

VGSTUDIO

The Simple Solution for the Visualization of CT Data



Volume Graphics—Enabling Better Products

Volume Graphics customers all over the world in both industry and science know that Volume Graphics software gives them a decisive advantage: The ability to gain reliable insights and make better products. It's time you join them.

With the Volume Graphics product family, comprising VGSTUDIO MAX, VGSTUDIO, VGMETROLOGY, VGinLINE, and myVGL, you can carry out all kinds of analyses and visualizations directly on data from industrial computed tomography (CT).

Recognized Market Leadership

With a market share of around 80%, Volume Graphics holds a leading position in the industrial CT software industry, as recognized by the global business consulting firm Frost & Sullivan with the “2018 Global Industrial CT Software Market Leadership Award”.*

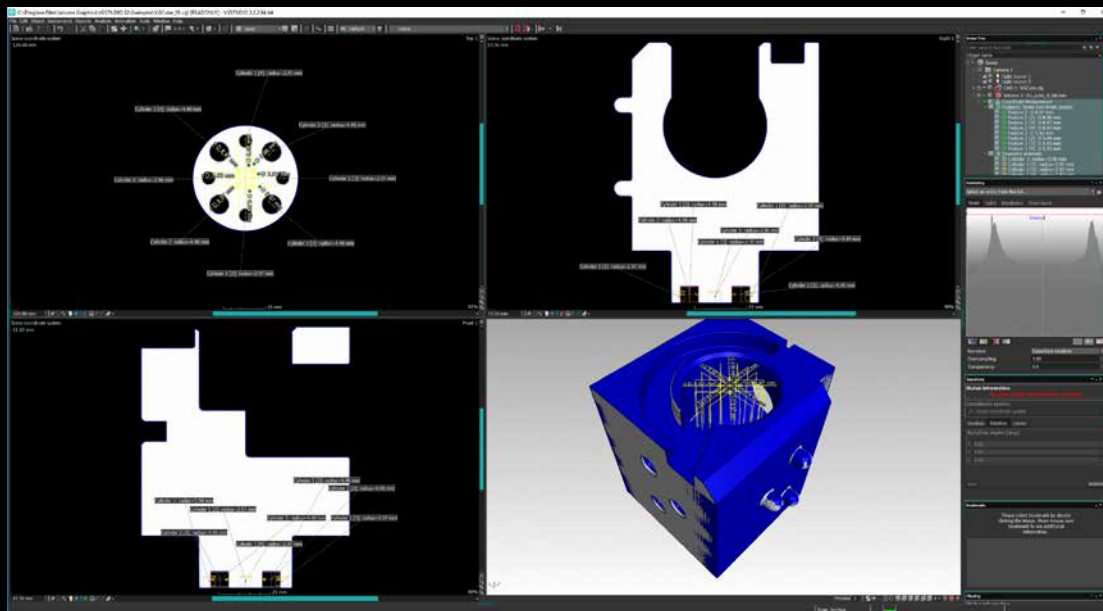


By choosing Volume Graphics, you can rely on more than 20 years of experience in the development of software for non-destructive testing. Today, global customers, e.g., from the automotive, aerospace, and electronics industries, use Volume Graphics software for quality assurance in product development and production.

Peace of Mind Included

When you choose Volume Graphics, you get the peace of mind that comes with knowing that you have a team of experts with a deep understanding of your tasks at your side. This begins when our sales experts help you configure your Volume Graphics software and continues long after the purchase: an optional update/service agreement keeps your software up to date, a competent team of specialists with short response times is there to support you, and training courses at VG Academy get you up to speed in using your software. In addition, our consultants are at your side, especially when it comes to automating complex analysis tasks.

* Source: Frost & Sullivan Award Write Up www.volumegraphics.com/en/frost



The user interface of VGSTUDIO is designed to simplify the visualization of your CT data in 2D and 3D.

VGSTUDIO is the ideal choice for visual quality inspection in industrial applications, e.g., in the electronics industry, but also for the visualization of data in fields of academic research such as archaeology, geology, and life sciences.

VGSTUDIO covers the entire workflow, from the precise reconstruction* of three-dimensional volume data sets using the images taken by your CT scanner to visualization (in 3D and 2D) and the creation of impressive animations.

A Sample of the Features in VGSTUDIO

Visualization

> 3D visualization of even very large CT data sets— with almost no limit on data volume.

- > Real-time ray tracing for a photo-realistic look.
- > Combined visualization of voxel and polygon data, including textured meshes.
- > Arbitrary orientation of 2D slices.
- > 2D slice rotation view around a customizable axis.
- > Gray-value classification of a data set.
- > A wide variety of 3D clipping options.
- > Unrolling of objects or leveling of freeform surfaces in a 2D view.
- > Combination of consecutive slices into a single 2D view.

Analyses

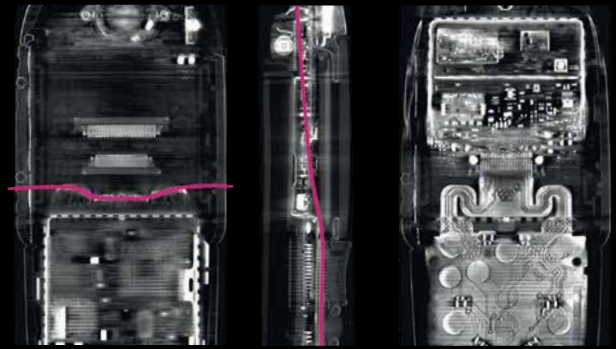
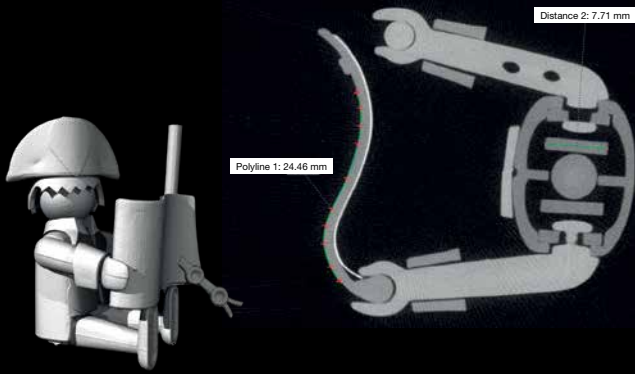
- > Data quality analysis according to the ASTM E 1695 standard to monitor the CT scan quality over time.

Bookmarks

> Save 3D and 2D views, clippings, selected coordinate systems, and rendering settings as bookmarks.

- > Switch between bookmarks and between different views within your project easily with one click.
- > Include views from bookmarks in reports.

* The CT Reconstruction Module is not part of the basic edition of VGSTUDIO and must be purchased separately.



Use of measurement instrument

Example of the use of non-planar view. Left and middle: regular slice view, the line reflects the path of the non-planar slice, right: non-planar view

Data Set Alignment

- > Simple 3-2-1 registration.
- > Simple registration.

Measurement Instruments

- > **Distance, polyline length, and angle measurement instruments.**
- > Snap mode to snap instruments to the surface for an easier use of measurement instruments.

Videos/Animations

- > **Create impressive animations of your volume data with just a few clicks.**
- > Automatically generate the camera trajectory between two or more key frames.
- > Save your animation as a movie or create an image stack.

Display of Analysis Data & Reports

- > **Display all analysis data generated with VGSTUDIO MAX or VGMETROLOGY.**
- > Use the export and reporting features and save results in the VG Report Format (.vgrf) and as customizable test reports, e.g., in a .xlsx or .pdf file.

Data Import/Export

- > **Import data from most major industrial CT systems.**
- > Import standard image formats (such as .bmp, .jpg, .jp2, .raw, .tif) as well as DICOM and DICONDE data.
- > Open metrology projects created with VGMETROLOGY or VGMETROLOGY ES (.mvgf files).
- > Read and write .vgarchive files that combine all files, folders, and even source data.
- > Reduce data set sizes when importing data on less powerful computers.
- > Save memory by opening data sets with unloaded gray values.



Create stunning animations with VGSTUDIO.

CT Reconstruction Add-On Module *

- > **Supports cone beam, fan beam, parallel beam, planar, and helical (spiral) CT.**
- > Exports reconstructed volume data sets directly as VG projects.
- > Uses one or multiple GPUs to speed up calculations by incorporating OpenCL.
- > Reconstructs even very large data sets (limited only by the PC hardware used).
- > Provides a real-time, single slice preview.
- > Uses robust automatic scan geometry corrections.
- > Reduces metal and ring artifacts.
- > Allows an artifact-free ROI (Region of Interest) reconstruction.
- > Extends the field of view by shifting the detector or rotation table.
- > Improves the image quality using the standard Volume Graphics beam hardening correction or the optional Iterative Artifact Reduction (IAR) **.

Licenses and Languages

- > Available as node-locked or dongle license.
- > Available in six languages: English, German, French, Japanese, Chinese, and Korean.

Upgrade Options

If your needs grow, you can upgrade VGSTUDIO to VGSTUDIO MAX, giving you access to all analysis add-on modules: Coordinate Measurement, Nominal/Actual Comparison, Wall Thickness Analysis, Porosity/Inclusion Analysis, Extended Porosity/Inclusion Analysis, Fiber Composite Material Analysis, Foam/Powder Analysis, Structural Mechanics Simulation, Transport Phenomena Simulation, Manufacturing Geometry Correction. ***

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** Technology licensed by Fraunhofer EZRT

*** Add-on modules are not part of the basic edition of VGSTUDIO MAX and must be purchased separately.



**VOLUME
GRAPHICS**

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Volume Graphics GmbH has subsidiaries in the US, Japan, China, and Singapore. To broaden our global footprint even more, we can rely on a worldwide network of distributors.



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