

Cadna R[®]

Prediction of
Noise Levels inside Rooms



CadnaR is the powerful software for the calculation and assessment of sound levels in rooms and at workplaces

CadnaR at a Glance

CadnaR is the powerful software tool to help you deal with acoustic planning and noise mitigation in workplaces.

Introduction Video

You can view a short and informative presentation of the most significant functions of CadnaR at

www.datakustik.com

Intuitive Handling

The software is clearly arranged to enable you to build models and make simple calculations easily. At the same time you benefit from the sophisticated input possibilities as your analysis becomes more complex. Focus your time on the project and not on the software. All input and analysis features are easy and intuitive to handle.

Efficient Workflow

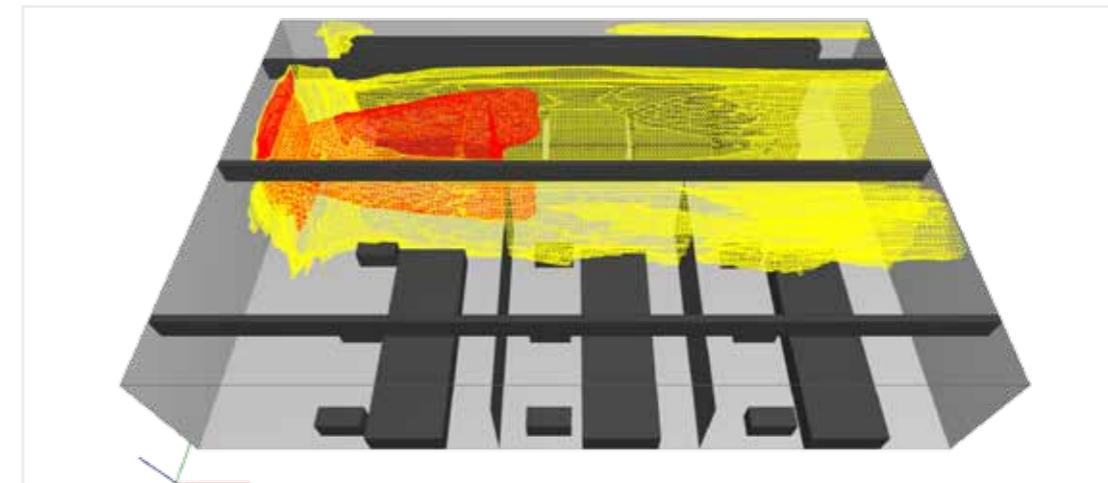
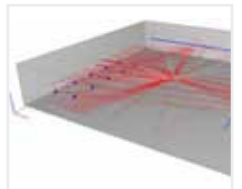
Change your view from 2D to 3D within a second. Multiply the modeling speed by using various shortcuts and automation techniques. Many time-saving acceleration procedures enable fast calculations of your projects.

Modern Analysis

CadnaR uses scientific and highly efficient calculation methods. Techniques like scenario analysis, grid arithmetic or the display of results within a 3D-grid enhance your analysis and support you during the whole planning and assessment process.

Characteristics

- calculation of the sound load at workplaces based on the emission parameters specified by the machinery manufacturer according to the EC guideline 2006/42/EC, and on the room geometry and the room design
- specific planning and assessment of noise level reduction measures like change in layout, screening by barriers, sound absorbing claddings of walls and/or ceiling, change of emission levels and more
- assessment of alternative scenarios in conjunction with the planning of offices, call centers, public rooms and areas etc.
- support when selecting sound absorbing products including cost-benefit analysis of sound absorbing ceilings and wall coverings by an implemented library of sound absorption product data
- check of the consequences of alternative planning scenarios by calculation of the level distribution on a grid
- complex room geometries can be modeled (with mirror image method or particle model)
- point, line, areas and box-type sources for modeling the geometry of machinery arrangements and other sources
- directivity of point sources available (in a simplified way or in steps of 5-degrees)
- barriers and box-type obstacles available as screening objects in the room
- consideration of the reflection/absorption at obstacles
- considering the local distribution of absorbers on all room surfaces
- input of the frequency dependent sound absorption coefficient or selection of a product-specific absorption spectrum for wall and ceiling areas (also for partial areas)
- visualization of the noise distribution in 2-dimensional and 3-dimensional view
- voxel grid (volumetric grid) with projection of level distribution on x, y and z planes
- calculation protocol for receivers



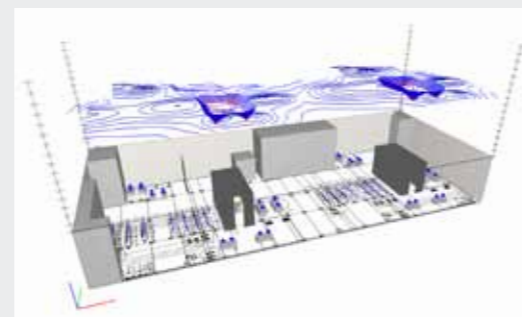
Calculation methods

The following calculation methods are available (also in combination):

- diffuse field
- mirror image method
- particle model
- VDI 3760

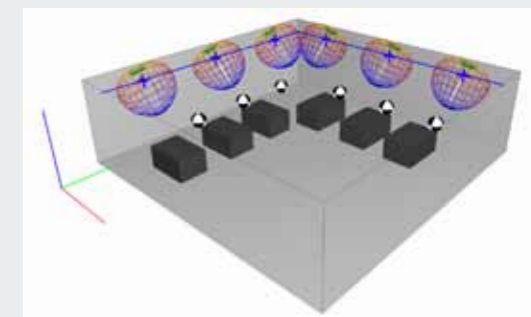
CadnaR – Absorption Data Library




- library with more than 700 spectra of the sound absorption coefficient according to ISO 354 (in octave and third-octave bandwidth)
- The library can be extended by user-defined datasets.
- product filter enabling to select datasets for a specific range of application (e.g. ceiling, wall) or for special requirements (e.g. humidity, hygiene, mechanical stability)



Data Import & Export

- editable spectral library with data of sound power level and absorption coefficient
- import/export of directivity data of point sources from/to text files
- import of receiver point coordinates from text files
- import of bitmap files serving as a background image for the room design
- export of the object geometry and the grid into DXF-format
- extensive printing options (Print Protocol, Print Report, Print Graphics via Plot-Designer)



Apply also our software Cadna  A[®] for the prediction and presentation of environmental noise and impact of air pollution. The functionalities and the handling of Cadna  R[®] and Cadna  A[®] are nearly identical and enable an efficient workflow in both fields of expertise.

Our Services

Hotline

Our experts are at your service. Simply call us or send us your file if you encounter any problems with your projects.

Seminars

We frequently provide basic and expert workshops in order to keep you updated with the latest developments.

Web Seminars

Learn about the latest developments and specific applications without even leaving your office. These online-based live workshops are an efficient way to keep informed about state-of-the-art modeling techniques.



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