BASTIAN®

The Building Acoustics Planning System

The most efficient software to predict
the sound insulation of buildings
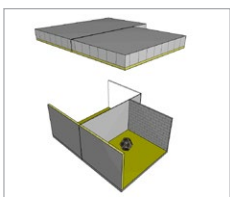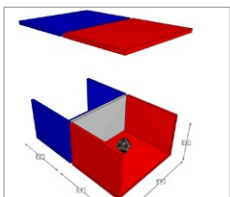according to EN 12354

DataKustik

BASTIAN

The planning software for building acoustics

BASTIAN is the software to calculate the airborne and impact sound transmission between rooms in buildings and the airborne sound transmission from the exterior. The calculations in BASTIAN are based on parts 1 to 3 of the European Standard series EN 12354, being adopted by the majority of the European countries as part of their national standards. Therefore, these calculation procedures form the common basis for the prognosis of sound insulation of buildings. BASTIAN can be applied to predict the acoustical performance between rooms in apartment and office buildings, between classrooms in schools, and between rooms in hotels or hospitals.

For more information about BASTIAN please visit www.datakustik.com.

Calculations

BASTIAN calculates the sound insulation in regard to the following aspects:

- airborne sound insulation between rooms according to EN 12354-1
- impact sound insulation between rooms according to EN 12354-2
- airborne sound insulation against outdoor sound according to EN 12354-3

BASTIAN enables calculations using the Detailed and the Simplified Models:

- calculations in third-octave band width and with single number ratings
- for all parameters to express building performance according to ISO 717-1 and -2 (including the spectrum adaptation terms) and
- for parameters STC (Sound Transmission Class),OITC (Outdoor-Indoor Transmission Class) and IIC (Impact Insulation Class) according to ASTM

⁘ BASTIAN-Databases

BASTIAN offers several databases supplying the acoustical data of a number of building elements. Databases are available independently from the calculation software. At present, the following BASTIAN databases are offered:

- BASTIAN specific data (1629 monolithic walls and floors)
- Manufacturer's databases: Saint-Gobain Isover (287 constructions), Rigips GmbH (41 constructions), Saint-Gobain Glass (83 constructions)
- Literature databases: Supplement 1 for DIN 4109, Germany 1989 (284 constructions), UBA-Text 11/85, Germany 1985 (96 constructions), Geluidwering in de Woningbouw, The Netherlands 1992 (333 constructions), Fasold/Sonntag/Winkler, Germany 1988 (314 constructions), ON V 32, Austria 2001 (186 constructions), SIA D 0189, Switzerland 2005 (420 constructions), PTB-Bericht Holzbau, Germany 2005 (154 constructions), US-American & Canadian data 2008 (408 constructions), CTE-Catalogue, Spain 2008 (385 constructions)

BASTIAN-Features

- calculation of the sound insulation based on data on the sound insulation of the transmitting elements and systems
- calculation of interior sound pressure levels for sound transmission from the outside
- doors, windows and air intakes can be inserted into the separating construction.
- additional flanking elements or sound transmitting systems such as ventilation and cable ducts
- junction types for combinations of heavy single and double-walls, lightweight walls and floors and flanking cavity walls
- easy generation of variants by duplication and inversion of room situations for changed preferences
- calculation of the structural reverberation time in-situ
- correction of radiation factor for flanking elements
- multi-lingual user interface in German, English, French, or Spanish.
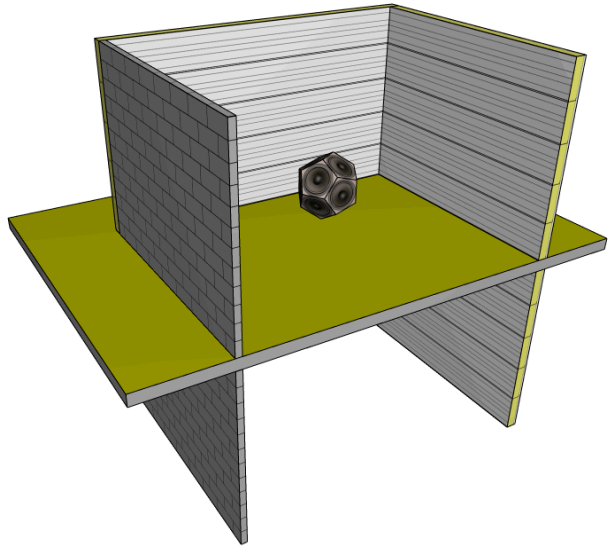
Data Import & Export

- database for constructions and sound sources expandable by the user
- import of sketch-files (BMP/JPG) for user-defined constructions
- import of noise immission spectra from CadnaA
- export of sketches for constructions
- export of all calculated data in MS-Excel-format
- configurable print-preview / print-outs
- print-preview / print-outs in 15 European languages
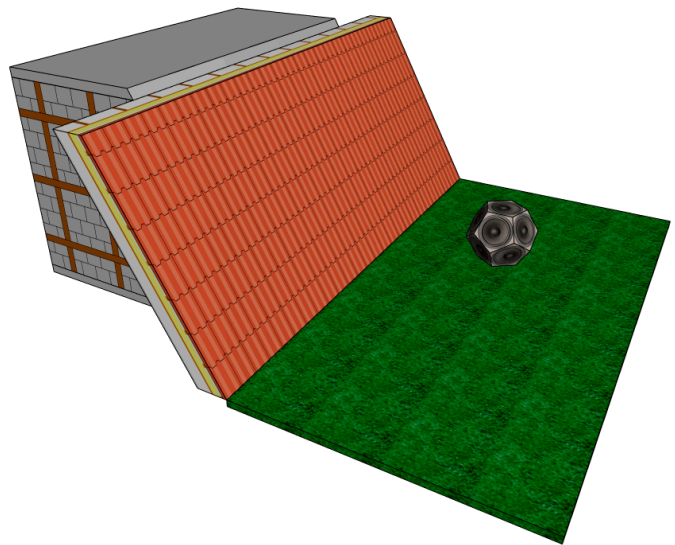
⊹ BASTIAN-Auralization

This optional extension BASTIAN auralization renders the calculated sound insulation audible for various indoor and outdoor sound sources in dependence of the sound absorption characteristics of the receiving room. BASTIAN auralization is a pure software solution not requiring any additional hardware besides the internal 16-bit sound card. Listen to the sound inside the receiving room with BASTIAN-Auralization!

- renders audible all calculation results for airborne sound transmission between rooms and from the outside
- no additional hardware required – pure software solution (requires just a 16-bit sound card)
- various interior (e.g. speech, stereo set, TV-set, several musical instruments) and exterior sound sources (e.g. road and air traffic noise, railway noise) and different kinds of receiving rooms available
- considers 5 directions of transmission by using the binaural head related transfer functions (HRTFs)

About DataKustik:

DataKustik is based in Greifenberg near Munich, Germany. We are one of the leading manufacturers of software for immission protection. Our state-of-the-art products for calculation and presentation of environmental noise, interior noise and building acoustics are powerful and rich in features but also user friendly. Experience in the field of noise dispersion, gained during more than 25 years of noise measurement and analysis, combined with the use of the latest software engineering methods are the basis of our outstanding products. DataKustik software is well-known and successfully applied in more than 50 countries all over the world.

We look forward to being in touch with you. For further information or any questions please do not hesitate to contact us or one of our distribution partners.

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