Operating System(s): DOS, Windows

Memory: DOS - 1.5M bytes RAM, Windows - 4M bytes RAM

Disc storage: 3M bytes (for basic installation)

Copies sold UK: 8,000

World: 700,000

Price: £199 + carriage + VAT

Training: Available

251

Software Name: DESIGNCAD 3D

Version: DOS-Ver 4.0, Windows-Ver 5.0 **First Published:**

Company: P.M.S. (Instruments) Ltd (01628 38036)

DESIGNCAD 3D is a complete solid modelling CAD package with true 3D capabilities. It can perform solid manipulations (Boolean operations) such as solid subtract, solid intersection, solid drilling, and calculate volumes and surface areas of any solid shape.

DESIGNCAD 3D includes support for the following: DXF, HPGL, X, Y co-ordinates, Postscript, Renderman, Wordperfect graphics, IGES, PCX, ASCII, GEM.

It can perform Phong (smooth) shading with a variety of textures such as marble, wood grain, concrete, etc., to create a realistic representation of a model, DESIGNCAD 3D offers a programming language so users may create their own commands to fit their particular needs. DESIGNCAD 3D allows viewing from any angle, and users can easily prepare slide show presentations.

(Windows 3D has additional 'Photo Realistic' rendering + walkthroughs).

Basis:

Computers: IBM or compatible

Operating System(s): DOS, Windows

Memory: DOS - 1.5M bytes RAM, Windows - 4M bytes RAM

Disc storage: 2M bytes (for basic installation)

Copies sold UK: 1,200

World: 200,000

Price: £245 + carriage + VAT

Training: Available



INTEGRATED CAD

252

Software Name: HEVACAD

Version: 2.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Allows digitising of building outline. Can create a design database project enabling heat losses, heat gains, energy consumption and lighting calculations to be carried out for the project. Links to heat loss and radiator programs. Draws LPHW pipework systems and sizes them from the drawing. Also draws and sizes HWS, CWS and ductwork. Analyses duct noise on screen. Link to 16th Edition package. DXF output for detailing by other CAD systems.

Basis:

Computers: IBM PC or compatible 386 or better

Operating System(s): MSDOS

Memory: 640K bytes minimum, up to 8M bytes

Disc storage:

Copies sold UK: 300

World: 300

Price: £4,500

Training: Available

253

Software Name: LIGHTCAD

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Carries out lighting calculations on a point to point basis and daylight calculations. Rooms may be square, rectangular or L-shaped. CAD facilities are provided including pan and zoom. An extensive range of printouts are available including direct links to a plotter and contour plots and fitting positions can be sent to draughting systems using industry standard DXF files.

Basis: BRE Split Flux Method. CIE Overcast Day.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

(entry continued)



INTEGRATED CAD

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

254

Software Name: PLT2TIF

Version:

First Published:

Company: Cad-Capture (01254 583534)

PLT2TIF is a graphics translator which takes in HPGL plot files and rasterizes them into standard Group 4 TIFF raster format. PLT2TIF supports a multitude of HPGL entities. It enables images to be captured and output at any resolution with a user specified scale factor or automatic fit to predefined document size. PLT2TIF has the power to allow batch translation of files over night.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

255

Software Name: RIBACAD

Version: D16/1994

First Published: 1986

Company: RIBA Information Services, RIBA Companies Ltd (0171 250 4050)

RIBACAD is a CAD library or predrawn graphics in 2D and 3D delivered to users through AutoCAD and other CAD packages. The library consists of more than 7000 drawings of building components; from windows, bathroom fittings, steel lintels and sections, to roof tiles and insulation boards. To maximise on the benefit of RIBACAD the system works most effectively on CD-ROM, which contains the complete library in both .DWG and .DXF formats, at each update so that no housekeeping is necessary.

(entry continued)



INTEGRATED CAD

Basis:

Computers: Requirements as per CAD vendor specification

Operating System(s): MSDOS, Apple Macintosh, Windows

Memory: Requirements as per CAD vendor specification

Disc storage: CD-ROM or floppy disk (25 x 1.44M bites compressed format)

Copies sold UK: 1200

World: N/A

Price: Subscription:-
CD ROM 1st year £88 + VAT
2nd and subsequent £60 + VAT
floppy discs 1st year £96 + VAT
2nd and subsequent £50 + VAT

Training: Can be accommodated

256

Software Name: SILVERSCREEN 3D

Version: V.4

First Published: 1987

Company: Leonardo Computer Systems Ltd (01734 753477)

SILVERSCREEN is a combined 3D CAD solid modeller and a 2D draughting package running on IBM compatible personal computers. It is fast and easy to use in both the 3D and 2D environments. SILVERSCREEN is ideal for such diverse activities as architecture, construction and space planning, to the design of domestic appliances, machinery or furniture. It is well documented with readable manuals and inbuilt tutorials. With SILVERSCREEN, users can work in 3D right from the start, get the concept right, then use the inbuilt 2D draughting and dimensioning tools to enhance the detail.

Basis: Solid modelling

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 8M bytes

Disc storage: 4M bytes

Copies sold UK: 2,500

World: 50,000

Price: £2,200

Training: 2 days included with package



257

Software Name: TAS 'LITE'(THERMAL ANALYSIS SOFTWARE)

Version: 1

First Published: 1995

Company: Environmental Design Solutions Ltd (EDSL) (01908 261461)

TAS 'LITE' building simulation software consists of the following functional modules: 3D graphics building modeller (includes AutoCAD link for input and output) - Dynamic building simulation - Materials and climate databases - Report generation utilities (includes links to PC presentation software).

Basis: Dynamic simulation (Response Factors)

Computers: HP workstations, Sparc workstations, PC 486, Pentium

Operating System(s): UNIX, Solaris

Memory: 16M bytes

Disc storage: 400M bytes

Copies sold UK:

World:

Price: £3,000

Training: 3 days



258

Software Name: TAS (THERMAL ANALYSIS SOFTWARE)

Version: 8

First Published: 1980

Company: Environmental Design Solutions Ltd (EDSL) (01908 261461)

TAS building simulation software consists of the following functional modules. 3D graphics building modeller (includes AutoCAD link for input and output) - Dynamic building simulation - Plant systems and controls simulation - CFD microclimate simulation - materials and climate databases - Report generation utilities (includes links to PC presentation software).

Basis: Dynamic simulation (Response Factors)

Computers: HP workstations, Sparc workstations, PC 486, Pentium

Operating System(s): UNIX, Solaris

Memory: 16M bytes

Disc storage: 400M bytes

Copies sold UK: 80

World: 80

Price: £5,000

Training: 5 days



LIFT DESIGN

259

Software Name: DYN2S

Version: 2

First Published: 1989

Company: Lerch, Bates & Associates Ltd (0161 439 4042)

Calculates lift dynamics. Input - speed, acceleration, jerk. Output - time to travel various distances.

Basis:

Computers: Any computer with BASIC

Operating System(s): BASIC

Memory:

Disc storage:

Copies sold UK: 6

World: 9

Price: £10 + disc

Training: None

260

Software Name: FILDER

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

FILDER is an interactive lift design program which will calculate the number of lifts of a given capacity required in a building to satisfy the peak arrival conditions, based on the round trip time method.

The user specifies the type of building, the number of floors and interfloor heights as well as the building population if known. The user is also required to define the lift door size, type and opening control method. The program will allow the user to change any of the values that have been selected based on the given criteria, and will check that sensible data have been entered. The user is warned if any value is considered unsatisfactory.

Once the data have been entered, the program will calculate the number of passengers required per trip based on the up-peak arrival rate, which in turn is used to suggest standard lift car arrangements based on BS:5655 contract capacity lift sizes. The program will then analyse the performance of each of the lift sizes and suggest solutions. The user can then select up to 10 different lift car groupings to analyse.

(entry continued)



LIFT DESIGN

The results can be viewed at the screen, as well as being printed to a file. These include the up-peak arrival rate, the round trip time, the required and calculated design intervals as well as the calculated handling capacity, which is given as an actual number and as a percentage.

Basis:

Computers: IBM 386/486 PCs or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

261

Software Name: LIFT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Analysis of traffic movement in a building. Comparison of lift design solutions and costs.

Basis: Standard probability equations.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



262

Software Name: LISI**Version:****First Published:****Company:** Facet Ltd (0181 784 5768)

LISI is an interactive lift simulation program, which can cope with up to 20 similar lifts, serving up to 40 floors, using interconnected directional collective group control theory.

The user specifies the number of floors, the interfloor heights, the floor populations, as well as arrival rates and interfloor traffic. The program will also allow for traffic peaks other than the main arrival and staggered occupancy, as well as multilevel arrival. It will also allow the user to study various periods during the day, such as the peak arrival and normal operating periods.

The program will check all the data that the user enters, warning him if any value is considered unsatisfactory. The program also provides an editor which allows the user to change any of the data entered. This is saved in an input file which allows the user to analyse the data at a later date.

The results can be reviewed at the terminal as well as being printed to a file. These include the queue lengths at the end of each period as well as the maximum lengths on each floor for each period. The program will also display the average and maximum waiting times for each period. A graphical simulation can also be shown on an appropriate graphics terminal if required.

Basis:**Computers:** IBM 386/486 PCs or compatible**Operating System(s):** MSDOS**Memory:** 4M bytes RAM and 4M bytes paging memory**Disc storage:** 1.5M bytes**Copies sold UK:****World:****Price:** P.O.A.**Training:**



LIFT DESIGN

263

Software Name: LTD1

Version: 1

First Published: 1988

Company: Lerch, Bates & Associates Ltd (0161 439 4042)

Simple calculation of the traffic handling capacity of a lift system. Calculates round trip time, internal handling capacity, etc.

Basis:

Computers: Any computer with BASIC

Operating System(s): BASIC

Memory:

Disc storage:

Copies sold UK: 3

World: 6

Price: £1 + disc

Training: None

264

Software Name: PC-LSD

Version: 2

First Published: 1988

Company: Lerch, Bates & Associates Ltd (0161 439 4042)

Traffic design of lift systems. Uses simulation techniques for up to 8 lifts, 24 floors, 26 person cars. Many traffic conditions definable.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.3 or higher

Memory: 2M bytes

Disc storage: 2M bytes

Copies sold UK: 4

World: 10

Price: £1,000+

Training: At Cost



LIGHTING DESIGN

265

Software Name: CADLINK LIGHTING

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

The software carries out an initial lumen method calculation, warning the engineer if the spacing to height ratio or any specified glare limit is exceeded. The program calculates the number of fittings needed to achieve a given lux level. It then sets up an array of fittings on a half/one/half spacing ratio, automatically adjusting the positions to snap onto the nearest ceiling tile. It then does a point-to-point calculation for each fitting and window, and displays isolux diagrams, numeric reports, intensity diagrams, and 3D views.

Basis: CIBSE Guide

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

266

Software Name: DAY

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Using the BRE "split flux" method and a standard CIE overcast sky, this program calculates the total daylighting factors on the working plane of a rectangular room. Wall reflectances, shading and obstructing buildings can all be included in the evaluation. Windows of any type may be located on any wall or horizontally on the ceiling. The package will produce daylight factors - sky, plus internally and externally reflected components.

Basis: BRE split flux method. CIE overcast sky.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

(entry continued)



LIGHTING DESIGN

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

267

Software Name: DAY

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes daylight factors on a grid for a room. Allows for recess shading, external obstructions.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

268

Software Name: DAYLIGHT

Version: 4.1

First Published:

Company: Anglia College Enterprises Ltd (01245 493131 Ext.3241)

Allows a room to be described and evaluated for daylight distribution. For ease of use, the program is menu driven, with various options being displayed when appropriate. The room area is divided into rectangular sections determined by the number of reference points requested, and the daylight factor is calculated at the centre of these rectangles at the height determined by the working plane. Output takes the form of a plan of the room either with the daylight factor or the illuminance level displayed in each rectangle or with daylight factor

(entry continued)



LIGHTING DESIGN

contours or an Isolux plot. Graphs may be produced showing the daylight factor or illuminance level v. the distance from a wall. In addition, a table is produced showing minimum, maximum, average, min/max ratio and uniformity ratio for the daylight factors or illuminance.

Basis:

Computers: IBM PC or compatible. A CGA, EGA or VGA adaptor is required.

Operating System(s): DOS 3.1 or later

Memory: 512K bytes

Disc storage:

Copies sold UK: 50+

World: 10+

Price: Single user £400 + VAT. Site licence £1,200 + VAT. A 50% discount is available for educational use only

Training: Available on request either at our premises in Chelmsford or Cambridge or at client's premises. A quotation for tailored training will be provided on request.

269

Software Name: FLOOD

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

FLOOD may be used for any external or internal lighting simulation to give (on a point-to-point basis) the total light levels reaching the surface under examination. Any fitting for which photometric data is available can be included. Using an input technique exclusive to Cymap, data from many sources may be entered in the same format. Fittings may be placed anywhere on the site, at any angle - a "twist" from horizontal can also be entered.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



LIGHTING DESIGN

270

Software Name: FLOOD

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

The program enables a site to be set up and towers carrying floodlamps to be positioned. The lamps may be directed to any point on the site. A point to point calculation of illumination levels is carried out at each point on a grid defined by the user. The program uses lamp data stored on a separate disk.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

271

Software Name: HYPERLIGHT

Version: 3

First Published: 1994

Company: Hyperlight Partnership (01482 216792)

A hypertext tutorial covering all aspects of lighting design and has been revised to take into account changes in the 1994 CIBSE Code for Interior Lighting. The information is divided into a series of "frames" on the screen. Within each frame several keywords or phrases are highlighted. The user selects one keyword at a time for expansion. This places another frame on the screen, elucidating that keyword and offering a further choice of keywords to explore. Each user chooses a different route through the information.

Hyperlight 3, an expanded version of Hyperlight 2, contains files on every type of building. These are supplemented by files on energy, daylight, lamps, comfort, colour, vision, etc. Interactive calculations are included for both natural and electric lighting.

Basis: Hypertext

Computers: IBM PC or compatible

(entry continued)



LIGHTING DESIGN

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 2.5M bytes

Copies sold UK: **World:**

Price: £350 for site licence

Training: None needed

272

Software Name: ICEL

Version: 1.0

First Published: 1993

Company: Hevacomp Ltd (01142 556680)

A specialised lighting design package specifically for laying-out and analysing emergency lighting systems. The package incorporates a database of approved ICEL luminaires. Calculation options include the facility to estimate spacings between fittings, create fitting layout grids or define fitting locations individually. A full point to point calculation is performed to assess the performance of the lighting layout with a range of graphical outputs.

Basis: ICEL Industry Committee

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 570K bytes

Disc storage: 0.5M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training: Available



LIGHTING DESIGN

273

Software Name: ILLUM

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Lighting and glare calculations for rooms using various types of lighting fittings for specified service illuminance level. It can compare the different sizes and number of tubes or discharge lamps for any specified fitting. It follows the normal "Lumen" method and the IES Glare indices to give a running cost for each arrangement with a schedule or quantities of the fittings and lamps used and installation cost.

Basis: CIBSE Lighting Guide.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

274

Software Name: LBASE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Creates a database of rooms for which lumen, point to point, uplighting and daylight calculations can be carried out. Effects of uplighting and daylight can be combined with regular luminaire layouts. Luminaire layouts can include regular and individually positioned luminaires. Results can be shown numerically or graphically using shaded, contour and 3-D surface graphs.

Includes a comprehensive database of over 1500 luminaires from 20 manufacturers. A quantity schedule of luminaires used in the design can be produced on request.

Basis: CIBSE TM10, TM5 and Electricity Council

Computers: IBM PC or compatible

Operating System(s): MSDOS

(entry continued)



LIGHTING DESIGN

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

275

Software Name: LEN

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes the annual electrical energy consumption for an artificial lighting system. Allows for different switching methods and varying occupation periods.

Basis: BRE 'Availability of Daylighting'.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

276

Software Name: LIGHT

Version: 5.06

First Published: 1986

Company: Oasys Ltd (0171 465 3302)

LIGHT analyses illuminance characteristics in a room due to artificial lighting or daylighting or a combination of these two elements for both indoor and outdoor lighting environments. Standard CIE sky models have been used for daylight analysis. Both rectangular and complex spaces can be examined using the program. The program also includes a large database of luminaire photometric data which allows the user to input additional luminaires when required.

(entry continued)



LIGHTING DESIGN

Results are available in the form of graphs, contour plots, lux mountains and numerical values. All data is entered via the BEANS database.

Basis: Basic Physics

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 2M bytes minimum

Disc storage: 2M bytes optional 15M bytes for extra data

Copies sold UK:

World:

Price: £1,500

Training: By arrangement

277

Software Name: LIGHTCALC

Version: 3.2

First Published: 1991

Company: Trend Computers & Software (01454 412138)

Lighting Design Program. A design facility for Interior Lighting based on the 'Lumen' method, and CIBSE Codes of Practice. Designs can be produced from within the program's own databases, or for any luminaires for which Photometric data is available.

The program determines, total required lighting flux together with total Number of luminaires and their dimensional layout. Corrected Glare Index can also be calculated.

A print-out is available giving full design details including a dimensional layout. A context sensitive help facility provides immediate access to information and data relating to any specific part of the program thereby eliminating the need for an operating manual.

Basis: 'Lumen' method, CIBSE Lighting Guides

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 128K bytes

Disc storage: 200K bytes

Copies sold UK:

World:

Price: £95

Training: Yes, where required



LIGHTING DESIGN

278

Software Name: LUGL3

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

LUGL3 is a lighting design program that will perform lumen and glare calculations.

The user specifies the room dimensions, the surface reflectances, light loss factors and the type of luminaires and lamps. The program will then check various solutions for illumination level, space to height ratio, whether the luminaires will fit in a room, and optionally check the corrected glare index. Successful solutions will be displayed on screen and, if selected, printed in the output file. The results include the number of fittings in the length and width, which orientations are satisfactory, the total wattage as well as the achieved illumination level and maximum glare index. Other calculation results can be viewed at the terminal if desired, these include - room index, cavity reflectance values and glare correction factors.

Other calculation options are also available, one is to specify a particular lighting layout, either by defining the number of fittings in the length and/or width, or by setting the offsets and spacings in the length and/or width. The other calculation option is to try all the valid lamps for the same luminaire. This is useful for linear fluorescent fittings as it will try different combinations for each length of lamp.

LUGL3 is part of a new suite of lighting programs that use a common database of luminaires and lamps. An extensive system database is provided with the program but the user can add and modify his own data.

Basis: CIBSE Code for Interior Lighting 1984. CIBSE TM5 1980. CIBSE TM10 1985.

Computers: IBM 386/486 PCs or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



LIGHTING DESIGN

279

Software Name: LUMEN

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Lumen lighting design and glare computations for rooms using light fitting data stored on separate disk.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

280

Software Name: MCD

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Lighting design using multiple criterion design method.

Basis: CIBSE (IES) Technical Report No.15.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



LIGHTING DESIGN

281

Software Name: ME LIGHTING

Version: 1.0

First Published: 1994

Company: Hevacomp Ltd (01142 556680)

Design of interior lighting and daylighting analysis within AutoCAD, part of full suite sold in modules.

Basis: CIBSE Lighting Code

Computers: IBM PC or compatible

Operating System(s): MSDOS/Windows

Memory: 12M bytes

Disc storage: Part of complete program suite requiring minimum 25M bytes

Copies sold UK:

World:

Price: P.O.A.

Training: Available on all programs

282

Software Name: MODLUX (USED WITH MINIMODELLER)

Version: V1.4

First Published: 1990

Company: Ecotech Design (01142 680982)

Conversion of CAD 3-D model of building to geometric data for daylight calculations and display of grid or graphically as contours. Output of file of geometric data and coded elements for SPIEL thermal modelling program. Calculation of average daylight factor, or selection of single points, or grid of any size.

Basis: Direct, diffuse & reflected daylight from CIE average sky

Computers: IBM PC or compatible

Operating System(s): MSDOS or Windows (DOS linked)

Memory: 600K bytes

Disc storage: 300K bytes

Copies sold UK:

World:

Price: Public domain (cost of materials & documentation)

Training: Yes by arrangement



LIGHTING DESIGN

283

Software Name: PHOTO3

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

PHOTO3 is used to create and amend a database of information describing luminaires and lamps. The information in the database is then used by SPIEL3 and LUGL3, the other two programs in the lighting design suite, for design or analysis purposes. An extensive system database is provided.

Photometric data may be entered into the PHOTO3 program either interactively or by using data files in CIBSE or ASCII formats. This facility allows manufacturers' TM14 data supplied as data files to be entered directly into the database without the need for reformatting or retyping.

PHOTO3 uses the polar curve data to calculate light ratios, spacing-to-height ratios, utilisation factors, glare data, aspect factors and BZ classifications for a luminaire. Alternatively, these may be entered by the user if available. In addition the program can also produce polar curve plots which can be viewed from within the program, or stored in a plot file and viewed at a later date using the Facet VIEW option, or plotted using a pen plotter.

Although data will normally be entered into the database using PHOTO3, it is possible to input and edit the user's lamp and luminaire database when running the LUGL3 or SPIEL3 programs.

Basis: CIBSE TM5 1980. CIBSE TM10 1985.

Computers: IBM 386/486 PCs or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



LIGHTING DESIGN

284

Software Name: POINT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates indoor illumination levels on the working plane on a point to point basis.

Basis: CIBSE TM5

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

285

Software Name: PTP

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Carries out lighting calculations on a point-to-point basis using tubular or point fittings with a symmetrical light distribution. Fittings may be arranged at any height in the room, in a regular array or otherwise. If the arrangement of the fittings is to be regular, the program will automatically work out the coordinates of each unit. Results show not only the light reaching the working plane directly, but also the light reflected from the walls and ceiling. Items necessary for multiple criterion design are also given.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



LIGHTING DESIGN

286

Software Name: SCRIBE MODELLER (MINIMODELLER)

Version: V3.7

First Published: 1985

Company: Ecotech Design (01142 680982)

Three dimensional modelling (CAD) for visualisation (perspectives, elevations, plans, sections, oblique and isometric projection and axonometric projection); for calculation of areas, volumes, numbers of coded elements, for costing (SPECALC); for thermal modelling (MODLUX and SPIEL); for daylighting (MODLUX); for daylighting ray-tracing and calculation (ADLINE system using SCRIBE, PLINK and RADIANCE); for daylighting (ADLINE system - SCRIBE, PLINK and SUPERLITE)

User interface extremely easy with mouse or tablet input, pull-down menus, dialogue boxes, icons and windows.

Basis:

Computers: IBM PC, AT, PS2 or compatible

Operating System(s): MSDOS or Windows (not integrated in Window)

Memory: 640K bytes

Disc storage: 1M byte for full system; 720K bytes for Minimodeller

Copies sold UK:

World:

Price: £250 (Minimodeller for thermal links) £1,000 (full CAD)

Training: Yes - can be arranged

287

Software Name: SPIEL3

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

SPIEL3 is a lighting simulation program that will analyse both artificial lighting and daylighting using the point by point method. The artificial lighting calculations can be performed for both internal and external situations and these are based upon calculation methods given in the CIBSE Code for Interior Lighting and from first principles utilising the luminous output and intensity distribution from the given luminaire(s). The daylighting calculations are based on the CIE Standard Overcast Sky and the internally reflected component on the BRE split flux method.

(entry continued)



LIGHTING DESIGN

For interior situations the program will calculate illumination levels due to the combined effect of daylight and artificial installation, either for an assumed outdoor illumination of 5000 lux or for a specified hour of a given month which utilises actual outdoor illumination data selected from system database or input by user. Using the results from the calculations the program is then able to estimate energy savings through the use of automatically switched or dimmed lighting circuits.

The user specifies the area dimensions, the surface reflectances (if it is an internal room), light loss factors, the type of luminaires and lamps, as well as their positions and orientations, and the window positions. Various editors are provided to allow the user to edit, add or delete both area data, luminaire positions and window positions. The program will check that all combinations of luminaires and lamps exists and that they are sensibly positioned within the room and that the windows do not overlap. The user is warned if any value is considered unsatisfactory.

The results can be viewed at the terminal as well as being optionally printed to a file. These include the minimum, average and maximum illumination levels or daylight factors, the internally reflected component, the total circuit wattage and the wattage per square metre. A symbol map is also produced for both the artificial lighting and daylighting, which shows either lux or daylight factor levels. The program will also produce a bar chart of the energy savings on a month by month basis, if the appropriate calculations are performed.

The input data can be saved on file, this can be read at a later date, either to examine the data, or to make any necessary modifications. It is also possible to read input files created using the LUGL3 program, in order to analyse these solutions in more detail.

SPIEL3 is part of a new suite of lighting programs that use a common database of luminaires and lamps. An extensive system database is provided with the program but the user can add and modify his own data.

Basis: CIBSE Code for Interior Lighting 1984. CIE Standard Overcast Sky. BRE Split Flux.

Computers: IBM 386/486 PC or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:



LIGHTING DESIGN

288

Software Name: TM

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

The TM lighting manufacturers package analyses photometric data for luminaires to produce Utilisation Factor, TM10 Glare, BZ classification and Aspect factors. The package will produce full TM14 data files and polar curve output. Links to Hevacomp lighting design software.

Basis: CIBSE TM

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 600K bytes

Disc storage:

Copies sold UK: 50

World: 50

Price: P.O.A.

Training: Available

289

Software Name: UPLITE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes illumination levels due to a system of uplighters on a point by point basis.

Basis: Electricity Council Booklet EC 45551/5.84

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



MAINTENANCE

290

Software Name: AMC SYSTEM

Version: PP3.0

First Published: 1980

Company: Asset Management Centre Ltd (0161 449 9520)

Maintains register of plant, buildings, equipment, with ample space for data, spares, contacts, drawing refs., etc. Evaluates against variety of criteria.

Initiates regular maintenance and prints documentation. Maintains history of assets, cost of work, etc., and publishes periodic summaries. Controls spares and orders automatically to avoid shortfalls. Flexible, and easily tailored to meet unusual needs. Report generator available. Multi-user. Hand-held data capture devices. Active user group dictates development plans. Support by experienced engineers free. Written in 4GL language with built-in relational database, screen formatter, and report generator, D-BASE III compatible.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory: 640K bytes

Disc storage: 20M bytes

Copies sold UK: 130

World:

Price: From £250 depending on number of assets

Training: Beginners £275. Advanced £550

291

Software Name: ASSET TRACKING

Version: 1.0

First Published: 1993

Company: Custom Maintenance Systems (01208 77077)

A program intended for use by managers and others who have the need to track the location of items of furniture, plant and equipment, and other items.

The system is based on the use of bar codes to identify locations and items and includes a portable bar code scanner with internal memory.

Basis:

Computers: IBM PC, portable and notebook computers

(entry continued)



MAINTENANCE

Operating System(s): DOS 3.3 or above

Memory: 500K bytes

Disc storage: 5M bytes

Copies sold UK:

World:

Price: £1495

Training: Not applicable

292

Software Name: BAR CODE PRINTING

Version: 1.61

First Published: 1992

Company: Custom Maintenance Systems (01208 77077)

A program for those wishing to be able to print their own bar code labels.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 250K bytes

Disc storage: Not applicable

Copies sold UK: 90

World:

Price: £99 single user

Training: Not applicable

293

Software Name: CUSTOM MAINTENANCE MANAGEMENT

Version: 6.2

First Published: 1987

Company: Custom Maintenance Systems (01208 77077)

Using an Asset Register to hold details of all plant and equipment, the system schedules preventive maintenance from a Planning Chart or on the basis of meter readings. Preventive Maintenance Job Cards provide full details of the work to be carried out.

Standard libraries of maintenance routines and task specifications can ensure that those carrying out preventive maintenance conform to established procedures.

(entry continued)



MAINTENANCE

The system has facilities for issuing Corrective and Minor Works job cards. Maintenance costs are calculated from Job Histories and a range of management reports provide cost information by asset, by location and by cost code. There is a detailed history for each asset, together with unlimited technical information. A system of fault codes aids investigations into repeating or similar faults.

There are many user-friendly features in all CUSTOM systems, these include:-
Ease of operation by engineering staff, Help! screens for every operation and at every data entry point, Help! information can be modified by the Maintenance Manager, Personal Menus may be created for individual users, any operation can be modified to meet specific requirements, systems can grow from single user to multi-user supporting any number of users, Psion Organiser module allows instant data capture, link available to Condition Monitoring System, links available to Building Management Systems for the automatic transfer to hours-run and other information, link available to computer-based drawing packages for the immediate display of the appropriate drawing for each asset, link to Portable Appliance Test equipment, printed Permits-to-Work, support for laser printers, stores module.

Basis:

Computers: IBM PC or compatible

Operating System(s): PCDOS, MSDOS, Concurrent-DOS, Novell, LAN MANAGER

Memory: 500K bytes

Disc storage: Basic requirement 2M bytes plus an average of 2.5K bytes per asset.
This would hold up to two years' histories.

Copies sold UK: 65

World:

Price: £495 - £6,750

Training: £175 - £575 per day dependent on location

294

Software Name: FRONTLINE INTEGRATED MAINTENANCE MANAGEMENT

Version: 3

First Published: 1986

Company: Shire Systems Ltd (01703 224111)

System includes a plant/equipment register, planned maintenance procedures with job cards and permits to work, work requests, condition monitoring and fault reports. Optional modules for stock control and purchasing.

It helps plan and control all maintenance activities, including statutory safety checks, maintains historical records and provides a range of useful management information.

(entry continued)



MAINTENANCE

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS, Novell

Memory: 640K bytes

Disc storage: Programs - 1.4M bytes. Data variable

Copies sold UK: 900 **World:** 1000

Price: £795 - £3,500 (+ VAT)

Training: £170 (+ VAT) per person per day (2-4 day course)

295

Software Name: IDHAMMAR DOCUMENT IMAGE PROCESSING

Version: **First Published:**

Company: Idhammar Management Systems Ltd (01179 297309)

Idhammar Document Image Processing will link and display all kinds of documents, drawings and photographs to specific items held in a maintenance management system database stored on an IBM AS/400.

Basis:

Computers: IBM AS/400

Operating System(s): OS/400

Memory: N/A

Disc storage: N/A

Copies sold UK: **World:**

Price: P.O.A.

Training: Full range of training and implementation courses



MAINTENANCE

296

Software Name: IDHAMMAR SYSTEM

Version: 4.3

First Published: 1979

Company: Idhammar Management Systems Ltd (01179 297309)

System consists of a wide range of separate modules including preventive maintenance, plant and unit record, inventory and spare parts control, purchasing, document record, planned maintenance and work order routines, general enquiry, special user enquiry, technical/economic analysis of plant history and maintenance work and machine availability. Any of the modules can be installed as required by the user. System is totally integrated throughout all of its modules. Interfaces to project control, fixed asset accounting, general ledger and condition monitoring systems are available.

Basis:

Computers: IBM AS/400, IBM PC, IBM RS/6000, IBM System/36, IBM System/38, DEC VAX, DEC Micro VAX, DEC ALPHA, HP9000

Operating System(s): OS/400, SSP, CPF, AIX, MSDOS, VMS, ORACLE, INFORMIX

Memory:

Disc storage:

Copies sold UK:

World: 500+

Price: P.O.A.

Training: Full engineering consultancy services and training courses

297

Software Name: MAINMAN

Version: 2.20.00

First Published: 1986

Company: Hatton Parkinson Systems Ltd (01327 857914)

An all embracing maintenance management system which provides the manager with information to control the department. It provides the following features: plant inventory, technical library, spares catalogue, maintenance planning, job ticket generation, technical and financial history, labour control, management reports, purchasing and stock control.

Basis:

Computers: Microcomputers, minicomputers, mainframe

Operating System(s): MSDOS, CDOS, UNIX, Xenix, VMS

Memory: 1.2M bytes

(entry continued)



MAINTENANCE

Disc storage: 20M bytes

Copies sold UK: 350

World: 350

Price: £1,495 +

Training: Available

298

Software Name: MAXIMO SERIES 5

Version: 2.0

First Published: 1991

Company: PSDI (UK) Ltd (01483 727000)

MAXIMO SERIES 5 is the newest member of the PSDI family of computerised maintenance management software products. MAXIMO encompasses all maintenance functions and aids maintenance operations in moving toward preventive and predictive maintenance, rather than costly corrective and emergency maintenance. Modules within MAXIMO include Asset Register, Condition monitoring, Failure analysis, Work Order Tracking, Inventory Control, Purchasing, Labour Resources and Calendars. MAXIMO is also providing full user customisation utilities for changing database configuration, screen designs and report layouts.

Users can access modules by simply clicking with their mouse on the icon representing the module they require. Data can be accessed from any modules while in another module, and can be transferred across different departments.

Basis:

Computers: IBM PC or compatible, PC-LAN, any UNIX

Operating System(s): MS-Windows, DOS, OS/2, NLM, UNIX

Memory: 8M bytes

Disc storage: Flexible

Copies sold UK: 100

World: 1100

Price: Dependent on required modules, P.O.A.

Training: Regular basic and advanced schools given at PSDI and client sites.



MAINTENANCE

299

Software Name: MIDAS

Version: 2.52

First Published: 1991

Company: Pantek Ltd (0161 428 8506)

A maintenance management system suitable for both industrial and commercial applications. Multi-site capability to keep data for many concurrent projects. Each site has five level asset register from departmental to spare part identities. User defined terminology and prompts.

Facilities for planned and unplanned work control. Extensive history report options. Integrated stores and purchase order control. Links to 'CAD' review system and 'SCADA' packages for event triggered maintenance. Built-in 'demo' data for training purposes.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS (Windows version available 1995)

Memory: 640K bytes

Disc storage: 5M bytes for install

Copies sold UK: 40+

World: 50+

Price: £1,500 - £6,000 depending on asset numbers and options

Training: Not necessary. Special courses at Pantek or on-site by arrangement

300

Software Name: PLANET XL

Version: 2.01

First Published: 1987

Company: FDS Advanced Systems (01483 481024/486956)

PLANET XL is a comprehensive and easy to use maintenance and facilities management system suited for single and multiple site operation. Based around a plant register the system has facilities for planned maintenance, contractor control, energy records, resource balancing, work order issuing and history / cost reporting. Optional modules include a Help Desk, PAT Test module, CAD, stock control and purchasing, service management, facility booking, health and safety database, project management, and supplier contracts.

Basis:

Computers: IBM PC or compatible and networks

Operating System(s): MSDOS, DRDOS, Novell

(entry continued)



MAINTENANCE

Memory: 4M byte RAM

Disc storage: Typically 10M bytes

Copies sold UK: 200+

World: 200+

Price: £3,950 + VAT

Training: Full training and consultancy services to assist clients implement the PLANET system.

301

Software Name: SAMSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

SAMSYS has been tailored to suit refrigeration, air conditioning, water services, control equipment, lighting and power distribution, heating, fire detection and prevention and plumbing and drainage. The traditional administrative overhead that the relatively small value, high volume, visits generate are accommodated by SAMSYS ensuring that records are easily maintained and invoices generated accurately and promptly. The main features are:

Contract administration and service control. Planned preventative and corrective maintenance. Equipment schedules and full contract history. Integrated invoicing for service work. Multiple labour rates. Fully priced materials file with standard labour rates with TSI (formerly Luckins) update facility. Labour and materials scheduling.

Basis:

Computers: IBM PC or compatible, B20s, UNIX machines

Operating System(s): UNIX, MSDOS, BTOS

Memory: 1M byte

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available



MAINTENANCE

302

Software Name: UNIFINE MAINTENANCE SERVICES SOLUTION

Version: 6.1.01

First Published: 1990

Company: Avalon Solutions Ltd (0116 278 7150)

"UNIFINE" is an integrated management information system specifically designed and written for the Maintenance Services Industry. Developed in conjunction with leading maintenance service companies, the system provides immediate access to critical information by the use of the very latest "open systems" computer software and hardware technology. Flexible and comprehensive modules for financial accounting, payroll, cost ledger, sub-contractors accounting, planned maintenance scheduling and automatic contract invoicing, operating in a multi-company and multi-currency environment, provide the degree of control that is necessary to run a successful enterprise.

Basis: Written in the ACCELL "open" 4GL for UNIFY and any standard SQL database

Computers: Computers using UNIX (e.g. H.P., NCR), i.e., open systems

Operating System(s): UNIX and/or Microsoft Windows (client-server mode)

Memory: Configuration dependent

Disc storage: Configuration dependent (manages large database)

Copies sold UK: 98

World:

Price: P.O.A.

Training: Contact Avalon for details

303

Software Name: WCS-PPM MAINTENANCE MANAGEMENT

Version: 4.4

First Published: 1982

Company: Whesoe Computing Systems Ltd (01325 381818)

WCS-PPM is a totally integrated maintenance management system which consists of the following main modules - asset register, job request, manpower/contractor planning, planned maintenance, plant history, stock control and purchasing. Options include CAD link, scanning, accounts integration and project planning.

(entry continued)



MAINTENANCE

The WCS-PPM coding system makes the software suitable for any project from bill of materials through construction to actual maintenance. All details concerning maintenance tasks, frequencies and resources are held on the system which can also build a history of plant from tender to commissioning and into operation.

WCS-PPM is fully supported.

Basis:

Computers: DEC VAX, IBM RS6000, PCs, SUN SPARC, ICL, HP, NCR

Operating System(s): UNIX, ULTRIX, VMS, DOS, SCO-UNIX, SOLARIS, HP-UX

Memory: 8M bytes

Disc storage: 50M bytes

Copies sold UK: 20

World: 30

Price: £5,000 to £50,000

Training: As required and given by Whesoe

304

Software Name: WISE & WISEMANAGER

Version: 4.53

First Published: 1985

Company: Hallmark Facilities Management Ltd (0161 848 0842)

WISE application software, using a MSDOS relational database, is tailored to customers needs from a basic core system which can be developed into a powerful Facilities Maintenance Management tool. Experienced staff work with each client to develop both short term and long term requirements. Attention is given to existing plant data, and identification of Assets. Development of future needs include Condition Monitoring, Bar Coding, the storage of text, and production floor plans through scanning and links with AutoCAD.

WISE offers a multi-level Asset structure to identify each process unit or machine, principal component Assets and Sub Assets. Maintenance of factory buildings and services can also be incorporated into this Asset structure when required. Hallmark have the capability to prepare and input Asset and Maintenance Data. Several Job Instructions procedures can be provided including paperless, using hand held logging devices.

The system can be multi-user, networked and feed off compatible BMS processors for triggering selective preventive and conditioned based routines and where necessary fault diagnosis.

Basis: DataEase 4.5r3

(entry continued)



MAINTENANCE

Computers: IBM 386 PCs and above

Operating System(s): MSDOS & Novell

Memory: 4M bytes

Disc storage: 100M bytes +

Copies sold UK: 52

World: 59

Price: £1,500 to £15,000

Training: DataEase, WISE, WISEMANAGER, DATA INPUTTING, DATA SURVEYING etc.



MANAGEMENT

305

Software Name: BRITER CLIENT AND SUBCONTRACTORS RECONCILIATION

Version: VIXEN 5.06

First Published: 1985

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Client and Subcontractors Reconciliation systems are designed to handle the often complex tasks of recording, reconciling and accounting for interim applications, clients certificates, deferred VAT, discounts and retentions on contracts whether run under full JCT80 conditions or simply paid on application.

Links to costing and sales or purchase producing the applicable invoices and remittance documentation. Many reports including Retentions Due and Outstanding, Applications and Certificates Outstanding, and Job Profitability.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

Disc storage: Fixed disc

Copies sold UK: 100+

World:

Price: From £880 depending on number of users

Training: In-house or on-site

306

Software Name: BRITER CONTRACT COSTING SYSTEM

Version: VIXEN 4.01

First Published: 1983

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Contract Costing System records costs, both actual and committed, from a variety of sources - Purchase Orders, Goods Received Notes, Purchase Invoices, Time Sheets and Stores Issues. Links to other modules to allow for the production of invoices (small works) or to the Client Reconciliation package for the production of applications for interim payments.

(entry continued)



MANAGEMENT

The Costing record may be split into an almost unlimited number of jobs each of which may be sub-divided into sub-jobs. Further analysis splits the job into cost heads and transactions showing full detail of all costs and orders raised. Comparison against budget figures (automatically transferred from the Briter Estimating system) and factors for Overhead Recovery and Profit Margins provide details of budget variances and profitability.

Profitability, Work-in-progress and total Job Analysis reports are instantly available either in summary or at the level of individual cost transaction.

The Purchase Order module links to provide Committed Costs and details of the value and nature of Committed Costs against any selected Job.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

Disc storage: Fixed disc

Copies sold UK: 300+ **World:**

Price: From £1,320 depending on number of users

Training: In-house or on-site

307

Software Name: BRITER CONTRACTORS' ACCOUNTS SYSTEM

Version: VIXEN 5.01

First Published: 1981

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Accounts system embraces the Sales, Purchase, Sub-contractor and Nominal Ledgers. Many postings to these ledgers are automatic, when linked to other Briter modules but, as each module may be used independently, facilities are included for the input of invoices, credit notes, cash and discounts. The Purchase Ledger includes a comprehensive Sub-contractors Ledger with recording of 714 Certificates and SC60 Taxation.

The ledgers offer full open item accounting with Account History being retained for a user definable period. Statements, Remittance Advices, Debtors and Creditors analysis of debts may be produced at any time. There is an automatic link to Wordprocessing for the production of credit control letters and, if required, to BACS for payments.

(entry continued)



MANAGEMENT

The Nominal Ledger provides performance reports, comparing budgeted figures to actual, on a month and year-to-date basis or period by period. The system allows for Accruals and Prepayments with automatic reversals and will produce self-balancing Trial Balance, Profit and Loss, and Balance Sheet reports.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

Disc storage: Fixed disc

Copies sold UK: 300+ **World:**

Price: From £880 per module depending on number of users

Training: In-house or on-site

308

Software Name: BRITER CONTRACTORS' SYSTEM

Version: VIXEN RELEASE 3 **First Published:** 1982

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Contractors' System is a fully integrated system embracing Estimating, Costing, Small Works Management, Service Records, Schedule Price Invoicing, Price File Database, Client and Sub-contractors Reconciliation, Stock Control, Payroll, Sales, Purchase and Nominal Ledgers, Purchase Order Production and Checking, Design, Wordprocessing, Spreadsheet and Database.

The system allows for the use of the TSI dataselect file and also links to AutoCAD and a Project Management system for planning work and material schedules.

Any one of the modules may be supplied independently, or collectively as a full management system.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

Disc storage: Fixed disc

Copies sold UK: 300+ **World:**

Price: From £3,500 depending on number of users

Training: In-house or on-site



309

Software Name: BRITER PURCHASE ORDER SYSTEM

Version: VIXEN 2.32

First Published: 1989

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Purchase Order System for use with the Briter Contractors Package links to Briter Estimating, Sales Ledger, Purchase Ledger and Contract Costing.

Prints Purchase Orders either from details processed from the Estimating System or entered manually including prices taken from the price file (TSI) and preferential discounts. Allows for the checking of incoming delivery dates and purchase invoices both quantities delivered and prices charged. Enquiry facilities enables the user to check on the status of orders and to "find" items - whether ordered, delivered or awaiting delivery. Links to costing to show committed costs which are automatically adjusted as materials are received. Reports include "chase" information on outstanding orders and details of any over charges. Comprehensive "Best Buy" facility for single or multiple suppliers.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

Disc storage: Fixed disc

Copies sold UK: 200+

World:

Price: From £1,320 depending on number of users

Training: In-house or on-site

310

Software Name: BRITER SCHEDULE PRICE INVOICING

Version: VIXEN 4.01

First Published: 1990

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Schedule Price Invoicing system is an add-on to the Briter Costing and Small Works Management systems and is ideal for invoicing jobbing works for local authorities, housing associations, retail chains, etc., where the basis of charging is an agreed "Schedule of Rates" which covers most of the items likely to be used or installed. Allows for any number of clients each with their own schedule of rates and references.

(entry continued)



MANAGEMENT

Where a schedule has been raised on the Briter Estimating system it may be transferred automatically once the Estimate is accepted so that all "extras" or "dayworks" are charged at the agreed Schedule Rate. Non-schedule items are catered for using the TSI Database.

Produces invoices with a choice of line format, automatic text facilities and allowing checks against Total Cost and Profitability before completion. Links to Sales Ledger and Analysis, Revenue posted automatically to the Nominal Ledger.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

Disc storage: Fixed disc

Copies sold UK: 50+

World:

Price: £880+

Training: In-house or on-site

311

Software Name: BRITER SMALL WORKS MANAGEMENT SYSTEM

Version: VIXEN 4.01

First Published: 1984

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

The Briter Small Works Management module combines flexibility and ease of operation in booking-in and allocation of dayworks with the ability to handle most invoice pricing structures for materials and labour. Each invoice may be individually edited to show charges in summary or detail, and at list price less a discount or on a cost plus basis. Powerful text editing facilities allow for the inclusion of extended narrative to further explain charges.

The sales invoice may be viewed on the screen before final acceptance, showing detail precisely as it will appear on the printer. Once accepted the invoice is printed and the Sales and Nominal Ledgers are automatically updated.

As all Briter modules, the Small Works system is integrated to the relevant programs for the automatic posting of purchase orders, time sheet, stock and purchase invoices.

Basis:

Computers: Using INTEL or RISC processors

Operating System(s): UNIX, Xenix, AIX, ULTRIX, RISC O/S, OSF/1

Memory: 1/2 M byte per user

(entry continued)



MANAGEMENT

Disc storage: Fixed disc

Copies sold UK: 250+

World:

Price: From £1,320+ depending on number of users

Training: In-house or on-site

312

Software Name: BUDGET PRICING

Version:

First Published: 1987

Company: Ensign Advanced Systems Ltd (01162 538820)

Budget Pricing uses a database made from old jobs or other base details such as Spon's and allows the user to select from a category list the type of job to be priced, e.g., speculative office block, the area of space to be constructed and then displays a list of services to be selected from for inclusion in the quote.

Prices are updated by the system using NEDO Indices and therefore a quick and accurate budget can be produced very quickly.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Included



313

Software Name: BUILDAX ADVANTAGE

Version: **First Published:** 1987

Company: FCG Computer systems Ltd (01442 231166)

BUILDAX is a multi-user financial ledger and costing system. All aspects of accounting, retentions and sub-contractor administration are handled with detailed management information instantly available. A wide range of fully integrated optional modules are available including estimating, purchase order processing, cashflow, database, house building, plant hire, fixed assets and stock control.

Basis:

Computers: Most

Operating System(s): DOS, Novell, Xenix, UNIX, AIX

Memory: 1M byte

Disc storage: 80M bytes +

Copies sold UK: 320 **World:**

Price: From £2,450

Training: Available

314

Software Name: C-CHASE

Version: 2.25 **First Published:** 1989

Company: Hastam (0121 359 7548)

Allows users to type in checklists of questions which can then be reproduced and used for monitoring and auditing performance on site. Questions can be given a numerical weighting which means that the system can be used for quantified measures of performance.

There is a range of analysis options including comparisons of results from different sites. Analysis results can be displayed as tables, or graphically. Other features include:-

- Adding guidance to question so that, for example, performance standards can be specified.
- Recording recommendations during monitoring and auditing.
- Recording notes during monitoring and auditing.
- Optional PSION 3A (hand-held computer) version for use on site.

(entry continued)



MANAGEMENT

Designed originally for health, safety and environmental auditing. The package can be used to measure any aspect of an organisation's performance. Sets of questions are available from Hastam, e.g., construction - complete health and safety evaluation, developed in conjunction with BAS.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.xx and greater

Memory: 640K bytes

Disc storage: Less than 1M byte

Copies sold UK: > 200

World: > 10

Price: From £345

Training: Not essential. Recommended half day (£350)

315

Software Name: CONSTRUCTION INDUSTRY ACCOUNTING SOFTWARE

Version: 1.01

First Published: 1991

Company: Ibis Service Ltd (01494 448866)

Provides accounting solutions for the contracting environment, with particular emphasis on operational software covering the following: Planned maintenance including call logging, integrated estimating, procurement (contract based), JIB Union based payroll, marketing database, plant management, site based data capture.

Basis: Informix 14GL developed / C

Computers: IBM RS6000, most SCO UNIX environments

Operating System(s): AIX 3.25, other UNIX derivatives

Memory: 4M bytes

Disc storage: 400M bytes

Copies sold UK: 200

World: 210

Price: P.O.A.

Training: P.O.A.



MANAGEMENT

316

Software Name: CONSTRUCTION*400

Version: 8.0

First Published: 1983

Company: Binary Computer Services Ltd (0181 423 7676)

A full integrated accounting system consisting of the following modules:-

- Construction*400/1 Subcontractors
- Construction*400/2 Payroll
- Construction*400/3 Costing/nominal
- Construction*400/4 Plant management (Including plant hire)
- Construction*400/5 Bought Ledger
- Construction*400/6 Buying/purchase ordering
- Construction*400/7 Sales applications
- Construction*400/8 Marketing
- Construction*400/9 Estimating

Each module may be purchased separately.

Basis:

Computers: IBM AS/400

Operating System(s): OS/400

Memory:

Disc storage:

Copies sold UK: 30

World:

Price: P.O.A.

Training: On request

317

Software Name: CONTRACTS MANAGEMENT SYSTEM

Version:

First Published: 1993

Company: British Gas plc (01489 775313)

The system meets the needs of managing the complexity of engineering and works contracting as well as periodic services common to most businesses. The system is menu driven and provides comprehensive control, and effective management reporting, from the invitation to bid through to contract award, monitoring and post contract vendor performance.

(entry continued)



MANAGEMENT

Individual modules cover supplier qualification and management, tender management and progressing, sub-contractor control, purchase order production, EU requirements, contract & agreement management and finance control. Modules under development include project control, and stock management.

Basis:

Computers: IBM PC or compatible. PC networks including Novell Netware, VAX Pathworks, LAN Manager
Versions under development - Windows, Oracle file access, UNIX

Operating System(s): DOS V2.1 and above. Windows V3.1 and above

Memory: Minimum 500K bytes RAM

Disc storage: Minimum 10M bytes

Copies sold UK:

World:

Price: £5,000 + VAT

Training: Available for all areas of the system including consultancy and customisation

318

Software Name: COSTPLAN

Version: 6.0

First Published: 1988

Company: Construction Software Ltd (0181 660 2685)

The 'COST PLAN' program has been designed to undertake the cost planning of building projects. The program can be operated independently or in association with the 'ESTIMATE' program. All cost plan/cost checks are produced in full elemental format. The 'RATEBOOK' program is included in the 'COSTPLAN' package.

The layout of the Cost Plan program is such that all data held can be easily amended and improved as the design develops.

The program is structured to calculate and print data at 3 levels. The higher level is able to feed on the data of the next lower level. The 3 levels are:-(a) the full cost plan, (b) individual elements, and (c) unit rate level from the Ratebook program.

Data to produce the full cost plan may be entered by the user or drawn from existing cost plan files loaded by the Cost Plan or the Estimate program.

(entry continued)



MANAGEMENT

At Element level, separate files may be created for each individual element of the cost plan. Up to 33 such data files may be produced, 1 for each element of the BCIS standard format plus external works, abnormal works etc. The form of entry to the data files can vary from items of description, quantity and rate to notes with or without values. The new element total derived from the files may be moved into the Cost Plan to revise the total construction cost.

Rate files may be established for items of construction such as brick walling, windows, etc in the Ratebook program. Rates for those items would be produced from labour, material and plant data. Automatic transfer of the unit rates is possible into the Element files to revise the element total.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: Not significant

Disc storage: On hard disc

Copies sold UK: 65

World: 5

Price: £680

Training: If required

319

Software Name: DIGICO

Version: 2.4

First Published: 1990

Company: Construction Software Ltd (0181 660 2685)

Digico is a program for use with digitisers in the construction industry. It is memory resident and will permit the calculation of lengths, areas, volumes, etc., from scale drawings and the transfer of this data into other programs. The program is driven from a card menu secured to the digitiser board. Selection from the menu is made by placing the cursor over the menu or touching the boxes on the menu with the digitiser stylus. The program has interactive graphics. A full manual is provided with the program.

Use is recommended with a solid state digitiser such as 'Accugrid', 'TDS Numonics 2210', 'Kurta', 'GTCIO', etc. May be used with boards in size range of A2 up to A00.

The services carried out by the program include:- Number counting and calculation of point lengths, searate lengths, traced lengths, point areas and traced areas.

(entry continued)



MANAGEMENT

Measurement is scale adjusted from entered scales or from scales calculated from known drawing lengths, to adjust for drawing stretch or shrinkage. 'Undo' and 'Delete entry' facilities exist.

Input may be by metric or imperial measurements for output in metric or imperial. It is thus possible to enter data from an imperial scaled drawing as feet yet receive areas, etc., in metres.

The graphics screen may be annotated from record purposes and a full printout is provided of all the measurement undertaken in detail or by a graphics dump to Epson compatible printer. Files are established with measurement data for later recall if required.

Improvement of digitiser measurements may be made by further calculations prior to transfer of the results into other programs.

The program will sit alongside other programs for estimating, spreadsheets etc. On completion of data calculation, the required measurements will be automatically transferred into the users host program.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: Varies between versions - 250K bytes or 5K bytes with disc swap

Disc storage: Not significant on hard disc

Copies sold UK: 110

World: 10

Price: Depends on digitiser type and size - approx. £4,000 for complete package

Training: Available if required

320

Software Name: FCG ENTRY LEVEL SYSTEM

Version: 1.76

First Published: 1975

Company: FCG Computer Systems Ltd (01442 231166)

Offers full integrated management of accounts, job costing and payroll. Can link to the FCG Materials Control Package and to the B.O.Q. and Estimating System. Posting of invoices automatically updates all relevant ledgers and job costing records. Subcontractor ledger handles valuation reports, retentions and C704 returns. Reports include automatic payments remittance advices, cheque print, ageing of debtors, VAT analysis, profit and loss balance sheet etc. Job costing allows comparison of budgets and work in progress costs can be analysed by job or type. Labour costs from payroll can be automatically posted. Payroll

(entry continued)



MANAGEMENT

from conventional time sheets. PAYE, SSP, NWP, GMB, C714 tax calculations are done automatically. System set up according to National Working Rules for the Building Industry but variations can be easily accommodated.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 40M bytes

Copies sold UK: 1,000

World: n/a

Price: P.O.A.

Training: Available

321

Software Name: FCG PURCHASE ORDER PROCESSING

Version: 6.08

First Published: 1990

Company: FCG Computer Systems Ltd (01442 231166)

A fully integrated system enabling control over materials ordering and allowing accurate and immediate contract costing. Checks are carried out automatically to ensure that orders are placed, delivery dates met and invoices paid according to schedule. Full reporting facilities detailing a description of materials required, estimated or actual value and date required on site are available for all order stages including requisition, order, delivery and invoice. Materials ordered, invoiced or delivered can be posted to the job costing ledger. Reports can be obtained detailing where action is required. An automatic checking procedure picks up discrepancies between various stages of an order. Integrates with FCG Buildax Suite.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS, UNIX, Xenix

Memory: 2M bytes

Disc storage:

Copies sold UK: 100

World:

Price: P.O.A.

Training: On application



MANAGEMENT

322

Software Name: FOUNDATION 2000 ADVANCED

Version: Advanced

First Published: 1990

Company: Computer Foundations Ltd (01206 41455)

Financial management and costing system designed for the medium sized company. Advanced comprises the following

FINANCIAL MANAGEMENT SYSTEM: Sales ledger, sales applications, sales invoicing, purchase ledger, purchase applications/subcontractors ledger, nominal ledger, fixed assets.

COST MANAGEMENT SYSTEM: Cost/control management ledger, plant costing, stock control.

PURCHASE ORDER MANAGEMENT SYSTEM: Automatic re-ordering for stock, full price book interface. Discount management with delivery note and invoice matching, scheduled deliveries, best prices search facility, orders by contract.

WORKS ORDER MANAGEMENT SYSTEM: Call logging and progression to invoicing, engineer time and cost allocation to job, jobs costed within contracts, property register, maintenance diary management, schedule of rates management, multiple uplift charges

FULL PAYROLL SYSTEM plus House sales and Report writer.

Basis: Microfocus Cobol

Computers: IBM PC or compatible

Operating System(s): DOS, Novell, Windows

Memory: 640K bytes

Disc storage: From 40M bytes

Copies sold UK: 600

World: 600

Price: From £450 per module

Training: £330 per day on-site inclusive of expenses



MANAGEMENT

323

Software Name: FOUNDATION 2000 BASIC

Version: Basic

First Published: 1986

Company: Computer Foundations Ltd (01206 41455)

Financial management and costing software for the construction industry and specifically designed to grow with a company's needs. Basic is designed for the first time user and is simple to use yet sophisticated in operation offering up-to-the-minute management information in the form of screen reports and snap shots.

Basic is design for the smaller company and comprises: sales ledger, purchase ledger, nominal ledger, sales applications and retentions, invoicing, 714/715 handling and contract costing.

The basic system is fully compatible with other versions of FOUNDATION 2000 and both training and data translate directly to other versions. In addition the full cost of the software is credited against the new version, thus protecting the entire investment as the system grows.

Basis: Microfocus Cobol

Computers: IBM PC or compatible

Operating System(s): DOS, Novell, Windows

Memory: 640K bytes

Disc storage: From 40M bytes

Copies sold UK: 600

World: 600

Price: From £1,000 Basic

Training: £330 per day on-site inclusive of expenses

324

Software Name: FOUNDATION 2000 STANDARD

Version: Standard

First Published: 1988

Company: Computer Foundations Ltd (01206 41455)

Financial management and costing system designed for the small building company which can grow as the company grows. As with the Basic version, Standard is easy to use but has sophisticated management reporting facilities.

Standard consists of: full financial ledgers, sales and purchase applications, contract costing, full subcontractors ledger, payroll, stock and plant costing.

(entry continued)



MANAGEMENT

Standard is upgradeable to Advanced with full protection of investment in terms of training, data, and payments made for software.

Basis: Microfocus Cobol

Computers: IBM PC or compatible

Operating System(s): DOS, Novell, Windows

Memory: 640K bytes

Disc storage: From 40M bytes

Copies sold UK: 600

World: 600

Price: From £1,900

Training: £330 per day on-site inclusive of expenses

325

Software Name: MANAGEMENT OF CONTRACTORS

Version: 2

First Published: 1993

Company: British Steel, Open Learning Development Unit (01709 371234 ext.5550)

The course covers the main issues involved in the management of contractors, testing and reinforcing the trainee's knowledge of these matters. Users will be able to outline the respective responsibilities of client and contractor, taking account of both civil and criminal law, determine the degree of control that a client should retain over the activities of a contractor in different situations, distinguish between the implications for health and safety of labour only, supervised and set rate contracts and evaluate the health and safety related competence of a prospective contractor.

Basis:

Computers: IBM PC or compatible. EGA (640 x 200) resolution

Operating System(s): DOS 3.3 or greater

Memory: 512K bytes

Disc storage: 1100K bytes

Copies sold UK: 55

World:

Price: £245 + VAT

Training:



MANAGEMENT

326

Software Name: MARPSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

TIPDATA MARPSYS Material Requirements Planning module is fully integrated with Tiptdata Mecsys and Lecsys. It will analyse any tender to provide purchasing or planning breakdowns of materials and labour, time staged by event if required. Tiptdata Marpsys is suitable for all contractors already using Tiptdata Mecsys or Lecsys. The main features are:

Consolidation of materials, materials ordering, component analysis, cost breakdown/groups, event scheduling, order scheduling/cash flow, production planning, labour and sub-contract analysis.

Basis:

Computers: IBM PC or compatible, UNIX machines

Operating System(s): UNIX, MSDOS

Memory: 1M byte

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available

327

Software Name: MICABUILD

Version: II

First Published: 1987

Company: MICAbuild Ltd (01403 211877)

MICAbuild is an integrated contract costing and accounting system designed specifically for the building, construction and contracting industries.

Basis:

Computers: IBM, HP, ICL, ALTOS, NCR, CT, APRICOT and most IBM compatibles

Operating System(s): UNIX/Xenix/MSDOS/Novell Network

Memory: Depends on size of system

Disc storage: Depends on size of system

(entry continued)



MANAGEMENT

Copies sold UK: 300

World:

Price: £5,000+ (depends on user licence and hardware)

Training: Included/available

328

Software Name: MULTISOFT ACCOUNTS

Version: Prestige and Premier

First Published: 1984

Company: Estimation Ltd (0121 704 3221)

Modules available to handle every aspect of financial and business management for building services contractors. Ledgers may be purchased individually or fully integrated, and are designed to include contractor specific needs such as contract and job costing, applications, retentions, 714s and 715s etc. If required the system will link up with Bidmaster Estimating to offer a fully integrated business management tool.

Basis:

Computers: IBM PC or compatible, IBM 6150, IBM RS6000

Operating System(s): DOS, Xenix/UNIX, AIX

Memory: 500K bytes

Disc storage: Dependent on ledgers in use

Copies sold UK: 15,000

World: 20,000+

Price: £400+ per module

Training: Structured for each company

329

Software Name: PERTSYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

PERTSYS has been designed to provide integration between the detailed estimating function and any leading project management software. The main features are:

Project management and critical path analysis. Estimating linked into project management. Labour and materials scheduling. Cashflow projections.

Basis:

(entry continued)



MANAGEMENT

Computers: IBM PC or compatible, UNIX machines

Operating System(s): UNIX, MSDOS, BTOS, BOS

Memory: 640K bytes

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training: Support available

330

Software Name: PRESTIGE OR PREMIER PLUS

Version: 6.5

First Published: 1983

Company: Multisoft Financial Systems Ltd (01420 541456)

Comprehensive integrated contractors systems for single user PCs up to large Unix systems. The modules covered are costing, sub-contractors, contract sales, estimating, sales, purchase nominal, purchase ordering, plant hire, asset register, payroll, bank reconciliation. Estimates can be posted directly to costing systems, are multi-company and multi-currency with sophisticated password and security. Partial key allows access to system without prior knowledge of codes. Comprehensive enquiry and reporting facilities.

Basis:

Computers: Any running relevant operating systems

Operating System(s): MSDOS, Novell, Xenix, UNIX

Memory: Minimum 1M byte RAM

Disc storage: Minimum 80M bytes

Copies sold UK: 11,000+

World: 5,000+

Price: £500+ per module

Training: By supplier



MANAGEMENT

331

Software Name: PROJECT/2 SERIES X

Version: 1.3

First Published: 1992

Company: PSDI (UK) Ltd (01483 727000)

P/X is an advanced project management system, designed for organisations who wish to control multiple projects with full resource scheduling and cost management capability. It is a multi-user system capable of handling complex resourcing issues and of scheduling work automatically (including delay, stretch and split activity scheduling).

P/X has a genuinely easy to use look and feel built within a windows environment and works identically on all hardware platforms.

Basis:

Computers: IBM PC or compatible, PC-LAN, any UNIX, VAX

Operating System(s): DOS, MS-Windows, UNIX, VMS

Memory: 8M bytes

Disc storage: Flexible

Copies sold UK: 25

World: 300

Price: P.O.A.

Training: Full training both at PSDI offices and on clients' sites

332

Software Name: PSASYS

Version:

First Published:

Company: Engineering Technology (01332 799777)

Tracks an order through from greens to final 1827 accounts, enabling the user to capture and administer all the information on a contract from initial measure to final account. The main features are:

Preliminary percentages may be held against each contract. Monthly updates easily changed. Allows for daywork rates. Ability to include for non-rated items.

Basis:

Computers: IBM PC or compatible, UNIX machines

Operating System(s): UNIX, MSDOS, BOS, BTOS, AIX, VMS

(entry continued)



MANAGEMENT

Memory: 640K bytes

Disc storage:

Copies sold UK: **World:**

Price: P.O.A.

Training: Support available

333

Software Name: PTC & LAMPSYS

Version: **First Published:**

Company: Engineering Technology (01332 799777)

The post tender take-off system allows an engineer to work up his labour plan - zone by zone, service by service - recollate that job back to the tender format for comparison with the original estimate and then generate a fully detailed and priced material requisition to ensure the correct materials arrive on site - on time - therefore bringing tighter financial and labour controls into project management. LAMPSYS, fully integrated with PTC, will analyse any project to provide purchasing or planning breakdowns of material and labour. This can be time-staged by event if required.

Basis:

Computers: IBM PC or compatible, BTOS & UNIX machines

Operating System(s): UNIX, MSDOS, B20s

Memory: 1M byte

Disc storage:

Copies sold UK: **World:**

Price: P.O.A.

Training: Support available



334

Software Name: S-CHASE

Version: 1.03

First Published: 1990

Company: Hastam (0121 359 7548)

A more advanced version of C-CHASE program (see separate listing). Designed for specialist auditors. It has all the features of C-CHASE (see software number 344) plus:-

- Different question formats (Yes/No, %, etc.).
- Separate guidance for monitoring and auditing.
- Analysis by topic (e.g., all the questions which refer to training)
- Dated recommendations with overdue recommendations tracking
- Diary facilities for managing audit programmes.
- Unlimited number of questions on a checklist.
- Analysis by raw scores or percentage.

A range of checklists are available including

Construction health and safety.

Environment audit and BS 7750 audit.

CHASE III - based on the HSE's successful "Health and Safety Management" (HS(G)65).

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS 3.xx and greater

Memory: 640K bytes

Disc storage: Less than 1.5M bytes

Copies sold UK: > 50

World:

Price: From £540

Training: Half day recommended (£350)



MANAGEMENT

335

Software Name: TRASER 2+

Version:

First Published:1991

Company: Trade Service Information Ltd (01780 64331)

Traser 2+ is essentially a "price book on a computer" using the same core data as the "Luckins" price books. A choice of electrical and mechanical services materials databases are available each updated weekly by diskette received from TSI.

Traser 2+ allows users to enter details of suppliers, customers, preferential discounts and mark-ups and also contains a variety of take-off options and printout configurations enabling the system to be used in purchase order, procurement, daywork costing and invoicing functions.

Basis:

Computers: Various

Operating System(s): MSDOS V.4.1 or above, Novell networks

Memory: 2M bytes RAM minimum available

Disc storage: 40M bytes minimum available

Copies sold UK:

World:

Price: From £295 Licence plus £50 monthly subscription

Training: Details on request

336

Software Name: UNIFINE CONSTRUCTION INDUSTRY SOLUTION

Version: 5.9.08

First Published: 1990

Company: Avalon Solutions Ltd (0116 278 7150)

"UNIFINE" is an integrated management information system specifically designed and written for the Construction Industry. Developed in conjunction with leading construction companies, the system provides immediate access to critical information by the use of the very latest "open systems" computer software and hardware technology. Flexible and comprehensive transaction processing and enquiry routines provide for the control of applications, tax invoices, certificates, retentions, discounts, costs and estimates, as well as procedures for contract final accounting, cost of sales, work in progress and profitability enquiries at all levels. Financial accounting, payroll, cost ledger, sub-contractors accounts, Customs and Excise and Inland Revenue requirements are all dealt within a multi-company and multi-currency environment.

(entry continued)



MANAGEMENT

Basis: Written in the ACCELL "open" 4GL for Unify and any standard SQL database

Computers: UNIX (e.g., H.P., NCR) i.e., open systems

Operating System(s): UNIX and/or Microsoft Windows (in client/server mode)

Memory: Configuration dependent

Disc storage: Configuration dependent (manages large databases)

Copies sold UK: 73

World:

Price: P.O.A.

Training: Contact Avalon for details

337

Software Name: UNIFINE CONTRACT SERVICES SOLUTION

Version: 5.9.02

First Published: 1990

Company: Avalon Solutions Ltd (0116 278 7150)

"UNIFINE" is an integrated management information system specifically designed and written for the Contract Services Industry. Developed in conjunction with leading contracting companies, the system provides immediate access to critical information by the use of the very latest "open systems" computer software and hardware technology. Flexible and comprehensive modules for financial accounting, payroll, cost ledger, sub-contractors accounts, Customs and Excise and Inland Revenue requirements, operating in a multi-company and multi-currency environment, provides exactly the degree of control that is necessary to run a successful enterprise. Profitability analyses, cost/estimate enquiries and full transaction details can be viewed on screen, at multiple levels, at any time.

Basis: Written in the ACCELL "open" 4GL for Unify and any standard SQL database

Computers: UNIX (e.g., H.P., NCR) i.e., open systems

Operating System(s): UNIX and/or Microsoft Windows (in client/server mode)

Memory: Configuration dependent

Disc storage: Configuration dependent (manages large databases)

Copies sold UK: 59

World:

Price: Contact Avalon for details

Training: P.O.A.



MANAGEMENT

338

Software Name: VARIATIONS AND VALUATIONS SYSTEM

Version: **First Published:** 1993

Company: Ensign Advanced Systems Ltd (01162 538820)

The object of the system is to enable the Contract Engineer, Quantity Surveyor, Site Supervisor, Project Manager or whoever is responsible for evaluating work completed on a project against the original tender, to complete the task in the shortest time with the greatest accuracy and credibility.

Cashflow is often adversely affected by variations not being produced until final account presentation, this means that the contractor funds the variation and can lead to disputes with the client over claims for variations that may be months in the past and that are not adequately documented at the time.

The overall object of the Ensign System is to produce a solution that will enable the contractor to apply for variations quickly, provide documentary evidence to avoid disputed claims and to keep a track of all variations on behalf of his client to be attached in summary form with the valuation. The valuation will be constructed as a progressive percentage of work completed by tender summary plus variations to date plus unfixed materials on site and show previous amounts applied for and net down to this application value.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



339

Software Name: WINBUILD

Version: V3.09

First Published: 1988

Company: FCG Computer Systems Ltd (01442 231166)

WinBuild, is the MS Windows accounting and costing control system specifically developed for construction companies. All entries into the purchase or sales ledgers automatically updates all other relevant ledgers ensuring that costs and budgets are always up to date for comparison purposes. A flexible report generator allows customised and standard report facilities. All construction legislation is handled within the system.

Basis:

Computers: IBM PC or compatible

Operating System(s): MS Windows

Memory: 2M bytes

Disc storage: 100M bytes

Copies sold UK: 300

World:

Price: £2,450

Training: Available



PIPE INSULATION

340

Software Name: COLDPIPE

Version: 1

First Published: 1992

Company: Diamant Technical Software (0161 962 2708)

The mathematics included in BS 5422:1990 is used to determine the minimum insulation thickness, which has to be applied to pipelines and vessels carrying refrigerated fluids, to prevent condensation taking place on the insulation surfaces.

Basis: BS 5422:1990

Computers: All modern computers including lap-tops

Operating System(s): MSDOS 3-21 and above

Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 20

World: 30

Price: £60

Training: By phone or fax if needed

341

Software Name: ECON

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Program to compute the most economic thickness of pipe insulation based on energy costs of pipe heat losses, the cost of thermal insulation and the likely payback period.

Basis: Basic heat transfer equations.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



PIPE INSULATION

342

Software Name: EIS

Version: 1

First Published:

Company: Comline Ltd (01462 453211)

Aids selection of the insulation thickness that provides the lowest total installation and operating costs over the system life for both piping and equipment. The program comes with a database of man hours and material costs, which can be modified for particular sites or geographical areas. Determines thermal losses without having to input the financial entries so that the heat loss figures without regard to cost can be reviewed. Uses SI and US units.

Basis:

Computers: PC

Operating System(s): DOS

Memory: 256K bytes RAM

Disc storage: 1M byte

Copies sold UK:

World:

Price: £405

Training: No

343

Software Name: INDIN

Version: 1

First Published: 1990

Company: Diamant Technical Software (0161 962 2708)

This program is designed to determine the optimum thickness of thermal insulation to be applied using the correct MacMillan equations for plane areas and for pipelines, as applicable. It consists of four different sections, which are:

- a) A wall or rectangular tank (free standing or elevated)
- b) A spherical tank
- c) A cylindrical tank (free standing or elevated)
- d) A pipeline

(entry continued)



PIPE INSULATION

The programs make allowances, as to whether the objects are positioned outside, in which case the Langmuir equation is applied, or whether the object is placed indoors, in which case the Heilmann equation is used. The programs are equally capable of dealing with refrigerated media as they are with heated fluids. The package works in either SI metric units or English Imperial units and is so formulated, that individual variables can be altered when carrying out repeat calculations.

Basis: Mathematics extracted from: William H. McAdams Heat Transmission and MacMillan Equations (standard engineering equations)

Computers: IBM PC or compatible including lap-tops

Operating System(s): MSDOS 3-21

Memory: 500K bytes

Disc storage: 80K bytes

Copies sold UK: 30

World: 30

Price: £60

Training: By phone or fax if needed

344

Software Name: PIPELINE

Version: 4

First Published: 1982

Company: Diamant Technical Software (0161 962 2708)

Deals with either hot water or steam pipelines. Evaluates loss of heat from pipelines when these are insulated in various ways and run either vertical or horizontal. Program gives payback period when additional insulation is applied using cost of heat, cost of insulation material, k-value, and thickness.

Basis: William H. MacAdams Heat Transmission. Data from Handbook of Chemistry and Physics

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 80K bytes

Copies sold UK: 380

World: 400

Price: £60

Training: By phone or fax if needed



PIPE INSULATION

345

Software Name: QLAG

Version:

First Published: 1988

Company: Thermeng Services (01274 498313)

Calculates the heat flow, loss or gain, through the insulated walls of pipes and vessels. Heat transfer is by radiation and natural convection with allowance for windage. Configurations available are - horizontal and vertical cylinders, spheres, vertical disk, vertical plate, horizontal plate, hot face up or cold face down, and horizontal plate, hot face down or cold face up.

Basis: Newton-Raphson convergence

Computers: IBM PC or compatible

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 65K bytes

Copies sold UK:

World:

Price: £180 + VAT

Training: None necessary



346

Software Name: BURIED

Version: 2

First Published: 1983

Company: Diamant Technical Software (0161 962 2708)

Concerned with buried single and twin pipelines used in district and group heating networks. Heat losses from such systems are evaluated according to techniques developed in Sweden and West Germany. Program can be used for analysis of existing networks.

Basis: Martin Zeitler Fernwarme International 9 (1980) 3. S. Carlsson and I. Eneborg
Heat losses from buried and culvert pipelines

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 80K bytes

Copies sold UK: 200

World: 220

Price: £60

Training: By phone or fax if needed

347

Software Name: CADLINK H&C

Version: 7.15

First Published:

Company: Cymap Ltd (01179 299332)

In order to calculate pipework to hot and cold water services, the engineer places outlets such as baths and showers on the drawing, then draws in the pipework to supply them. Circulating hot water returns may be entered if required. The program then calculates pipe sizes, with flows, pressure drops, and velocities throughout the system. Schedules of pipes can be produced, with bills of quantity if required.

Basis: CIBSE Guide

Computers: Microcomputer

Operating System(s): Windows

Memory: 8M bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

(entry continued)



PIPE SIZING AND ANALYSIS

Price: P.O.A.

Training:

348

Software Name: CIRC

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Used with the PIPESIZE program, this package permits the inclusion of a circulating system on a hot water circuit, with towel rails if included. Pump duty, all pipework sizes, and pressure drops along each section of pipe are given, together with balancing pressures at any regulating valves specified by the designer of the system.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

349

Software Name: CONDUIT

Version: 2

First Published: 1983

Company: Diamant Technical Software (0161 962 2708)

Heat losses from underground district and group heating mains are worked out where twin (flow and return) mains are positioned in either rectangular cross section or circular conduits or surrounded by loose fill insulating materials in earth trenches.

Basis: Martin Zeitler Fernwarme International 9 (1980) 3. S. Carlsson and I. Eneborg
Heat losses from buried and culverted pipelines

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

(entry continued)



PIPE SIZING AND ANALYSIS

Memory: 500K bytes

Disc storage: 84K bytes

Copies sold UK: 200

World: 220

Price: £60

Training: By phone or fax if needed

350

Software Name: CWS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Program to size any water pipe network supplied from a single tank, with no closed loops of pipework.

Basis: Basic fluids equations.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

351

Software Name: EMIT

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Program to calculate the amount of heat emitted from bare or insulated pipework. The program uses pipe data stored in a separate file.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

(entry continued)



PIPE SIZING AND ANALYSIS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

352

Software Name: EXPIPE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes friction losses in an existing pipe system. The program uses pipe data stored in a separate file.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

353

Software Name: GAS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Gas pipe sizing - natural and town gas, propane, butane and medical gases.

Basis: Colebrooke White equation.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

(entry continued)



PIPE SIZING AND ANALYSIS

Disc storage: Part of complete program suite requiring **minimum** 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

354

Software Name: GASPIPE

Version: 3

First Published: 1986

Company: Diamant Technical Software (0161 962 2708)

Uses the various equations for compressible fluids to evaluate the design characteristics of pipelines carrying gaseous media, from air and various types of fuel gases to a wide variety of other gases such as nitrogen, chlorine, the freons, etc. The program is particularly useful for assessing steam lines. Uses variables such as gas throughput, material, pressure, cost etc. to work out design characteristics for both circular and rectangular section ducts.

Basis: Standard gas flow equations. Rumford, Chemical engineering operations. Perry, Handbook of chemical engineering.

Computers: Microcomputers including lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 68K bytes

Copies sold UK: 250

World: 270

Price: £60

Training: By phone or fax if needed

355

Software Name: GRAVITY PRIMARIES

Version:

First Published: 1987

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

A short program that sizes gravity primaries between the boiler and the hot water storage cylinder. The procedures take into account a) cylinder content reheat time required, b) circulation height, primary design temperatures. Piping may be either copper or steel. Where applicable the primary return size will be given as one size smaller than the flow.

(entry continued)



PIPE SIZING AND ANALYSIS

Basis:

Computers: IBM PC or compatible, Amstrad PCW word processors

Operating System(s): MSDOS

Memory: 20K bytes

Disc storage:

Copies sold UK: 400

World: 450

Price: £35

Training: Full documentation supplied

356

Software Name: HPIPE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Computes friction losses for the index circuit of a two pipe heating system. The program uses pipe data stored on a separate file.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

357

Software Name: HWS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Hot water service pipe sizing for a complete network.

Basis: Basic fluids equations.

(entry continued)



PIPE SIZING AND ANALYSIS

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

358

Software Name: INPLANT

Version: 3.0

First Published: 1989

Company: SimSci International Limited (0161 429 6744)

INPLANT simulates steady-state, multiphase fluid flow giving an insight into piping systems. The program combines proven multiphase fluid flow technology simulation with a physical properties database. It simulates the most complex piping systems. The program can design new systems for maximum efficiency in addition to monitoring existing systems.

The program can be used for: Duct sizing and analysis, Heating design, Heat gains, Integrated CAD, Pipe insulation, Pipe sizing and analysis and Plant and equipment.

Basis:

Computers: PC, Mainframe, UNIX

Operating System(s): HP9000, IBMOS-MVS, IBM VM-CMS, Sun Solaris, VAX, VMS, PC Windows

Memory: 5M bytes

Disc storage: 22M bytes

Copies sold UK: 50

World: 000s

Price: P.O.A.

Training: Regular courses run in the UK. P.O.A.



359

Software Name: LOOP

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Used with the pumpsizer program, LOOP allows single pipe loops in heating systems to be fully analysed. Heaters may be connected in standard ways, or unusual types of connection may be described in detail. The effective temperature drop and other details are given for each heater on the loop.

Basis:

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

360

Software Name: LPHW

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Package of programs for sizing a complete 2 pipe heating system network. The program checks and stores data on file.

Basis: CIBSE Guide Section C4.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



PIPE SIZING AND ANALYSIS

361

Software Name: LUBE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Pipe sizing for industrial fluid lubricant/coolant systems.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

362

Software Name: ME PIPED SERVICES

Version: 1.0

First Published: 1995

Company: Hevacomp Ltd (01142 556680)

Layout, sizing and drawing of hot and cold water services systems within AutoCAD environment.

Basis: BSI and CIBSE

Computers: IBM PC or compatible

Operating System(s): MSDOS/Windows

Memory: 12M bytes

Disc storage: Part of complete program suite requiring minimum 25M bytes

Copies sold UK:

World:

Price: P.O.A.

Training: Available on all programs



363

Software Name: NGAS

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Analyses and sizes any complete network of gas pipes (excluding loops and ring mains).

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

364

Software Name: OILPIPE

Version: 2

First Published: 1986

Company: Diamant Technical Software (0161 962 2708)

Pressure losses, head losses and pump loads needed to transmit any fluid such as oil, petrol, etc., through a circular cross section pipeline made from a variety of materials. Program allows for height difference, pipe fitting losses and pump efficiency.

Basis: Equations used: Hardy and Cottingham, Swindell's, Von Karman rough and smooth, Colburn. Data: Valve Manufacturer's Handbook. Handbook of Chemistry and Physics

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 200

World: 220

Price: £60

Training: By phone or fax if needed



PIPE SIZING AND ANALYSIS

365

Software Name: ORIFICE

Version: **First Published:** 1989

Company: Thermeng Services (01274 498313)

ORIFICE calculates the diameter of the orifice plate required to monitor the flow rate of liquids or gases in pipes using any of the three types of orifice plate - square, conical or quarter-circle entrance.

Basis: Standards ISO 5167-1:1991 and BS 1042:1.1:1992

Computers: IBM PC or compatible

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 54K bytes

Copies sold UK: **World:**

Price: £65 + VAT

Training: None necessary

366

Software Name: PDAPIPES

Version: **First Published:** 1988

Company: Thermeng Services (01274 498313)

Calculates the pressure drop and theoretical power requirement for the incompressible, isothermal flow of air through pipes and fittings. No physical properties are required.

Basis: Hagen-Poiseuille equation and Colebrooke & White friction factors

Computers: IBM PC or compatible

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 60K bytes

Copies sold UK: **World:**

Price: £115 + VAT

Training: None necessary



PIPE SIZING AND ANALYSIS

367

Software Name: PDPIPES

Version:

First Published: 1990

Company: Thermeng Services (01274 498313)

Calculates the pressure drop and theoretical power requirement for the incompressible, isothermal flow of any fluid, Newtonian or non-Newtonian, through pipes and fittings.

Basis: Hagen Poiseuille equation and Colebrooke & White friction factor

Computers: IBM PC or compatible

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 63K bytes

Copies sold UK:

World:

Price: £95 + VAT

Training: None necessary

368

Software Name: PDSSTP

Version:

First Published: 1989

Company: Thermeng Services (01274 498313)

Calculates the pressure drop and theoretical power requirement for the incompressible, isothermal flow of saturated or superheated steam through pipes and fittings. No physical properties are required.

Basis: Hagen-Poiseuille equation and Colebrook & White friction factors

Computers: IBM PC or compatible

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 64K bytes

Copies sold UK:

World:

Price: £115 + VAT

Training: None necessary



PIPE SIZING AND ANALYSIS

371

Software Name: PIPECALC

Version: 3

First Published:

Company: Comline Ltd (01462 453211)

PIPECALC analyses liquid, gas gathering, and gas distribution system networks and compressors. The network programs calculate pipe lengths individually for networks of multiple pipe lengths. It solves flow rate and pressure problems, calculates pressure needs, pipe sizes and line lengths. Includes the Beggs-Brill Multiphase Flow model which calculates mixture velocity, liquid holdup, and two-phase density, in addition to Reynolds number. Supports colour displays, has context-sensitive help, pop-up menus, data validation, and allows files to be saved and retrieved. Users can work with a choice of SI or US units. PIPECALC calculations include: Generalised Hazen-Williams fluid flow model, Oliphant fluid flow model, AGA fluid flow model, Weymouth fluid flow model, Colebrook-White steady state flow model, Pipeline network models, Temperature profile of buried gas pipelines, Pipeline hydrostatic testing model, AGA orifice metering model, Pipeline blowdown model, Liquid pipeline surge pressure, and Compressor design and analysis.

Basis:

Computers: PC

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 2M bytes

Copies sold UK:

World:

Price: £660

Training:

372

Software Name: PIPESCH

Version:

First Published: 1989

Company: Thermeng Services (01274 498313)

Selects the approximate economic pipe size for turbulent flow of liquids and gases from a set of standard pipe sizes according to one of eight criteria. In each case, the fluid density is required, in one case (user-defined) the absolute viscosity may be required.

Basis:

Computers: IBM PC or compatible

(entry continued)



PIPE SIZING AND ANALYSIS

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 80K bytes

Copies sold UK:

World:

Price: £200 + VAT

Training: None necessary

373

Software Name: PIPESIZE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Calculates the pipe sizes in a hot or cold water system, either gravity or pressurised with diversity of usage in the summated circuit flow using the CIBSE Demand Units and pipe data. If the tank position or pump head is variable, the program may be used to size the distribution pipe-work on the basis of its carrying capacity and indicate the head required for the index circuit with the excess heads and at all the other loads given, or the program can be used to balance the system by increasing or reducing pipe sizes. Steam and gas pipes may be sized similarly if the appropriate type of pipe are entered into the database (six types already included).

Basis: CIBSE Guide Section C4 1977.

Computers: Microcomputer

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



374

Software Name: PIPESIZE

Version: 3

First Published: 1986

Company: Diamant Technical Software (0161 962 2708)

Program can be applied to either pipelines carrying water at any specified temperature or pipes filled with other fluids. User specifies the fluid head or pump pressure available and gives details regarding the overall length of the pipeline, level variations, valves and fittings, piping material and required volume flow rate. Uses Von Karman smooth and rough pipe equations. Chezy's equation, Swindell's equation, Hardy and Cottingham equation, Standard Colburn equation of fluid flow which allows calculation of the pipeline diameter with the help of the Fanning Friction Factor (from the Reynolds number).

Basis: Equations used: Hardy and Cottingham, Swindell's, Von Karman, Colburn. Data: Valve Manufacturer's Handbook

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 68K bytes

Copies sold UK: 200

World: 220

Price: £60

Training: By phone or fax if needed

375

Software Name: PISCES

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

PISCES copes with closed loop heating and cooling systems. The pipe circuits can be single pipe, two pipe or reverse return or any combination of these circuit types. The program not only deals with heating and cooling systems but combined heating and cooling systems such as Versatemp. The pipes are sized on a combination of velocity limits and pressure loss gradients which the user can define. The program contains ten standard pipe size ranges including steel, cast iron, UPVC and copper pipework. There is also inbuilt K-factor information for bends and tees.

(entry continued)



PIPE SIZING AND ANALYSIS

PISCES allows the user to fix any pipe size and if required all the emitter flow rates. The program accounts for temperature pick up/loss through the system taking into account the different pipe insulation and surrounding air temperatures. When each route through the system has been analysed and the index path found the non-index routes can be resized to take out any excess pressure if required before selecting balancing valves.

The program provides output for each section of pipe, pipe size, mass flow rate, velocity, pipe and valve pressure drops, temperatures, heat emission (or extraction).

The program provides output for the complete system, boiler or chiller output, circuit resistance, mass flow rate, water pump power, identification of index run, water content of pipework, length of each pipe size, amount of lagging for each pipe size, an optional list of all fittings.

Basis: CIBSE Guide Section C4 1986.

Computers: IBM 386/486 PC or compatible

Operating System(s): MSDOS

Memory: 4M bytes RAM and 4M bytes paging memory

Disc storage: 1.5M bytes

Copies sold UK:

World:

Price: P.O.A.

Training:

376

Software Name: PSA5 - PIPE STRESS ANALYSIS

Version: 5.58

First Published: 1963

Company: Whessoe Computing Systems Ltd (01325 381818)

Provides the piping engineer with the means to stress analyse his designs as subjected to thermal, gravitational, wind, shock and seismic loads. Customised on-line reports highlight areas where stresses exceed allowables for all major US and European codes of practice, including BS 7159, BS 806, D1101, B 31.1, B 31.3, ASME III Classes 1, 2 and 3. Interactive colour graphical input facilities make for ease of input and allow design changes to be quickly incorporated and the effects on stress levels readily assessed using on-line interrogation with isometrics being used as an index into the stress database. Flexible reporting facilities allow isometrics and tabular results to be combined and customised for a particular client.

Basis: BS806, BS7159, ASME III, ANSI B31.1, ANSI B31.3

Computers: IBM PC or compatible, VAX

(entry continued)



PIPE SIZING AND ANALYSIS

Operating System(s): MSDOS, VMS

Memory: 640K bytes

Disc storage: 5M bytes

Copies sold UK: 200

World: 250

Price: £8,000+

Training: In-house and/or public courses

377

Software Name: PUMPSIZE

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Heating pipe sizing for the hot water system using any type of heaters in any configuration of flow and return pipes. Balancing is achieved by regulating valves. Proportioning of heat losses is automatically carried out. Pipes can be pre-fixed in size and heaters with different internal resistances can be included. Standard data for six pipe types in the CIBSE Guide, but any type of pipe can be used. In addition the system can be balanced by reducing the pipe sizes on non-index circuits.

Basis: CIBSE Guide Section C4 1977.

Computers: Microcomputers

Operating System(s): MSDOS, PC DOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



PIPE SIZING AND ANALYSIS

378

Software Name: QUANTUM LINE

Version: 1.0

First Published: 1994

Company: Business Edge Ltd (01705 599000)

Originally written for supermarket refrigeration applications, Quantum Line is also suited to close control and air conditioning applications.

Quantum Line contains data for many refrigerants including:- R11, R12, R13, R13B1, R14, R22, R113, R114, R502, R134a, R23, KLEA60, KLEA61, KLEA66, HP62, HP80, HP81, MP39, MP52, MP66 & R717.

The software incorporates both copper and steel standard pipe sizes up to 12" diameter and calculates pressure drop, fluid velocity system penalties for:- suction line, discharge, delivery, liquid drain and liquid lines, double pipe risers and all system fittings. Q-Line will run in metric or Imperial units.

Q-Line can be applied to condensing units, compressor/receiver sets, parallel systems and ring systems and will also calculate refrigerant weight in lines, liquid vessel volumes.

Q-Line will also display full thermodynamic properties of all refrigerants across any temperature range and also allows any two refrigerants to be compared on screen.

Q-Line provides the key data but leaves the final decision of line sizing to the engineer to allow maximum flexibility of use.

Demo disk available.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 10M bytes

Copies sold UK:

World:

Price: £324

Training: Yes



PIPE SIZING AND ANALYSIS

379

Software Name: REVERSE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Sizes any pipe system in which the flow and return pipe systems follow different routes (i.e., a reverse returns system).

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

380

Software Name: SINGLE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Pipe sizing for single pipe heating system.

Basis: CIBSE Guide Section C4.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



381

Software Name: SPIPE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Sizes branches from a two pipe heating system. Used in conjunction with HPIPE. The program uses pipe data stored in a separate file.

Basis: CIBSE Guide Section C4

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

382

Software Name: SPIRACALC

Version:

First Published: 1989

Company: Spirax Sarco (01242 521361)

Spiracalc carries out steam based technical calculations. The program allows the user to view saturated steam tables, and to calculate heat losses, steam coil sizing, pipe sizing, steam sparge pipe sizing, steam consumption/condensation rates, humidification loads, valve flow coefficients (Kv), and flash steam quantities.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS version 3.3 or higher

Memory: Less than 200K bytes

Disc storage:

Copies sold UK: 11

World: 20

Price: £75

Training:



383

Software Name: STEAM

Version: 2

First Published: 1982

Company: Diamant Technical Software (0161 962 2708)

To determine how much heat can be obtained from condensing steam when details of condensate and steam temperature, pressure and flow rate are known. Both saturated and superheated steam can be considered. Program uses inbuilt steam tables.

Basis: International Steam Tables examined by regression analysis techniques

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 58K bytes

Copies sold UK: 300

World: 330

Price: £60

Training: By phone or fax if needed

384

Software Name: STEAM

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Sizes pipes for a steam heating system on a section by section basis.

Basis: CIBSE Guide.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



PIPE SIZING AND ANALYSIS

385

Software Name: STEAMTRACE

Version: **First Published:** 1989

Company: Spirax Sarco (01242 521361)

Steamtrace provides a means to size steam tracing lines without the need for tables, charts and other support documentation.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS version 3.3 or higher

Memory: Less than 200K bytes

Disc storage:

Copies sold UK: **World:** 10

Price: £75

Training:

386

Software Name: TWO PIPE HEATING

Version: **First Published:** 1987

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

The program sizes all circulation pipework on two pipe installations ranging from domestic (up to approx. 30kW) to smaller commercial/industrial contracts (up to approx. 52kW). It allows for the use of copper or steel piping and accommodates circuit layouts up to 'level 3' (multiple radiator branches themselves serving multiple radiator branches).

The program also incorporates costs files to estimate total contract figure which can be easily updated to comply with changing costs.

Basis:

Computers: IBM PC or compatible, Amstrad PCW word processors

Operating System(s): MSDOS

Memory: 100K bytes

Disc storage:

Copies sold UK: 450 **World:** 500

(entry continued)



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Price: £75

Training: Full documentation supplied

387

Software Name: WATER PIPING DESIGN PROGRAM

Version: V3.02

First Published:

Company: Carrier Air Conditioning Ltd (0181 991 2000)

The Water Piping Design Program is a microcomputer based program that determines pipe sizes and calculates pressure losses of a piping system. The program is menu driven, has a high degree of flexibility, and is easy to use. It gives the user the ability to investigate alternative designs at any time. The program eliminates oversizing of pipes, while aiding development of a better balanced and more economical piping system.

Additional features include the ability to analyse open or closed systems for steel, copper or plastic pipe and to compile a user defined customised material database.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: Minimum of 1M byte

Copies sold UK: Approx. 250

World: Over 10,000

Price: £200 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available free of charge to all licensed users.

388

Software Name: WATER SERVICES

Version:

First Published: 1989

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

A program for sizing and costing water services including cold water rising mains and downflow distribution and hot water secondary distribution services in buildings. It allows for use of copper or galvanised pipework up to 62mm using capillary, compression or screwed joints. Output gives the description of each section with pipe size, headloss mm w.g. and probable simultaneous demand together with the quantities of fittings required.

(entry continued)



PIPE SIZING AND ANALYSIS

Basis:

Computers: IBM PC or compatible

Operating System(s):

Memory:

Disc storage:

Copies sold UK: 100

World: 110

Price: £240

Training: Full documentation supplied

389

Software Name: WATERORF

Version:

First Published: 1989

Company: Thermeng Services (01274 498313)

WATERORF calculates the diameter of the orifice plate required to monitor the flow rate of water in pipes using any of the three types of orifice plate - square, conical, quadrant entrance. No physical properties are required.

Basis: Standards ISO 5167-1:1991/BS 1042:1.1:1992

Computers: IBM PC or compatible

Operating System(s): DOS 2.1 or higher

Memory:

Disc storage: 57K bytes

Copies sold UK:

World:

Price: £80 + VAT

Training: None necessary



PIPE SIZING AND ANALYSIS

390

Software Name: WATERPIP(E)

Version: 3

First Published: 1983

Company: Diamant Technical Software (0161 962 2708)

Used to determine pressure losses, head-losses, and pump loads needed to transmit water at varying loads and speeds through circular pipes of varying materials. Program allows for height difference, pipe fitting losses and pump efficiency.

Basis: Standard flow of fluids equations: Colburn, Von Karman, Bernoulli, Other Data from Valve Manufacturer's Handbook, Perry Chemical Engineer's Handbook, Handbook of Chemistry and Physics

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 74K bytes

Copies sold UK: 300

World: 320

Price: £60

Training: By phone or fax if needed



PLANT AND EQUIPMENT

391

Software Name: BLADE SECTION ANALYSIS PROGRAM

Version: MAY-90

First Published: 1990

Company: National Engineering Laboratory (013552 72412)

This program is a tool for use in design and analysis of axial, mixed and centrifugal flow pumps and fans. It is an analysis method for calculating the flow on an elemental stream surface of revolution intersecting a single blade row. Such a surface is defined by a meridional flow solution such as the Through-flow Analysis Program. The calculation uses a thin aerofoil potential flow method and a boundary layer calculation in an iterative loop, and can predict the flow rate at which the blade section will stall.

The program is driven using a simple command language and produces some graphical output.

Basis: Developed from the work of Prof. J.W. Raily of Birmingham University and the theory is described in NEL Reports.

Computers: IBM PC or compatible, DEC VAX

Operating System(s): MSDOS, DEC VMS

Memory: 175K bytes

Disc storage: 360K bytes

Copies sold UK: 0

World: 1

Price: P.O.A.

Training: By arrangement

392

Software Name: BLADE SECTION DESIGN PROGRAM

Version: 15-MAY-92

First Published: 1987

Company: National Engineering Laboratory (013552 72412)

This program is a tool for use in design of axial, mixed and centrifugal flow pumps and fans. It is a blade-to-blade program which uses an incompressible potential flow method for the design of sections of a pump or fan blade row on stream surfaces which are surfaces of revolution. The thickness of these surfaces need not be constant.

(entry continued)



PLANT AND EQUIPMENT

The program takes as input the geometry of the stream surfaces - which are normally generated by a meridional flow calculation, the speed of the blade row and the required whirl velocity at inlet and outlet. The input data also allow the user to control the blade thickness distribution and the distribution of the blade loading between the leading edge and the trailing edges.

The outcome from the program comprises the blade section coordinates, in camber line and thickness form, and the relative velocity of the fluid over the section surfaces. Two other programs (included with this program) are used to draw the blade sections, plot the velocity distributions and calculate the blade surface coordinates.

Basis: Developed from the work of Prof. J.W. Raily of Birmingham University and the theory is described in NEL Reports.

Computers: IBM PC or compatible, DEC VAX

Operating System(s): MSDOS, DEC VMS

Memory: 90K bytes

Disc storage: 360K bytes

Copies sold UK: 1

World: 7

Price: P.O.A.

Training: By arrangement

393

Software Name: CENTRIFUGAL ROTOR MEAN-LINE ANALYSIS PROGRAM

Version: 29-MAR-90

First Published: 1985

Company: National Engineering Laboratory (013552 72412)

This program is a tool for use in the first stage of the design or analysis of shrouded, centrifugal flow pump and fan rotors. It uses a very simple description of the rotor geometry and predicts the performance over a wide range of flow rates including stalled flow. Disc friction and leakage losses are calculated.

The program is driven using a simple command language and produces some graphical output.

Basis: The mean-line theory is presented in the User's Manual

Computers: IBM PC or compatible, DEC VAX

Operating System(s): MSDOS, DEC VMS

Memory: 95K bytes

(entry continued)



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Disc storage: 360K bytes

Copies sold UK: 4

World: 8

Price: P.O.A.

Training: By arrangement

394

Software Name: CHIM

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Sizes chimneys using Clean Air Act data and by friction loss. Also computes heat losses from chimney and minimum flue gas temperature to assess condensation risk.

Basis: Clean Air Act Data and Friction Loss Equations

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

395

Software Name: COAL

Version: 3

First Published: 1984

Company: Diamant Technical Software (0161 962 2708)

If the approximate analysis of the coal used is known, it is entered. If not, the solid fuel type in use is entered and the program assesses the approximate analysis on a dry ash free basis. It also gives the gross and nett calorific value of the fuel. It can also calculate the theoretical and actual air needed for combustion and the mass and volume of flue gas evolved. A range of chimney designs may be suggested giving minimum height to get the required draught without mechanical means. Also calculated are flue gas dewpoint, hourly production of flyash and clinker, hourly amounts of sulphur dioxide emitted and the percentage of the heat content lost as sensible and latent heat with the flue gases.

(entry continued)



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Basis: Efficient Use of Energy, Data from British Coal. Maths: Brame and King, Solid Fuels, publications

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 72K bytes

Copies sold UK: 240

World: 260

Price: £60

Training: By phone or fax if needed

396

Software Name: COIL

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Systems which incorporate heater or cooler batteries, for which a particular flow rate is used to ensure the correct output, may be analysed using the COIL program. The pipes in the system are sized, and balancing is achieved by regulating valves, or by reducing pipe sizes on non-index circuits. The resulting balancing pressures at the outlets are given, and temperatures are calculated at each junction and each load.

Basis: CIBSE

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



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397

Software Name: EXPERT SYSTEM FOR PUMPS

Version: **First Published:** 1993

Company: B W Associates (0191 251 4735 or 0831 532491)

The main objective of the system is to provide manufacturers, distributors and customers, with a decision making tool (an Expert System) that contains all the knowledge and rules to specify a pump for a chosen application. The user is taken through a logical sequence of questions and, depending on the answers, through other questions based on the rules built into the system. The systems has been extended to include product catalogues

Basis:

Computers: 386/486 Pentium PCs

Operating System(s): DOS and Windows

Memory: Minimum 1M byte

Disc storage: Minimum 10M bytes

Copies sold UK: 3 **World:**

Price: From £495

Training: Yes

398

Software Name: GAS

Version: 2 **First Published:** 1984

Company: Diamant Technical Software (0161 962 2708)

Contains details of up to 19 fuel gases or user can enter details of a specific gas. From data given, program can calculate gross and net calorific values, Weaver flame, speed, average density of gas at NTP, Wobbe Index. If conditions are quoted, then program can calculate volume flow rate of gas, theoretical and actual air volumes needed for combustion, volumes of dry and wet flue gas evolved, extra heat given off if water vapour in flue gas is condensed.

Basis: Technical Data - Handbook of Chemistry and Physics. Equations - S. Glasstone Textbook of Physical Chemistry. Efficient Use of Energy

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

(entry continued)



PLANT AND EQUIPMENT

Disc storage: 68K bytes

Copies sold UK: 300

World: 320

Price: £60

Training: By phone or fax if needed

399

Software Name: HEATPUMP

Version: 3

First Published: 1984

Company: Diamant Technical Software (0161 962 2708)

Program examines both mechanical and absorption type heat pumps and calculates both the theoretical and practical coefficients of performance. It then assesses the economic viability of installing the heat pump system equating cash savings on energy with annuity costs of the system. It tells the user the payback period if the system is viable.

Basis: D. A. Reay, et al., Heat Pumps, US Dept. of Energy, Heat Pump Technology

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 85K bytes

Copies sold UK: 300

World: 320

Price: £60

Training: By phone or fax if needed

400

Software Name: HEATTRAN

Version: 3

First Published: 1981

Company: Diamant Technical Software (0161 962 2708)

Determines the rate of heat supply to either flowing water or flowing air from a heated surface. Nature of surface, whether tubular, horizontal or vertical, is taken into account as well as velocity of the medium being heated. Program gives rate of heat transfer and the time taken for the medium to be heated.

Basis: William H. McAdams, Heat Transmission

(entry continued)



PLANT AND EQUIPMENT

Computers: Microcomputers and lap-tops

Operating System(s): BASICA, MSDOS

Memory: 500K bytes

Disc storage: 68K bytes

Copies sold UK: 250

World: 280

Price: £60

Training: By phone or fax if needed

401

Software Name: HED5 - HEAT EXCHANGER DESIGN

Version: 3.89

First Published: 1990

Company: Whessoe Computing Systems Ltd (01325 381818)

Performs the mechanical design of heat exchanger tubesheets to BS 5500, TEMA R, C or B; tube layout; flange design to BS 5500 and ASME VIII. Features:

- (i) fixed head, floating head, U tube exchangers,
- (ii) tube and plate layout optimisation,
- (iii) minimum thickness calculations,
- (iv) corroded and uncorroded conditions,
- (v) tube, tubesheet and shell stress calculations,
- (vi) single and/or mating pair flange design,
- (vii) tube layout plots

HED5 incorporates efficient optimisation techniques that will result in considerable savings in material costs over manual design methods.

Basis: BS5500, TEMA R, C or B, ASME VIII

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 5M bytes

Copies sold UK: 10

World: 15

Price: £800+

Training: In-house and or public courses



PLANT AND EQUIPMENT

402

Software Name: HOT WATER SIZING

Version: 2.0

First Published: 1992

Company: Electricity Association Services Ltd (0171 344 5716)

Enables designers to fully investigate the equipment options for providing adequate supplies of hot water in business premises. Estimates can be made of the storage capacity and the immersion element ratings required for either of the alternatives of electric direct, or a combination of off-peak and direct water heating. The menu includes patterns of consumption corresponding with the hot water service and catering requirements for each category of building given in the CIBSE Guide (schools and colleges, hotel and hostels, restaurants, offices and large shops). The standard patterns of consumption can be modified or, if required, an independent profile can be built-up for other types of commercial buildings. A running cost assessment is included, based on the designer's assumptions.

Basis: CIBSE Guide

Computers: IBM PC or compatible

Operating System(s): DOS 3 or above

Memory: 640K bytes

Disc storage: 650K bytes

Copies sold UK:

World:

Price: £25 + VAT

Training: Supplied with User Guidance Notes

403

Software Name: OIL

Version: 3

First Published: 1985

Company: Diamant Technical Software (0161 962 2708)

Four different grades of fuel are envisaged, together with paraffin. Program gives the gross and net calorific values of the fuel chosen both per unit mass and volume. If the pumping temperature is given, the program checks whether this is high enough, and gives viscosity of the fuel oil. Calculates the approximate Pensky-Martin flashpoint and gives the approximate chemical analysis of the oil. Calculates theoretical and actual flue gas mass and volume, assesses sulphur dioxide and particulate matter, and helps design a chimney for flue gas emission. Dewpoint of the combustion gases and heat losses in flue gases are calculated.

(entry continued)



PLANT AND EQUIPMENT

Basis: BS 2869, BS 799, CP 3002 Parts 1 and 3, Petroleum Handbook, Efficient Use of Energy

Computers: Microcomputers and lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 70K bytes

Copies sold UK: 200

World: 220

Price: £60

Training: By phone or fax if needed

404

Software Name: PSYCHRO

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Careful psychrometric analysis forms an important part of producing an efficient and effective air conditioning system. PSYCHRO enables the air conditioning engineer to carry out these calculations quickly and without the need for tables. Dramatic savings in time make it possible to investigate a wider range of designs and therefore produce considerable savings in capital and running costs.

PSYCHRO can analyse an individual plant item such as heating coil, local plant used to control the conditions in an individual room, or full air conditioning systems such as dual duct, VAV or induction units.

Basis: CIBSE

Computers: Microcomputers

Operating System(s): MSDOS, PC DOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



PLANT AND EQUIPMENT

405

Software Name: PVE5 - PRESSURE VESSEL ENGINEERING

Version: 3.89

First Published: 1980

Company: Whessoe Computing Systems Ltd (01325 381818)

Performs design calculations for pressure vessels in accordance to BS 5500 and ASME VIII Div 1. PVE5 is supported by an extensive material property database and has all the graphs/tables contained in the design codes built into the software. The following facilities are included:-

- (i) Internal and external pressure calculations.
- (ii) Stresses induced by saddle or ring supports.
- (iii) Wind and earthquake loads and anchor bolt design.
- (iv) Reinforcement of single and multiple openings.
- (v) Stresses induced by local loads.
- (vi) Out of roundness check and fatigue analysis.

Basis: BS5500, ASME VIII

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: 5M bytes

Copies sold UK: 50

World: 85

Price: £3,000+

Training: In-house or public courses

406

Software Name: RADBAL

Version: 1

First Published: 1992

Company: Institute of Domestic Heating & Environmental Engineers (01268 754266)

A program for use on site in balancing systems to obtain correct room temperatures. Can be used under all temperature conditions even when ambient air approaches required design temperature. Program only requires that user enters design flow and return water temperature and design air temperature, followed by actual ambient air and flow temperature. Read-out then shows return temperature required to be set to ensure balance under design conditions.

(entry continued)



PLANT AND EQUIPMENT

Basis:

Computers: PSION Series 2 ORGANISER Model XP & LZ

Operating System(s):

Memory: Approx. 16K bytes

Disc storage:

Copies sold UK: 28

World: 30

Price: £105

Training: Documentation supplied self-explanatory

407

Software Name: RADNET

Version: 2

First Published: 1988

Company: Diamant Technical Software (0161 962 2708)

Produces calculations for a hot water radiator network. Simple questions need to be answered, and known data inserted. Up to 12 branch lines from the main feeder and return lines are catered for, and the following answers are given:- a) total boiler heat load, b) percentage heat loss from supply and return pipelines, c) hot water flow rate through pump, d) minimum power developed by main circulatory pump, e) design of priming pump required for multi-storey building, f) internal diameters of supply lines for each individual branch line connection between flow and return mains.

Basis: Darcy Weisbach equation, Swindell's Equation, Blasius equation, Standard water flow mathematics

Computers: IBM PC or compatible including lap-tops

Operating System(s): MSDOS 3-21

Memory: 500K bytes

Disc storage: 84K bytes

Copies sold UK: 60

World: 70

Price: £60

Training: By phone or fax if needed



PLANT AND EQUIPMENT

408

Software Name: RADS

Version: 7

First Published:

Company: Cymap Ltd (01179 299332)

Used in conjunction with HEATLOSS to aid the selection of radiators. Radiators from any source can be used. Any height or length restriction are entered for each room with the preferred number of radiators. Outputs a bill of quantities with selection for each room.

Basis: Cymap interpretation of manufacturers data.

Computers: Microcomputers

Operating System(s): MSDOS, PCDOS, Windows

Memory:

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:

409

Software Name: RADSIZE

Version: 3

First Published: 1985

Company: Diamant Technical Software (0161 962 2708)

Program is used to work out the number or areas of radiators required. Utilises CIBSE Guide to assess likely minimum temperature in an area and calculates heat required to maintain external temperature at the set level except for 25 nights in 25 years. Exact heat requirements determined from other programs. A large number of different heating appliances is considered and their output per unit surface area or length is determined.

Basis: Summation of results from U-value, Floor, Living, Window, and Solar programs. CIBSE Guide, Meteorological data from Met. Office

Computers: Microcomputers including lap-tops

Operating System(s): BASIC, MSDOS 3-21

Memory: 500K bytes

Disc storage: 75K bytes

Copies sold UK: 150

World: 160

(entry continued)



PLANT AND EQUIPMENT

Price: £60

Training: By phone or fax if needed

410

Software Name: SPANEL

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates the total amount of energy collected by a solar panel and the panel efficiency for any panel configuration. An economic appraisal is included.

Basis: Stored monthly weather data for solar intensities

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

411

Software Name: THROUGH-FLOW ANALYSIS PROGRAM

Version: 17-SEP-91

First Published: 1989

Company: National Engineering Laboratory (013552 72412)

This program is a tool for use in design and analysis of axial, mixed and centrifugal flow pumps and fans. It is an analysis method for incompressible, meridional flow calculations and can be applied either to an existing, complete design or as part of the design process for a new design. The geometry of the blades is described in a simple manner so that once a casing outline has been chosen the Through-flow Analysis Program may be used to calculate more details of the flow and prepare input for the Blade Section Design or Blade Section Analysis programs.

The calculation takes account of the effects of the blades in generating whirl velocities, energy gradients, blockage and losses.

(entry continued)



PLANT AND EQUIPMENT

The program is driven using a simple command language and produces some graphical output.

Basis: The theoretical background of the method is given in: A.N. Neal, Through-flow analysis of pumps and fans. NEL Report No.669, 1980.

Computers: IBM PC or compatible, DEC VAX

Operating System(s): MSDOS, DEC VMS

Memory: 220K bytes

Disc storage: 360K bytes

Copies sold UK: 1

World: 7

Price: P.O.A.

Training: By arrangement

412

Software Name: TRAPSELECT

Version:

First Published: 1989

Company: Spirax Sarco (01242 521361)

Designed to identify, select and size the optimum steam trap(s) for a particular application. The program will select the most suitable trap, and without bias, from float, inverted bucket, thermodynamic, balanced pressure, bimetallic and liquid expansion traps. It can cater for users who have a preference for a particular trap type. The program will also calculate condensate loads, and specify a complete trapping station with all its ancillary equipment.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS version 3.3 or higher

Memory: Less than 200K bytes

Disc storage:

Copies sold UK:

World: 10

Price: F.O.C.

Training:



PLANT AND EQUIPMENT

413

Software Name: XSdetect

Version: 5

First Published: 1988

Company: Vilnis Vesma & Co. (01531 821350)

Computer-aided waste detection scheme, suitable for monitoring and targeting. Includes very advanced diagnosis and analysis tools for investigating incidents of excess consumption. Uses monthly or weekly keyboard input and can be linked to other systems including Psion Organiser.

Basis:

Computers: Any computer which can run Lotus 1-2-3 release 2.01

Operating System(s): MSDOS 2 and later, DR DOS 5. Requires Lotus 123 r2.x

Memory: 512K bytes

Disc storage: 1.2M bytes

Copies sold UK: 72

World: 72

Price: £5,000 (contingent on success)

Training: Two sessions included



POWER

414

Software Name: APPRAISE 100+

Version: 2.06C

First Published: 1992

Company: Eastern Electricity (01473 554304)

Appraise 100+ allows customers to audit monthly bills from their supplier, down to half hourly costs.

Energy Profiling - Appraise 100+ provides profiles of consumption on a half hourly basis. In addition to energy management, this information can be used in many different ways, for example, forecasting, graphical analysis or as a basis for recharging internal or external customers.

Contract Appraisal - Appraisal 100+ allows purchasers to evaluate different electricity contracts. Customers can consider whether a more complex contract, such as Load Management or Pool, would offer advantages over a simpler contract based on two or four different time of day price bases. It can also be used to compare contracts from different suppliers. As each electricity supply company has its own contract structures and pricing policies - offering discount rates for different time of day and seasons - it is difficult for businesses to make a true comparison. This program computes all the possible permutations on a like-for-like basis to provide vital comparative information, allowing companies to analyse competitive contract offers according to their particular requirements and obtain a completely unbiased picture.

Basis:

Computers: IBM PC or compatible with 640K bytes memory

Operating System(s): DOS 3.3 or later, Windows

Memory: 5.12K bytes RAM 5M bytes

Disc storage: 1M bytes/Site

Copies sold UK:

World:

Price: £995 + VAT

Training: £150 per day



POWER

415

Software Name: CHP

Version: 2

First Published: 1988

Company: Diamant Technical Software (0161 962 2708)

Assesses the viability of operating a CHP system, instead of purchasing electricity from a public utility and buying heating fuel separately. Two different economic techniques are used in these calculations. The first is the Simple Pay-Out method, which is the traditional one used to determine whether any new plant is likely to be economic. The second is a method developed by the Energy Economics Section, Northern Natural Gas Co. Omaha, Nebraska, USA, which they call the Uniform Present Worth technique. This takes into consideration a number of additional factors, such as income tax relief, interest rates paid, etc. to assess profitability of using borrowed cash for a project of this type.

Basis: R.M.E. Diamant, Total Energy

Computers: IBM PC or compatible including lap-tops

Operating System(s): MSDOS 3-21

Memory: 500K bytes

Disc storage: 60K bytes

Copies sold UK: 100

World: 110

Price: £60

Training: By phone or fax if needed

416

Software Name: IEE 16

Version: 7.4

First Published: 1982

Company: Building Services Computer Service Ltd (0265 57511/44036)

Enables total installation design from source through submains cable and switchgear to distribution boards and final circuits. Any low voltage installation can be handled. Includes extensive error trapping and help facilities. Full design information is screen displayed. Output information is by printed schedules. All records are held permanently on disk. Includes a database with data on all commonly used devices. This can be tailored to include specialist devices and cables on request. Network validation and discrimination checks are prepared. Information is provided on cable type and size, CPC size, installation method, thermal insulation, ambient temperature, circuit and overall impedance, maximum allowable impedance, protective device and rating, disconnection time, design load and amps, circuit length, volt drop and grouping. Direct links to AutoCAD.

(entry continued)



POWER

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 1M byte

Disc storage: Less than 3M byte

Copies sold UK: 350

World: 350

Price: P.O.A.

Training: 1 or 2 day courses held on client's premises. Costs individually agreed.

417

Software Name: PROTECT - HV

Version: 3

First Published: 1994

Company: Amtech Computer Systems Ltd (01234 240088)

PROTECT - HV is a protection study program designed to significantly speed up this time consuming task. Its graphical environment displays device characteristics on screen which are selected from built-in databases. These characteristics can be adjusted as required on screen whilst the settings are displayed simultaneously. A grading margin function allows the engineer to accurately define the time separation between devices and the study can be viewed at either the high or low voltage base. The software includes an interactive single line diagram, curve entry program and comprehensive manufacturers database of low and high voltage devices.

Basis:

Computers: IBM PC (386 minimum) or compatible

Operating System(s): Windows

Memory: 4M bytes

Disc storage: 6M bytes

Copies sold UK: 100+

World: 150+

Price: £2,000

Training: £150/day



POWER

418

Software Name: S/STEM

Version: 6

First Published: 1985

Company: EnTech Energy Consultants Ltd (0171 833 3353)

S/STEM is a software application for energy accounting, and the monitoring and targeting of all energy types - electricity, gas, oil etc., and other measurable utilities such as water and telephones. The software has been purpose-written by EnTech in the UK, and is not based on, nor requires the installation of, any other proprietary software.

S/STEM is designed on a modular "building block" approach which enables customers to choose from a wide range of software modules to record utility meter readings and invoices and generate management reports. The software is specially configured to each customer's own reporting, accounting and energy management procedures.

S/STEM is available as a bureau service or a stand alone system. The range includes relatively simple versions based on historical fuel data, through to very comprehensive packages able to perform invoice processing routines and interface with accounts systems.

Basis:

Computers: IBM AT or compatible

Operating System(s): MSDOS, PCDOS, Windows 3.11

Memory: Minimum 2M bytes. Floppy disk drive: 3.5, 1.44M bytes

Disc storage: Minimum 60M bytes

Copies sold UK: 70

World: 4

Price: £4,900+

Training: Number of days depends on complexity of system

419

Software Name: STRIKE

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Assessment of the need for lightning protection.

Basis: BS CP326:1965

Computers: IBM PC or compatible

(entry continued)



POWER

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs

420

Software Name: TARIFF

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates yearly electrical fuel bill for a building under each tariff within a board. The program uses a database containing information on all the boards in the UK and Eire.

Basis: Electricity Board Tariffs.

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



421

Software Name: BRESOAK (SOAKAWAY DESIGN SOFTWARE)

Version: **First Published:** 1992

Company: Building Research Establishment (01923 664444)

Allows designers to apply the new procedures given in BRE Digest 365. Provided details of the site are known (location, size of impermeable area, and results of soakage, it tests, or a design infiltration rate), the software can calculate a range of infiltration trench and perforated concrete ring soakaway designs which would be suitable.

These initial calculations give the designer an appreciation of the likely sizes for trench and ring unit soakaways, the excavation volumes and the material requirements which would be involved in the given options.

The designer then enters the design phase of the software and, working from the initial guidance, can obtain specific design solutions for sub-areas of the site using specified types of soakaways.

Basis:

Computers: IBM PC or compatible with VGA (or EGA) graphics screen or monochrome screen

Operating System(s):

Memory:

Disc storage:

Copies sold UK:

World:

Price: £150 + VAT

Training: Manual



422

Software Name: THE COSHH COMPANION

Version:

First Published: 1990

Company: Eurotech (01243 672891)

THE COSHH COMPANION is an interactive, computer-based training package which trains employees and employers (and their advisors) in the COSHH Regulations and Approved Codes of Practice. Tests their understanding by a comprehensive question and answer programme, which automatically stores all responses. Thus employers can examine each trainee's records and compare their level of understanding with the nature and importance of the tasks delegated under COSHH, and assess whether they are competent in so far as they understand the requirements of the Regulations.

Basis: COSHH Regulations and Approved Codes of Practice

Computers: IBM PCs (XT, AT, PS/2) or compatible with EGA/VGA colour monitor and Microsoft mouse

Operating System(s):

Memory:

Disc storage: 2M bytes

Copies sold UK:

World:

Price: £825 + VAT

Training:

423

Software Name: DRAIN

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Calculates sizes of the vertical stack and branch discharge pipes.

Basis: BS 5572:1978

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

(entry continued)



Price: P.O.A.

Training: Available on all programs

424

Software Name: LSS

Version: 4.2

First Published: 1986

Company: Hall & Watts Systems Ltd (01452 864244)

Mapping/ground modelling package for site surveys/design/service routing in conjunction with most well known CAD systems.

Basis: Fortran

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: Minimum 565K bytes available

Disc storage: Minimum 20M bytes

Copies sold UK: 300+

World: 325+

Price: From £2,000

Training: From £300/day

425

Software Name: SEWER

Version: 11.0

First Published:

Company: Hevacomp Ltd (01142 556680)

Enables an underground drainage system to be set-up and sized.

Basis: Basic Chezy equation

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 512K bytes

Disc storage: Part of complete program suite requiring minimum 10M bytes

Copies sold UK: 1400

World: 1600

Price: P.O.A.

Training: Available on all programs



426

Software Name: PROQUIS 9000**Version:** 2.2**First Published:** 1992**Company:** Deans Hill Systems Ltd (01622 884213)

The PROfessional QUality Information System has been developed around ISO9000 Standards and comes with example Quality and Procedures manual. It provides many useful areas for those companies not interested in ISO9000. Includes Customer/Prospective Customer details/Contact Manager, Quote and Order handling, Complaint Management/Analysis, Document Control/Management, Supplier Details/Mailing, Purchase Orders, Goods Inwards Checks, Product details/handling/disposal, Process Control/instructions, Equipment/Asset Register, Maintenance/Calibration records - planned and historic, Movement log/Responsibilities, Reject handling/analysis, Corrective Actions, Auditing, Personnel records/training, Automatic warnings for actions required in every area.

Basis:**Computers:** IBM PC 386 with 2M bytes RAM and above**Operating System(s):** DOS 3.3 and above, UNIX**Memory:** 2M bytes RAM**Disc storage:** 4M bytes**Copies sold UK:** 500**World:** 40**Price:** Single user £295; Multi user (site licence) £395**Training:** £250 a day plus expenses

427

Software Name: Q-PAK FOR DOS**Version:** 4.3**First Published:** 1986**Company:** Oscar Software Ltd (01702 542541)

Q-PAK, an integrated quality control documentation and management system for total quality management (TQM) ISO9001/2 and FMEA. Includes full text (under licence), or electronic version of BS/EN/ISO9000 text which can be used to cross reference to internal paperwork.

Basis:**Computers:** IBM PC 386, 486, Pentium**Operating System(s):** DOS, Windows**Memory:** 4M bytes

(entry continued)



QUALITY ASSURANCE

Disc storage: 7M bytes

Copies sold UK: 250+

World: 350+

Price: £390 - £7,700

Training: 1-3 days

428

Software Name: Q-PAK FOR WINDOWS + UNIX

Version: 1.01

First Published: 1994

Company: Oscar Software Ltd (01702 542541)

General tool for meetings requirements of ISO9000, TQM, FMEA, calibration, document control, calibration, ISO self check (June'95), corrective actions, procedure management including auditing, SPC (June '95), QFD and others yet to be released. Includes full text (under licence) or electronic version of BS/EN/ISO9000 text which can be used to cross reference to internal paperwork.

Basis:

Computers: IBM PC 386, 486, Pentium, UNIX

Operating System(s): DOS, Windows, UNIX, Windows'95 +

Memory: 8M bytes

Disc storage: 10M bytes

Copies sold UK: 16

World: 2

Price: £800 - £16,000

Training: 1-5 days

429

Software Name: QUANTUM

Version:

First Published:

Company: Facet Ltd (0181 784 5768)

QUANTUM is a computer program written for use by quality managers within the construction industry. It has been written using DBase III+ and compiled using the clipper program. The program is divided into three areas.

1. Personnel Information - The personnel file contains the discipline and managerial level of the various personnel within the company.

(entry continued)



QUALITY ASSURANCE

2. Project Information - Project information may be retrieved by either name or project reference. The project information has three main levels. Level one contains basic information about the staff working on the project with the start and finish points of each of the possible work stages, significant dates and personnel relating to each of the major disciplines. Level two contains information on the client and the design team including architect, building services engineer, quantity surveyor, structural engineer, and form of appointment. Level three contains information on the contractors, main contractor and the various sub-contractors.

3. Quality System Internal Auditing - The program records when each project has been subject to an internal audit and keeps account of the dates of completion of any corrective action that is needed following the audit. Each of the 20 QA system elements which relate to BS5750 part 1 (ISO 9001-1987) are attributed to the required work stages on each project held within the database. The program allows up to 9 work stages. QUANTUM records audits of the components of the quality system on a projects group by group basis and provides a tabular format with numerical identification of the system components. There is also a facility to review the frequency of component audits.

The program will identify those projects or elements not audited within a prescribed period, thus giving the quality manager a complete database for planning and conducting internal audits.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: Minimum 545K bytes RAM

Disc storage:

Copies sold UK:

World:

Price: P.O.A.

Training:



430

Software Name: SOFTOP

Version: 2

First Published: 1990

Company: TRAC Software Ltd (01749 841210)

SOFTOP provides a complete environment for policy, procedure and record keeping systems, e.g., BS5750, Quality Plans, Specifications, TQM, BS7750, COSHH, Health and Safety, and Investors in People.

The system manages the documents, issue, audit and records within (e.g.,) BS5750 at the operational level to improve productivity and throughput, and at the strategic level to provide management information to support continuous improvement.

In SOFTOP, each document is a record in a database. This 'database' approach allows text as well as forms to be selected and processed automatically, enabling productivity improvements over traditional clerical and word processing methods.

SOFTOP comes complete with the following ready to use QA databases:-

Document Control System, Issue Control System, Supplier Ratings System, Quality Cost Records, Calibration Records, Complaints Records, Non-Conformance Records, Audit Control Records, Training Records, Design Control Records, Purchaser Supplied Product Records, Traceability Records, Contract Review Records, Process Control Records.

SOFTOP also supports paperless distribution, even from a stand-alone machine.

Further applications can be quickly created as required using SOFTOP's user friendly design tools. The applications can then be further evolved as requirements change.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS, DOS Windows, Novell Netware

Memory: 640K bytes

Disc storage: 5M bytes

Copies sold UK: 200

World: 250

Price: £1,195

Training: £150 per day



REFRIGERATION

431

Software Name: FLAMINGO - COLD ROOM SOFTWARE

Version: **First Published:**

Company: Business Edge Ltd (01705 599000)

Provides calculation routines for sizing coldrooms. Any shape of coldroom can be entered with one or more doors. A simple drawing procedure for entering the coldroom detail is incorporated.

Flamingo also includes thermodynamic properties for a wide range of food products including vegetables, poultry, meat and fish.

Demo disk available.

Basis:

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes

Disc storage: 10M bytes

Copies sold UK: **World:**

Price: P.O.A.

Training:

432

Software Name: FOOD

Version: 1 **First Published:** 1993

Company: Diamant Technical Software (0161 962 2708)

Determines the time needed to freeze and thaw food (fruit, vegetables, fish and meat), using the NEUMANN, CHARM and other recently developed mathematical methods for these calculations.

Basis: Neumann and Charm equations

Computers: All modern computers including lap-tops

Operating System(s): MSDOS 3-21 and above

Memory: 500K bytes

(entry continued)



REFRIGERATION

Disc storage: 66K bytes

Copies sold UK: 1

World: 1

Price: £60

Training: By phone or fax if needed

433

Software Name: FREEZER

Version: 1

First Published: 1993

Company: Diamant Technical Software (0161 962 2708)

Calculates energy requirements and costs when freezing a wide variety of foods, such as fish, meat, vegetables and fruit. Takes into consideration type of deep-freezer used, standards of insulation employed, the time door is kept open and the nature of products to be frozen.

Basis: Charm equations

Computers: All modern computers including lap-tops

Operating System(s): MSDOS 3-21 and above

Memory: 500K bytes

Disc storage: 85K bytes

Copies sold UK: 3

World: 5

Price: £60

Training: By phone or fax if needed

434

Software Name: GASPAK

Version: 3.14

First Published: 1990

Company: Cryodata Inc. (01865 57892)

Interactive package for the thermodynamic and transport properties of 27 fluids, including R11, R12, R22, R134A, ammonia, oxygen and nitrogen. Also available as Lotus 123 'add-in' or Windows Dynamic Linked Library (e.g., for Excel). Range covered is from liquid, through 2-phase, to gas. Pressure range depends on the fluid but is generally up to several hundred bars.

Basis: Equations developed at the National Institute of Standards and Technology, Boulder, Co., USA and elsewhere

(entry continued)



REFRIGERATION

Computers: IBM PC or compatible, Macintosh, most other computers

Operating System(s): Any which support Fortran

Memory: Approx. 200K bytes

Disc storage: Approx. 700K bytes

Copies sold UK: **World:**

Price: P.O.A.

Training: Not necessary or available

435

Software Name: REFRIG

Version: 1 **First Published:** 1989

Company: Diamant Technical Software (0161 962 2708)

Designed to evaluate both the theoretical and the practical coefficients of performance for both compression and absorption refrigeration plants.

Basis: W.F. Stoecker, J.W. Jones, Refrigeration and Air Conditioning. H.M. Meacock, Refrigeration Processes

Computers: IBM PC or compatible including lap-tops

Operating System(s): MSDOS 3-21

Memory: 500K bytes

Disc storage: 75K bytes

Copies sold UK: 40 **World:** 45

Price: £60

Training: By phone or fax if needed



REFRIGERATION

436

Software Name: REFRIGERANT PIPING DESIGN

Version: V3.00

First Published: 1988

Company: Carrier Air Conditioning Ltd (0181 991 2000)

The Refrigerant Piping Design Program determines the minimum pipe size required to deliver refrigerant between the compressor, condenser, and evaporator within specified pressure loss limits. Program calculations are based on data contained in the ASHRAE Fundamentals and the Carrier System Design Manual.

The program allows sizing of either copper tube or steel pipe. It can perform analysis of a refrigerant piping system using any of the five common refrigerants (R-12, R-22, R-502 and R-717). The program requires minimal data to size suction, hot gas discharge, and liquid lines, as well as single or double vertical risers.

The program eliminates all the tedious calculations necessary when piping is sized manually and automatically corrects for all system operating conditions, interpolating and adjusting in the tables and charts.

Basis: ASHRAE/CARRIER

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Minimum of 512K bytes (at the DOS prompt)

Disc storage: 66K bytes

Copies sold UK: Approx. 250

World: Over 10,000

Price: £150 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available free of charge to all licensed users

437

Software Name: FASTSPECS**Version:****First Published:****Company:** Facet Ltd (0181 784 5768)

The concept behind FASTSPECS is to provide a framework in which NES based project specifications can be generated. At the outset, a number of key elements have been identified which have served to guide the development of the software.

- a) The software should enable the users technical management to impose an appropriate level of control over the form and content of the final project specifications that are produced. This will allow company standards and preferences to be imposed, yet allowing the flexibility to create project material to meet the special needs of any given job.
- b) To provide an environment that enforces users to comply with the "NES Specification Rules". If these rules are deviated from, then FASTSPECS will clearly identify such deviations in the final document.
- c) To provide a system which is easy to use, and which automates as much as possible the generation of the specification clauses. This should mean that the engineer has only to complete project specific details on a skeleton specification which the system will generate for him.
- d) To include a comprehensive series of checks on the completeness of the final specification by ensuring all options are selected, all variable text completed, and all cross reference clauses are included.
- e) To provide an access control system so that only approved users can be allowed to modify the content of any given project specification, or of the master databases.

Basis: National Engineering Specification.**Computers:** IBM PC or compatible**Operating System(s):** MSDOS**Memory:** Minimum 545K bytes RAM**Disc storage:****Copies sold UK:****World:****Price:** P.O.A.**Training:**



SUITES

438

Software Name: ACCOUNTING FOR CONTRACTORS

Version: **First Published:** 1986

Company: Ensign Advanced Systems Ltd (01162 538820)

A fully integrated suite of programs produced for contractors enabling costs to be accounted for automatically against contracts, whether those costs are from payslips or invoices, and compared with original budgets. Management accounts, profit and loss, balance sheets are produced as are VAT returns, DHSS returns, statements, invoices, remittance advices. Applications and retentions are stored with the contract away from the sales ledger.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory:

Disc storage:

Copies sold UK: **World:**

Price: P.O.A.

Training: Included

439

Software Name: AXIAL FLOW DESIGN SUITE

Version: 4-OCT-89 **First Published:** 1987

Company: National Engineering Laboratory (013552 72412)

These programs are for use in the design of axial flow pumps and fans. The suite comprises rotor and stator design programs. The programs are based on the actuator disc theory which provides an analytic solution to the meridional flow through an axial flow machine. The meridional flow field is calculated together with a semi-empirical blade-to-blade solution using a diffusion factor blade loss model. The programs generate meridional streamline data suitable for use with the Blade Section Design Program.

Basis: The theory of the programs is described in J.E. Hesslegreaves, D. McEwen, A computer-aided design method for axial-flow pumps and fans. Fan industry technical meeting 30 March 1977. East Kilbride, Glasgow. National Engineering Laboratory, 1977.

Computers: IBM PC or compatible, DEC VAX

(entry continued)



SUITES

Operating System(s): MSDOS, DEC VMS

Memory: 80K bytes

Disc storage: 360K bytes

Copies sold UK: 1

World: 5

Price: P.O.A.

Training: By arrangement

440

Software Name: CYMAP BUILDING SERVICES DESIGN

Version:

First Published:

Company: Briter Computer Systems Ltd (Alton 01420 89898, Coventry 01203 466281)

A comprehensive suite of programs to handle most aspects of design work. It includes the following:-

ENERGY PACKAGE, comprising heatgain, heatloss, internal summertime temperature, energy consumption, performance of materials and condensation checks, CIBSE Energy Code demands and target checks, psychrometric calculation.

CADlink MECHANICAL comprising take off areas and materials, radiator selection, pipework routing and analysis, ductcad and plotting and output to DXF file for draughting.

SIZING PACKAGE comprising pipe sizing for closed circuits, battery and coil, hot and cold water distribution, and gas pipework, also ventilation duct sizing.

WIRING PACKAGE comprising cable sizing, fault levels and final circuit analysis to IEE 16th Edition, trunking and conduit sizing, capacitors and graphical wiring system layout.

LIGHTING PACKAGE comprising illumination and glare calculation, daylight factors/point to point lighting, flood lighting design and graphical lighting design.

Basis:

Computers: Any UNIX/MSDOS computer.

Operating System(s): MSDOS

Memory: 640K bytes

Disc storage: Fixed disk

Copies sold UK: 500+

World:

Price: £1,500+

Training: In-house or on-site



SUITES

441

Software Name: DESIGNCALC

Version: 3.2

First Published: 1991

Company: Trend Computers & Software (01454 412138)

DesignCalc is a suite of 4 programs relating to the design of electrical installations.

Part 1 - consists of a Cable Sizing and IEE Wiring Regulations Design Program.

Part 2 - consists of an Electrical Reference and Calculation Program covering such items as conduit and trunking sizing, diversity assessments, motor currents and fuse ratings, derating factors for underground cables, data on wiring armouring and MICC sheaths etc.

Part 3 - provides an Interior Lighting Design Program in accordance with the CIBSE Codes of Practice.

Part 4 - provides a Space Heating Design Program for both direct heating and off-peak storage heating.

Detailed print-outs are available and a context sensitive help facility provides immediate access to information and data relating to any specific part of the programs thereby eliminating the requirement for an operating manual.

Basis:

Computers: IBM PC or compatible

Operating System(s): MSDOS

Memory: 128K bytes

Disc storage: 800K bytes

Copies sold UK:

World:

Price: £295

Training: Where required



SUITES

442

Software Name: E20-II

Version: N/A

First Published: 1984

Company: Carrier Air Conditioning Ltd (0181 991 2000)

E20-II is a package of HVAC Engineering Design and Analysis programs developed for use on microcomputers. The E20-II family of programs generally employ ASHRAE methodologies, and certified against US government sponsored DOE 2.1 load estimating and building operating cost analysis program. Each program is a computerised tool, facilitating different commercial building design or analysis tasks. These tasks include load estimating, duct design, piping design, hourly energy analysis and others. All programs utilise a modular, menu driven structure making each highly flexible and easy to use. E20-II programs are licensed on an individual basis allowing the customer complete flexibility in deciding which programs are applicable to their needs.

Basis: ASHRAE Methodologies

Computers: IBM PC or compatible

Operating System(s): DOS V3.00 or greater

Memory: Dependent on program(s)

Disc storage: Dependent on program(s)

Copies sold UK: Approx. 250 **World:** Over 10,000

Price: Program prices range from £100 to £950 + VAT

Training: Extensive "hands on" training seminars are held on a regular basis and are available free of charge to all licensed users

443

Software Name: HEATBAL

Version:

First Published: 1984

Company: Diamant Technical Software (0161 962 2708)

This 'chained' package serves to determine numerous thermal data in any kind of building from a small one-family dwelling up to large factories, hospitals, public buildings, etc., in any part of the world. It is able to carry out both heating and cooling load calculations. The program consists of six major sections, which are 'chained' together.

Part 1 determines the U-values of up to 20 different interfaces and correlates these with the dimensions of the walls and roof sections, windows and doors, sections which face unheated parts like garages, etc.

(entry continued)



SUITES

Part 2 is a data-file called CLIM, which is used for overseas users, in which world-wide climatic data are stored.

Part 3. Given the geographical latitude, the program works out solar radiation through all glazed areas during any one month of the year. In the case of doors, details are worked out for wooden and metal ones with either full or partial glazing.

A wide variety of solar resistant glasses, as well as double glazed and triple glazed windows with different qualities and types of framing are dealt with. The effect of various kinds of curtains is also considered.

Part 4 deals with flooring heat losses (if incurred) and with ventilation conditions, including the use of heat regenerators and recuperators. It also deals with the effect of solar radiation through building surfaces.

Part 5 deals with heat produced by humans and animals within the building, as well as with hot water run-off, heat gain by machinery and lights, etc. From the data so far obtained, as well as geographic conditions the program now works out dimensions and capacities for a very wide range of heating devices such as radiators, hot air heaters, tubular heaters, etc.

Part 6 deals with air chilling calculations as well as the effect of internal humidities, caused by occupation, presence of areas of water (swimming pools, baths, etc.) and clothes drying.

Basis: Programs U-VALUE, WINDOW, SOLAR, LIVING, FLOOR, and AIRCOND are correlated with climatic data from UK Met. Office and world climatic data from various sources.

Computers: All current computer types including lap-tops

Operating System(s): MSDOS 3-21

Memory: 500K bytes

Disc storage: Total - 460K bytes in 6 sections

Copies sold UK: 150 **World:** 160

Price: £150

Training: By phone or fax if needed



SUITES

444

Software Name: QUANTUM SUITE

Version: 1.0

First Published: 1993

Company: Business Edge Ltd (01705 599000)

A fully interactive suite of building services programs which include very advanced building heat gain and heat loss calculation. These products employ key CIBSE data tables together with sophisticated calculation routines for solar gains, radiant losses and many other factors.

Quantum allows full manipulation of zones and floors which are essential for multi-split DX and chilled water system design.

Quantum gain and loss allow the user to store projects on disk and extensive printouts of results are available to support quotations. Reaction from key manufacturers and distributors rate Quantum amongst the best available.

Quantum is DOS based and will run within Microsoft Windows.

Basis: CIBSE data tables

Computers: IBM PC or compatible

Operating System(s): DOS

Memory: 640K bytes RAM

Disc storage: 20M bytes

Copies sold UK:

World:

Price: From £250 according to options

Training: Yes

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