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IESVE for Engineers

Innovative, award-winning and in-depth suite
of integrated analysis tools



NEW FEATURES
Solar Shading & Analysis,
Model Viewer II,
HVAC

IES VIRTUAL ENVIRONMENT	SECTOR	DATE	COUNTRY
IESVE for Engineers	SOFTWARE	FEBRUARY 2013	GLOBAL

VE-Pro

Mix and Match your perfect suite.



A flexible, integrated system for performance assessment that brings productivity and excellence to every aspect of sustainable building design.

Used by leading sustainable design experts around the globe VE-Pro can virtually test the feasibility of different energy saving strategies and new technologies. It is an intelligent response to climate change.

Rating Systems

LEED, BREEAM, Green Star, DGNB and QSAS. The list of green building rating systems is long and growing steadily across the globe. Plus, building regulations in many countries now incorporate an energy performance requirement. VE-Pro offers a wide range of approved guided tools and analysis capabilities which make achieving these popular systems easy and cost effective.

Extensive Reporting

The VE-Pro suite allows you to easily visualise and communicate results at a highly detailed level. Our results analysis and reporting capabilities are about more than just aesthetics. They offer extensive, clear and diagrammatic technical information and visualisation.

Unrivalled Interoperability

Integrating Performance Analysis into the heart of the design process, IES offers an unrivalled interoperability with other CAD design and analysis tools.

Integrated Modelling

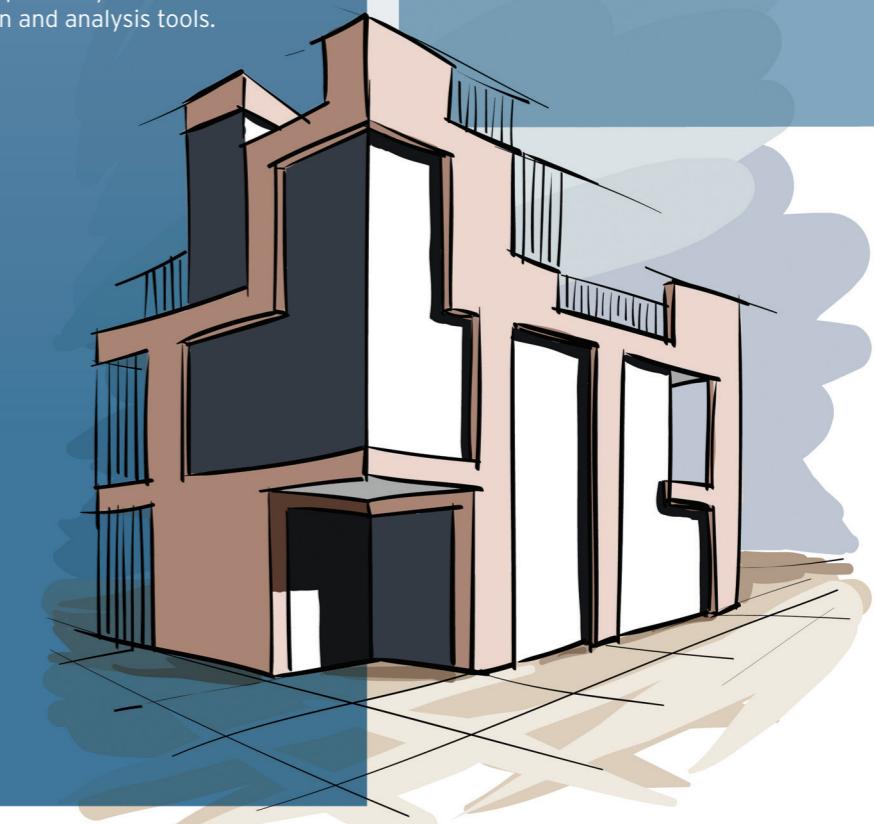
The first class suite of VE-Pro analysis tools all share one central integrated data model. Saving time and facilitating integrated analysis you can adjust and hone the model without duplication. Also, share results and input data amongst applications to refine and inform simulations. Import models, or build directly within the IES ModelIT application.

Mix and match to create your perfect analysis suite

Analysis Capabilities

Energy/Carbon | BREEAM | LEED | Green Star | Light/Glare | Daylight Harvesting | Solar Penetration/Shading | Sun Path Tracking | Climate/Bio-Climatic | HVAC Modelling & Sizing | Load Calculations | Passive Design | Hybrid Strategies | Renewable Feasibility | Natural Ventilation | Thermal Comfort | CFD Airflow | Cost/Value | Occupant Movement | Fire Evacuation | Lift Design | Part L | EPCs | Section 6 BERs

PLEASE TURN
OVER FOR MORE
INFORMATION

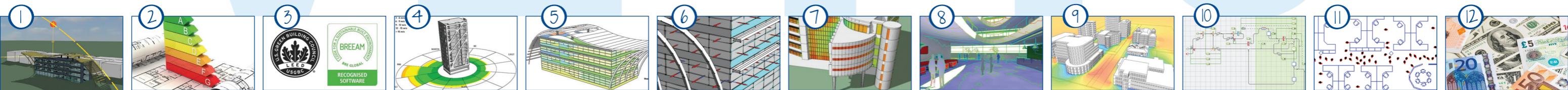


Early Stage → Detailed Design



VE-Pro

Use VE-Pro across the entire design lifecycle



VE-Pro Building Performance Assessment Tools

1. Model Building

The single central 3D data model at the heart of the system provides geometry and data shared by all tools

ModelIT

- Contains information on geometry, materials, occupancy, climate and equipment
- Enables you to create a 3D analysis model from scratch
- Alternatively, import CAD data into the system in 3D or 2D

2. Regulations

Ensure compliance against global regulations using 3D solutions. Specific modules provide automation and unique built-in Quality Assurance (QA) functionality

- UK PartL/PartF/Section6/EPCs/BERs (Domestic & Non-Domestic)*
- ASHRAE 90.1: 2004/07*
- ASHRAE 55
- CIBSE Guide A/ISO 7730
- ASHRAE 62.1
- US EPaCT
- Australia PartJ/NABERS/CBD
- New Zealand Part H1*
- Architecture 2030

* Specific Module Available

3. Rating Systems

Measure against global rating systems. Specific modules provide automation and unique built-in Quality Assurance (QA) functionality

- LEED USA* / Canada* / India*
- BREEAM UK*/Gulf
- Green Star (Aus)*
- Green Mark (Singapore)*
- Estdama (UAE)
- QSAS (Qatar)
- LOTUS (Vietnam)
- DGNB (Germany)

* Specific Module Available

4. Climate

Add the powerful early stage climatic and natural resource capabilities of VE-Gaia to your VE-Pro suite

VE-Gaia

- Climate, Solar, Daylight, Natural Resource Availability & Water
- Energy, Carbon & AIA 2030 Challenge analysis

5&6. Energy & Carbon

Design for the future with innovative low impact energy systems and strategies

ApacheSim

- Advanced dynamic thermal simulation at sub-hourly timesteps for better computation of building components
- Assess solar gain on surfaces, surface temperatures and radiant exchanges
- Extensive range of results variables for buildings and systems
- Building & room-level annual, monthly, hourly, and sub-hourly analysis
- Assess passive performance, thermal mass, and temperature distribution
- Link results from ApacheHVAC, MacroFlo, SunCast & RadianceIES and use as integral thermal simulation inputs
- Export results to MicroFlo as boundary conditions for detailed CFD analysis

7. Solar

Harness the power of the sun and analyse how it affects your building - inside and out

SunCast

- Control solar gains taking into account the sun's path and solar penetration
- Assess the shading/right to light impact of surrounding buildings & terrain
- Test internal and external solar shading devices
- Generate animated, visual, graphical and numerical output for colleagues, clients or planners

8. Light

Ensure good natural daylight and visual comfort, reduce lighting gains, and test how your lighting designs will look and perform

RadianceIES

- Detailed 3D visualisation of daylight and electric light levels
- Maximise daylight, minimise glare and incorporate electric lighting designs
- Place sensors and record accurate daylight levels for dimming controls
- Apply dimming profiles to lighting gains in ApacheSim to quantify energy reductions

FlucsPro

- Analyse light levels for defined lighting schemes, and calculate luminaires required
- Undertake daylight harvesting / dimming control assessments

FlucsDL

- Daylighting only capabilities of FlucsPro
- Perform point-by-point analyses to get daylight levels within a room and assess against thresholds

LightPro

- Design detailed lighting schemes and link to FlucsPro and RadianceIES simulations

9. Airflow

Simulate complex airflow without in-depth expertise. Produce graphics and animations to visualise and communicate results

MacroFlo

- Assess natural ventilation strategies at a macro level (bulk-airflow)
- Simulate thermal stack effects and wind-driven indoor airflows

- Combine with ApacheHVAC for analysis of mixed-mode operation
- Must be used in conjunction with ApacheSim

MicroFlo

- Ensure optimum ventilation and thermal comfort at the building, room and sub-room level
- Assess natural ventilation strategies at the micro level

10. HVAC

Size and model conventional, advanced, and building-integrated systems, plants & controls in detail

ApacheHVAC

- Simulate detailed typical & innovative HVAC systems with minimal effort
- Simulate simultaneously alongside building thermal analysis
- Pre-defined HVAC Wizard & System Prototypes saves significant input time
- Detailed analysis of HVAC energy saving measures
- Combine with MacroFlo for analysis of mixed-mode operation & achieve close to real-life results
- Advanced air side modelling flexibility for ventilated double skin facades and more
- Component based HVAC system mimics the control of a detailed system
- Must be used in conjunction with ApacheSim

ApacheLoads

- Calculate heat and cooling loads based on the ASHRAE Heat Balance method
- Links to SunCast and ApacheHVAC

ApacheCalc

- Calculate heat loss and gain calculations based on the CIBSE Guide

11. Egress

Ensure people can travel easily within your building and evacuate safely and quickly

Simulex

- Simulate occupant movement
- Keep people moving freely & avoid bottleneck
- Evaluate alternative fire evacuation escape routes

Lisi

- Simulate and assess different lift options

12. Value/Cost

Undertake efficient multidisciplinary value and cost studies

Deft

- Compare different indicators and design options at any stage to build in a comprehensive value engineering approach

CostPlan

- Prepare customised capital cost estimates

LifeCycle

- Take into account operating costs and tariff analysis



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Innovative, award-winning and in-depth suite of integrated analysis tools

Join World Leading Sustainable Design Experts – Start Using IESVE today!!

Examples of leading International companies which use our software include; AECOM, Arup, Atkins, BDP, Broadway Malyan, Buro Happold, Flack & Kurtz, Foster+Partners, Gensler, Aurecon, Guttman & Blaevoet, Mott MacDonald, Stantec, Syska Hennessy, WSP Group and WYG.

Link to Other IES Tools

Offering consistency across the design process, VE-Pro can be used in conjunction with any other IES Tool, either by different disciplines within the same organisation or across different organisations.

The capabilities of VE-Ware, VE-Toolkits, and VE-Gaia increase in detail and cover a wide variety of sustainable tasks and analysis for different levels of experience across every stage of a building's design and lifecycle.

Unrivalled Interoperability

Integrating Performance Analysis into the heart of the design process, IES offers an unrivalled interoperability with other CAD design and analysis tools.

Tool	Interoperability
Revit Architecture & MEP	Dedicated Plug-in Toolbar
SketchUp Free & Pro	Dedicated Plug-in Toolbar
Trelligence Affinity	Integrated Software Package
Gaia Geothermal	Two-Way Data Connection
Any with IFC Export	IFC Import Function (Beta)
Any with gbXML Export	gbXML Import Function
Any with DXF Export	DXF Import Function

Standards & Methodologies

IES tools meet the following approved international standards and can undertake the following methodologies.

Standards
ASHRAE 140: 2004 & 07, BESTEST, CIBSE TM33, EU EN13791: July 2000, EPACT Qualified

Methodologies
UK National Calculation Methodology
ASHRAE 55 calculation procedure
ASHRAE 90.1 Appendix G PRM calculation procedure (2004, 2007)
ASHRAE 62.1 calculation procedure
ISO 7730 calculation procedure

License Options & Pricing

As VE-Pro is modular it can be purchased in a variety of combinations; therefore cost depends very much upon configuration. This degree of flexibility ensures that you have the ability to pick and choose a solution which truly offers the functionality your business requires and which fits with the structure of your company.

Stand Alone, Single Office Network or Multiple Office Network license options are available either on an Annual rental agreement or via a Rolling License which allows you to purchase the software outright and support with maintenance payments in subsequent years.



Get a quote now!

Contact our expert sales team to discuss your requirements and get a personal tailored quote! Ask about our special offers, email: sales@iesve.com

"In this world of energy-related challenges, as well as concern about global environment and climate, no responsible participant in the building design process can afford to do without one or more of IES's products."

Jerry Laiserin
Industry analyst and consultant
Catalyst-Labs Review

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