

B1.2 Computer specification

Platform and operating system

PC	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
	MS-DOS®	<input type="checkbox"/>	Windows 3.x®	<input type="checkbox"/>
	Windows 95®	<input checked="" type="checkbox"/> 98	Windows NT®	<input checked="" type="checkbox"/> 2000 XP
	PS2	<input type="checkbox"/>	OS2	<input type="checkbox"/>
UNIX®	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Apple Macintosh®	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Comment.....	<i>No special hardware requirements</i>			

Processor, storage and peripherals

Processor speed	<i>200 +</i>MHz		
Minimum RAM	<i>64</i>MB		
Minimum disk space	<i>500</i>MB		
Other devices:				
Floppy disk	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
CD-ROM drive	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Printer	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Plotter	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Digitising table	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Other	<i>All data exported to standard Microsoft Office products</i>			

Other requirements*

.....

.....

Suitable machines†

Buy standard office PC or laptop

.....

.....

* Consider screen size, video RAM, Internet connection, local area network connection, etc.

† List types of machine known to be suitable.

B1.3 Program code**Type of code**

Compiled code only	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
Source code available	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Extra £ for source code	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Programming language	FORTRAN	<input checked="" type="checkbox"/>	C/C++	<input checked="" type="checkbox"/>

Notes..... *Simulation engine in FORTRAN and user interface in C++*
Source code is available for inspection

B1.4 Modelling methods

See section B2 to document thermal simulation programs.

B1.5 Input interface**Type of interface**

GUI Menu-driven Command line

Other..... *Includes a 3D geometry modeller*

Digital data file

Program produces accessible and human readable digital data files?*	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Legibility of digital file	Good	<input checked="" type="checkbox"/>	Poor	<input type="checkbox"/>	Bad	<input type="checkbox"/>
Is entire problem definition contained?†	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		
Are all simulation parameters included?‡	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>		

Data checking

Does program check for consistency and plausibility of input? Yes No

within very broad bands

* Interfaces may generate files (e.g. binary files) which cannot be read by people but only by the program interface. These are much less useful and old (binary) files may cease to be readable by new versions of the interface.

† Check that all the data are included — e.g. geometry, construction and occupancy data — and that the weather file used is noted.

‡ Check that all the simulation control information — such as time-step length, length of preconditioning and convergence criteria — is given.

B1.6 Output interface**Type of interface**GUI Tabular Digital **Digital data**

Is digital output accessible?

Yes No

Legibility of digital file

Good Poor Bad

Is all output contained?

Yes No

Are algorithm level outputs accessible?

Yes No **B1.7 Linked modules**

CAD input

Yes No

Vendor's own interface*

Yes No Other CAD system(s) (name)..... *Dxf or DWG floor plans may be used as template backdrops*Comments..... *Full 3D data import via IFC***B1.8 Associated databases**

Thermophysical properties

Yes No

Basic material properties

Yes No

Properties of complete construction

Yes No

Transmission of windows

Yes No Comment†..... *Data bases on occupation schedules*

Weather data

Yes No

Worldwide

Yes No

Number of sites

*500**also able to import climate data from METEONORM which has 2500 weather sites worldwide*

* Check that the modules are available and working; consult vendors about likely future releases.

† Ask how many entries are in each database; ask to see some of their contents.

Comment... *There are facilities for generating synthetic climate data to the users specification*

Other databases (description)... *schedules, heat gains, emitter types, controls*

B1.9 User support

Manuals

User manual Yes No

Hard copy Yes No

On-line Yes No

Date of the latest copy *Feb 2004*

Does it include example problems with the expected answers? Yes No

Do the problems exercise all program modules? Yes No

Does it explain how to use every module? Yes No

Comments* *On-line interactive tutorials with videos of software in use. Extensive theory manual*

Technical manual Yes No

Hard copy Yes No

On-line Yes No

On-line help Yes No

Comments *Describes all aspects of building dynamic simulation with integrated bulk air flow. Gwies equation used in the methodology*

Case studies

Vendor's case study examples obtained? Yes No

Case studies of others obtained? Yes No

Hotline

Hotline support Yes No

Turn round Instant 1 day >1 day

* Ask to see the manual. Ensure that it contains all the useful features and that it is up to date.

Software

Updates provided Yes No
 Media for dissemination Floppy disk CD Internet

Training

Courses provided Yes No
 Cost £ 250 per day per person
 Length 2 days
 Frequency Monthly, or on demand

B1.10 User base**Numbers**

Users in UK 200+ Users worldwide 300
 Sites in UK 100+ Sites worldwide 250
 UK building services engineers All users are engineers
 UK architects
 UK builders
 UK others
 Is there a user club? Yes No

Contacts

1 Name Sinisa Stankovic
 Address BDSP Summit House
 27 Sale Place
 London W2 1YR
 Tel 0207 2988383
 Fax
 E-mail

2 Name Matt Kitson
 Address Hudson Moran Partnership
 16 Armstrong Mall, Farnborough
 Hampshire GU14 0NR
 Tel 01252 550500
 Fax
 E-mail

3 Name

Address

.....

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Tel.....

Fax.....

E-mail.....

B1.11 Cost

Software and associated databases

Core program *Tas Building Designer* £

Modules Name ~~.....~~ £

Name ~~.....~~ £

Name ~~.....~~ £

Databases Name ~~.....~~ £

Name ~~.....~~ £

First year user /licence fee £

Total software and data £ 1600 annual or £ 3500 perpetual

Annual main tenance and support £ 1000

Computer

Name *N/A* £

Annual recurring licence fee after first year of use £

Typical training course fees per year £

B1.12 Accuracy

Has the program been evaluated? Yes No

Does the vendor exercise routine in-house quality testing? Yes No

Describe testing regime..... *All software developments are checked against CIBSE, ASHRAE and CEN standards*

New software is BETA tested by selected users before full release

Complete the table below to document the validation history

Date tested	Independently (I) or by vendor (V)	Type of test A, C, E	Source of information	Comments on the results
1994	I	E	INTERNATIONAL ENERGY AGENCY	Validation against monitored building data
1998	I	E	IWU Germany	German Government validation against monitored Building data
1998	I	E	BRE	Validation against monitored Test room data
2000	V	E	BRE/EDSL	Validation against monitored data, new BRE Offices
2002	V	A	CEN	Compliance with CEN standards
2004	V	A	CIBSE	Compliance with CIBSE software accreditation procedures
2004	V	C	ASHRAE	Compliance with ANSI/ASHRAE Standard 90.1 BESTEST
1999	I	C	VDI Germany	Inter model comparison

A Analytical verification, C Intermodel comparison, E Empirical validation

The CEN, CIBSE and ASHRAE standard tests are performed on all new releases, to ensure compliance.

These tests with associated models are available to users for in-house checking of compliance.

