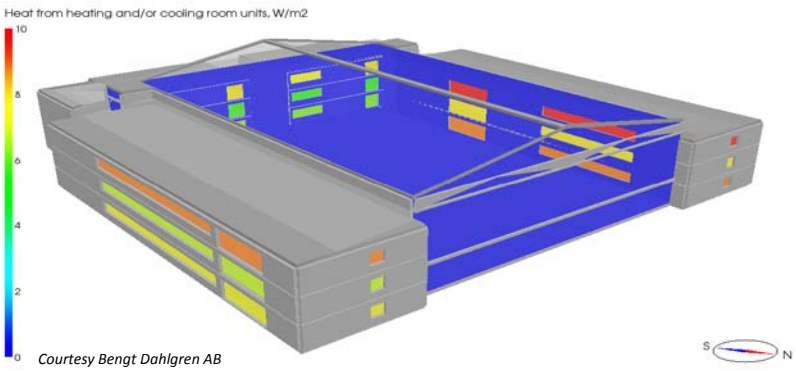


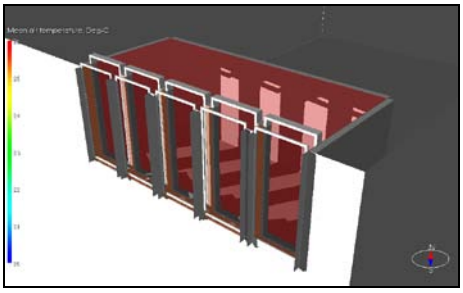
Courtesy Bengt Dahlgren AB

IDA Indoor Climate and Energy 4

IDA Indoor Climate and Energy 4 is a new type of simulation tool that takes building performance to another level. It accurately models the building, its systems, and controllers – ensuring the lowest possible energy consumption and the best possible occupant comfort.

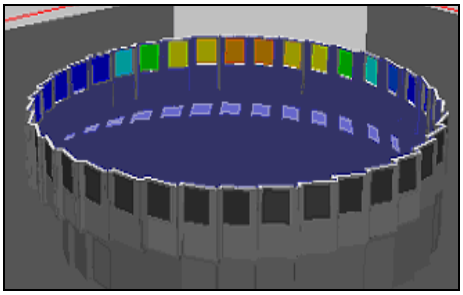
Overview

IDA Indoor Climate and Energy (IDA ICE) is an innovative and trusted dynamic multi-zone simulation application for study of thermal indoor climate as well as the energy consumption of the entire building. The user interface is designed to make it easy to build and simulate simple cases, but also to offer the advanced user full flexibility.

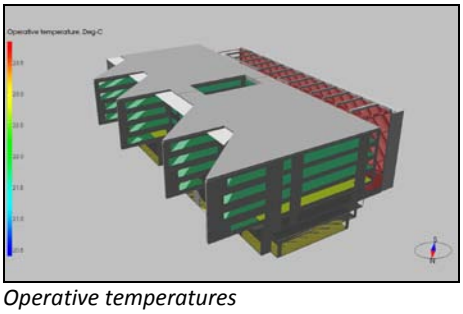

Sun patches *Image courtesy of Bengt Dahlgren AB*

What is new in Version 4?

IDA ICE 4 includes hundreds of new features and improvements compared to its forerunner, and at the core of the new release is a detailed real-time 3D environment. It is now possible to illustrate input parameters and to get animated results, including solar and shading graphics. The 3D environment also adds an overview during all steps of a project and provides impressive presentation graphics.


Surface heat fluxes and sun patches

New overview tables allow the user to get a complete overview of individual parameters of complex models. You can view and edit all important input data in tables and see e.g. useful totals for floor areas, u-values, external wall areas, etc.


Operative temperatures

A simple procedure for calculating and reporting cooling, heating, air demand and energy, together with a new version handling, makes it easy and efficient to compare different systems and results.

For more information, please contact:

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BIM Interoperability

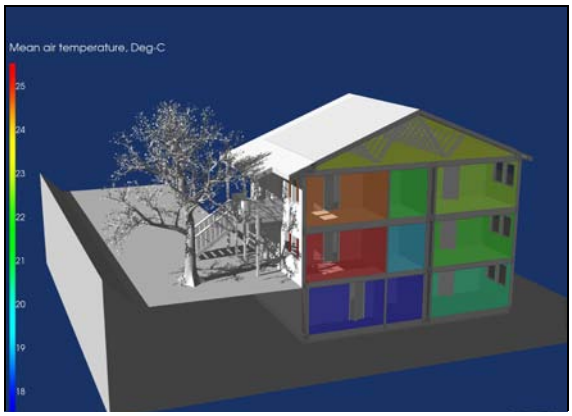
IDA ICE 4.0 can import all common 2D and 3D CAD files. It supports IFC BIM models, generated by, e.g. ArchiCAD, AutoCAD ADT, MagiCAD, Revit and many other tools.

Flexibility

Equation based modelling, using either the Modelica language or the Neutral Model Format (NMF), makes it straight-forward to quickly expand the software with new modelling capabilities, either by our in-house development team or by the experienced user.

Transparency

IDA ICE 4.0 is not a black box. We do not ask you to trust our secret model. Every underlying equation can be browsed, and every variable can be logged. For a single zone, this means that about a thousand temperatures, heat fluxes, CO_2-levels, control signals and other variables can be inspected by the critical user.



Shades, sun patches and air temperatures

Quality

An advantage of using a modern general-purpose variable time step solver, rather than the hand-coded component subroutines of all other available whole-building simulators, is that it automatically adapts to the nature of the problem. By choice of tolerance parameters, you can effectively eliminate numerical errors and see how the equations truly behave – even with a time resolution of seconds if needed.

Support

The IDA ICE user support is set up to facilitate the delivery of quality simulation results within a time constrained design project. There are support and development teams that will immediately attend to your enquiry.

IDA ICE 4

Features

	Standard edition	Expert edition
Multi-zone energy and carbon emission analysis	√	√
Dynamic cooling and heating load calculation	√	√
System and plant sizing	√	√
Thermal comfort analysis using view factors (PPD, Operative temperature)	√	√
Natural light computation	√	√
Solar penetration and shading animation	√	√
Natural and mixed mode ventilation (bulk air flow model)	√	√
Radiators, chilled beams and panels	√	√
3D visualization of input and results	√	√
3D realtime animation of results	√	√
Variable timestep solver with sub second resolution	√	√
Fully transparent model – log any variable	√	√
Multiple natural languages	√	√
Import BIM model geometry and data from IFC 2X3		√
Hydronic floor cooling/heating; ceiling radiant cooling/heating		√
Build free schematics of HVAC, control and envelope objects		√
Openable windows and doors		√
Multi-pane window model according to ISO 15099		√
Write your own models using the Neutral Model Format		√
Manage multiple case versions with automatic batch updates		√
Scripting, model diff, search and other productivity features		√

Editions and Pricing

IDA Indoor and Climate 4 is available in both commercial and educational editions, and in stand-alone and network versions.

For more information and prices, please contact us at info@equa.se or at +46 8 546 20 110 (Sweden).

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