3DGage™

Metrology Made Easy

The Model Based Metrology Solution for Inspection, Education and Reverse Engineering

Measure "Inspect1" (P)

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POWERED BY VERISURFX

3DGage™

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3D Digital Inspection Made Easy

The portability and affordability of Portable CMM's combined with 3D model based software enables manufacturers to quickly implement lean inspection practices right on the shop floor that yield real improvements in production and quality while reducing costs.   These proven manufacturing benefits result in rapid return on investment and are the reason why 3D model based measurement systems are revolutionizing manufacturing around the world.

To help your organization achieve its business goals Verisurf has designed the 3DGage as a complete yet configurable hardware and software solution that will accelerate your 3D measurement and reverse engineering projects. Every system is customized to your specific application and a 3DGage representative will help you configure a system that is right for your shop.

Complete Reverse Engineering Solution

The 3DGage Portable CMM powered by Verisurf X Reverse Engineering software is a complete solution for automating the creation of 3D CAD models from existing parts. Easy to use measuring modes such as; Probe Measuring and Probe Scanning combined with powerful Point Cloud & Mesh Editing, Surface Modeling and Optional Solid Modeling make quick work out of the most complex jobs.

Probe Measuring: In probe measuring mode the 3DGage automates the measurement of parts directly into CAD from basic construction features such as points, lines, circles, splines, ellipses and slots to advanced 3D primitives including planes, spheres, cylinders, and cones.
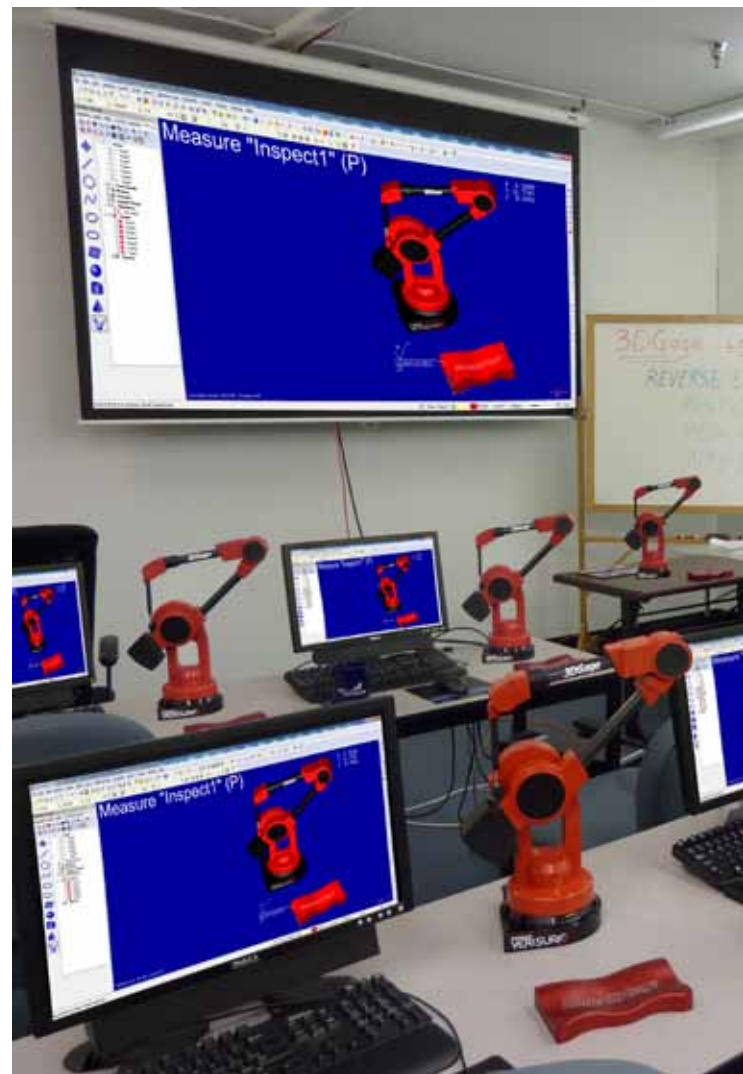
Probe Scanning: With Verisurf X probe scanning technology the 3DGage can scan 3,000 points per minute and create 3D point clouds of complex surface profiles, undercuts and cavities and is usually more accurate and less expensive than non-contact scanning.

Point Cloud & Mesh Editing: The Reverse Engineering configuration can import, filter and edit point clouds and STL mesh surfaces. Editing functions include; registration, smoothing, refining, hole filling, slicing, cropping, advanced feature fitting and auto NURB surfacing.

Surface Modeling: The 3DGage includes robust surface modeling including the creation of parametric and NURB surfaces using loft, ruled, revolved, swept, draft, and offset methods. Trim single and multiple surfaces to curves, planes, and surfaces and easily extend and split surfaces.

Solid Modeling: As an option the 3DGage can also create solid models including extruded, revolved, and swept solid construction techniques in addition to shelling, filleting, and chamfering. Solid features are managed in a history tree for easy selection and editing.

With its powerful software, training materials, affordable price and robust design the 3DGage is a great way to add model based inspection and reverse engineering to your CAD/CAM classroom.

Manufacturing Education

A skilled workforce technically educated in Quality Assurance, Portable Metrology, Manufacturing Inspection and Reverse Engineering processes is vital to compete in today's global economy and the 3DGage extends your technical education program to support a more complete product development and manufacturing lifecycle and helps your students fill good jobs at high tech companies. The 3DGage immediately extends your 3D design and manufacturing curriculum to include modern Quality Assurance, Portable Metrology, Manufacturing Inspection, Geometric Dimensioning & Tolerancing and Reverse Engineering education into your STEM program. If you are a technical educator please ask about the 3DGage Education Program.

Software Configurations

Inspection- Powered by Verisurf software the 3DGage supports both modern model-based measurement techniques and accelerated traditional blue print measurement processes. Inspection includes the import of any CAD model, creation of model associative GD&T, automated alignment of 3D CAD models to physical parts and real time probe position with deviation display.

Inspection Pro- Includes the functionality of Inspection with the addition of advanced iterative, least squares, 6 degree of freedom best fitting alignment, auto inspection programming, custom color deviation plots, results ballooning and reporting.

Reverse Engineering- Digitize parts directly into CAD. Create, import, filter and edit point clouds. Create, import and edit STL mesh surfaces with hole filling, slicing, feature recognition and auto surfacing. Create and edit NURB surfaces including extruded, revolved and lofted surfaces. Create and edit CAD features including planes, holes, and pockets. See the REVERSE brochure for more detail.

Inspection Pro & Reverse Engineering – Bundles all the functionality of Inspection Pro and Reverse Engineering.

Portable CMM Configurations

Standard- The Standard 3DGage Portable CMM is assembled from precision machined aluminum base and joints with carbon fiber tubing to minimize temperature effects. Portability is enhanced by its lightweight 3.6 kg (7.9 lb) construction, international power supply and plug & play USB connectivity. The Standard system has a 1.27 m (50 in) hemispherical working diameter with dimensional positional accuracy of +/- 0.23 mm (0.009 in).

Extra Long Reach- The Extra Long Reach option is for measuring larger items and increases the total hemispherical measurement diameter to 1.67 m (66 in).

High Precision- The High Precision option is for applications requiring higher accuracy measurements and features reinforced base and joints that reduce deflection and increase accuracy.

Schedule a demonstration today

Rapid 3D inspections will take machine shop productivity and profits to a whole new level. Contact 3DGage™ today to schedule a demonstration. Call toll free **866-340-5551** or visit **www.3DGage.com.**

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System Specifications

Software Configurations Windows 7, 32 or 64 bit:
- Inspection
- Inspection Pro
- Reverse Engineering
- Inspection Pro & Reverse Engineering

Standard Software File Formats:
- ACIS (*.SAT;*.SAB)
- Alibre Design (*.AD_PRT;*.AD_SMP)
- ASCII (*.TXT;*CSV;*.DOC)
- AutoCAD (*.DWG;*.DXF;*.DWF)
- Cadkey (*.CDL)
- HPGL (*.PLT)
- IGES (*.IGS;*.IGES)
- Inventor (*.IPT, *.IAM, *.IDW)
- KeyCreator (*.CKD)
- Mastercam (*.MC8 through *.MCX-6)
- Mastercam Educ (*.EMCX through *.EMCX-6)
- Parasolid (*.X_T;*.X_B;*.XMT;*.XMT_TXT)
- Rhino (*.3DM)
- SolidEdge (*.PAR;*.PSM:*.ASM)
- SolidWorks (*.SLDPRT;*.SLDASM;*.SLDDRW)
- SpaceClaim (*.SCDOC)
- STEP (*.STP;*.STEP)
- Stereolithography (*.STL)
- VDA (*.VDA)

Optional Software File Formats:
- CATIA V4 Translator (*.MODEL;*.EXP)
- CATIA V5 Translator (*.CATPART;*.CATProduct)
- Siemens UG/NX Translator (*.PRT)
- Pro/E Translator (*.PRT;*.ASM)

Portable CMM Configurations:
- Standard (STD)
- Extra Long (XL)
- High Precision (HP)
- Extra Long & High Precision (XLHP)

Standard CMM Accessories:
- Set-up Guide
- 3DGage Hardware Manual
- 3DGage Software Manual
- Training Part
- International Power Supply with Cable
- USB Cable
- Measurement Switch with Cable
- Standard Probe Kit includes: 6mm Master, 6mm Working, 3mm Working, Point Probes, 15mm Extension and Change Tool
- Calibration Fixture

Optional CMM Accessories:
- Rugged Wheeled Case
- Training Classes
- Factory Calibration & Certificate
- Optional Probes; 1mm, 2mm, & 5mm Ruby Probes.

Standard Probe Kit

Shipping Configuration

Portable CMM Configurations	Standard STD	Extra Long XL	High Precision HP	Extra Long High Precision
Length	.63 m (25 in)	.84 m (33 in)	.63 m (25 in)	.84 m (33 in)
Work Sphere	1.27 m (50 in)	1.67 m (66 in)	1.27 m (50 in)	1.67 m (66 in)
Two Dimensional Single Point Accuracy Test	+/- 0.23 mm (0.009 in)	+/- 0.30 mm (0.012 in)	+/- 0.0508 mm (0.002 in)	+/- 0.0762 mm (0.003 in)
CMM Weight	3.6 kg (7.9 lb)	4.1 kg (9.0 lb)	5.4 kg (12.0 lb)	6.0 kg (13.3 lb)
Universal Power Supply	100-240 V AC, 50/60 Hz			
Operating Temperature	15° C to 35° C (59° F to 95° F)			
Storage Temperature	-20° C to 70° C (-4° F to 158° F)			
Operating Humidity	10-90% non-condensing			

Optional Rugged Wheeled Case

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Phone: 866-340-5551 ■ www.3DGage.com

POWERED BY **VERISURFX**

The world's leading supplier of model-based inspection software.

Authorized 3DGage Reseller