pc·dmis

PC-DMIS
Software Products for
Coordinate Measuring Machines

The World's Leading Metrology Software

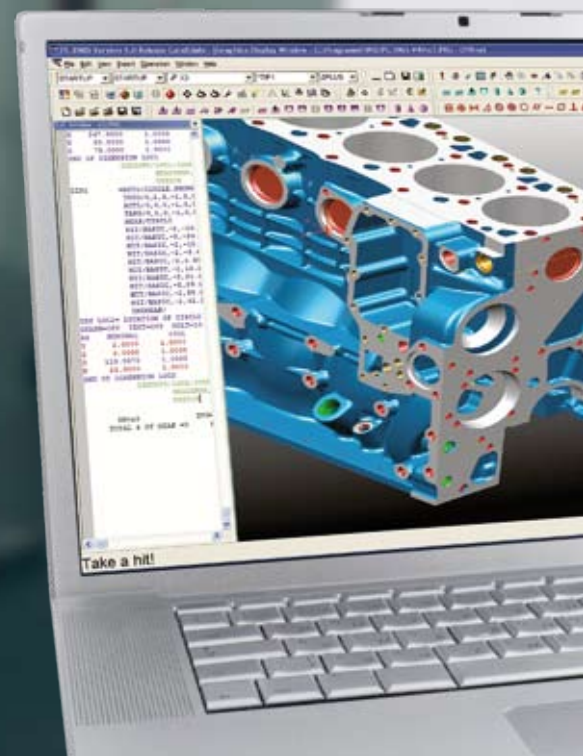# ◇ HEXAGON
METROLOGY

pc·dmis

The World's Leading Metrology Software

Wilcox Associates' PC-DMIS® is the world's leading metrology software. It is used across the globe by companies of every size to measure parts of all shapes, sizes and tolerances. PC-DMIS makes it easy to set up and check everything from straightforward, prismatic parts to the most complex contours and surfaces. And because it meets all international standards for CMM software, you can always be confident of your results.

Fifteen years ago, PC-DMIS revolutionized CMM software by linking CAD with CMMs. Thanks to continued technological advancement, the software now offers a variety of methods for melding CAD models into your inspection process, from simple yet powerful translators to Direct CAD Interfaces® (DCIs) that let you work directly on your native CAD models.

PC-DMIS is available as standard equipment or as an option on all new Hexagon Metrology coordinate measurement machines. It can also be easily installed on existing Hexagon machines, or as a plug-in module for most non-Hexagon CMMs.

PC-DMIS software is available in three different versions (PC-DMIS PRO®, PC-DMIS CAD® and PC-DMIS CAD ++®) and offers a variety of options packages to provide the most comprehensive solution to metrology applications on the market.
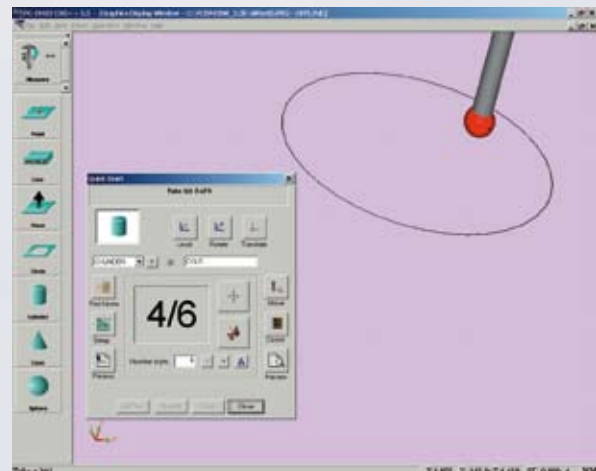
pc•dmis *pro*

PC-DMIS PRO is the baseline version of PC-DMIS offering a full range of measurement, evaluation and reporting functions. It's ideal for customers who don't use CAD in their inspection process.
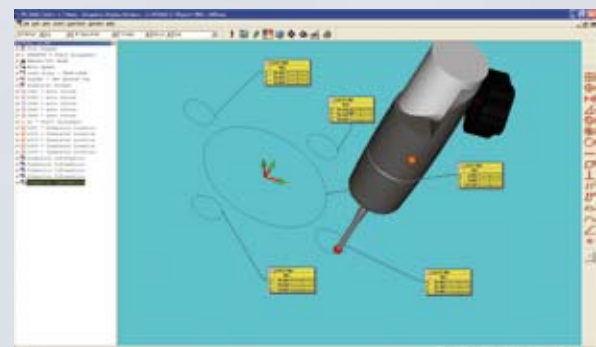
For the novice, PC-DMIS PRO includes a set of easy-to-use "Quick Start" routines. These automate many of the basic metrology functions to help new users get up and running as quickly as possible. More experienced users can measure even the most challenging parts with PC-DMIS PRO by taking advantage of its complete set of programming tools, graphical and textual reporting capabilities and links to third party software.
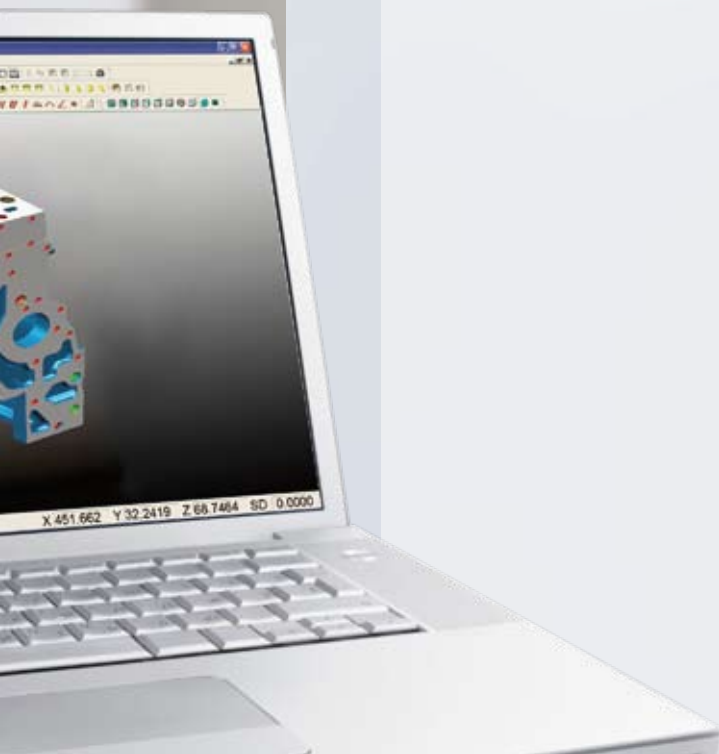
With PC-DMIS PRO, you can:

- Make quick checks or program complex parts using a powerful, flexible GUI.

- Analyze measurement data using a rich selection of PTB certified measurement algorithms.

- Report inspection results using built-in templates or customize your own reports.

- Develop tailor-made, high-level language routines.

- Configure the toolbars and menus according to specific needs and user preferences.

Measure parts easily without CAD

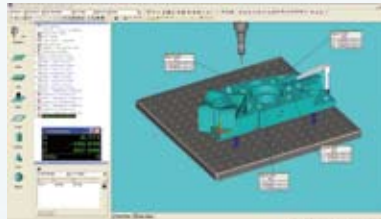*Graphically display measurement results*

pc·dmis *cad*

Supports ultra high accuracy probing technology

Program directly off CAD models

Graphically view and edit probe paths

Over fifteen years ago, Wilcox Associates revolutionized the industry by turning the tedious, error-prone job of writing inspection programs into a simple matter of pointing and clicking on CAD models. That was just the beginning.

Today, PC-DMIS CAD works with CAD models of all types, from basic 2.5D wireframes to the most complex solid models. With its easy-to-use GUI, accurate machine modelling and built-in QuikFixture™ module, PC-DMIS CAD makes short work of developing, testing and debugging inspection programs both on-machine and off-line.
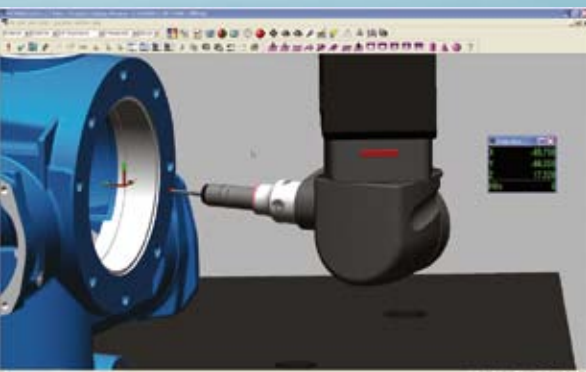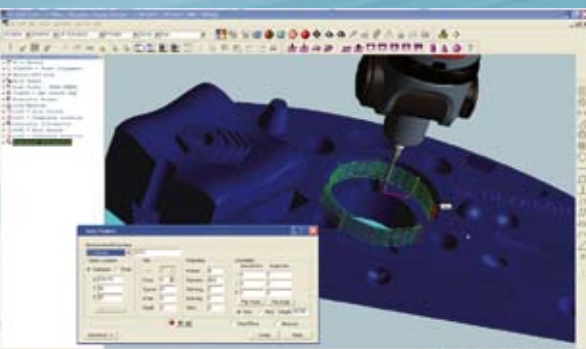

Built in QuikFixture library

PC-DMIS CAD imports and exports CAD information in most internationally accepted formats. Optional modules are available for even tighter integration of CAD and CMM systems.

In addition to the capabilities of PC-DMIS PRO, PC-DMIS CAD allows users to:

- Link to CAD bi-directionally using built-in DES, DWG, DXF, IGES, STEP, STL, VDAFS, and XYZIJK translators.

- Easily work with even the largest CAD files with an improved graphics engine employing the latest technology.

- Change probe paths, add and delete hits, and modify measurement parameters with the click of a mouse.

- Use new graphics-based tools to manage part programs; take fine control over variables like model lighting, transparency, and texturing; create cut planes that give direct access to areas of interest and highlight surfaces using Mouse Over Highlighting (MOHL).

- Operate directly on CAD models without translation using a Direct CAD Interface (DCI) technology or translate into and out of the native CAD format using a Direct CAD Translator™ (DCT).

- Manipulate CAD models using tools for: mirroring, adding layers, removing, hiding and changing entities and adding grids.
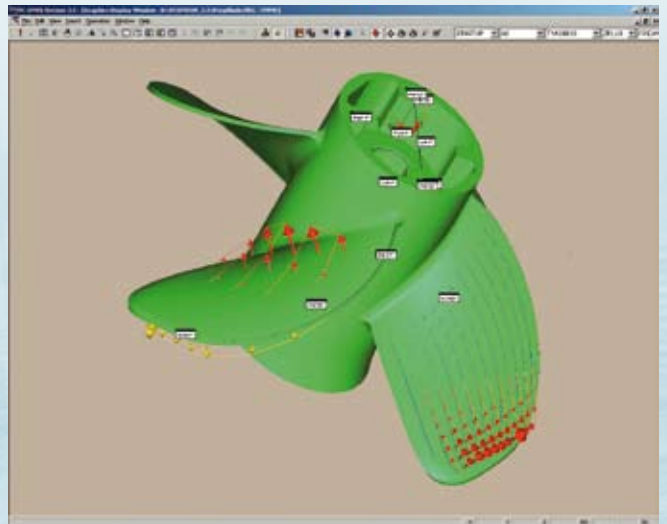
- Easily reverse-engineer parts.

pc•dmis *cad ++*

For the most demanding scanning and measurement applications, Wilcox Associates offers PC-DMIS CAD++. This software lets users measure the most complex parts with unsurpassed speed and accuracy, and provides full control over a range of scanning devices.
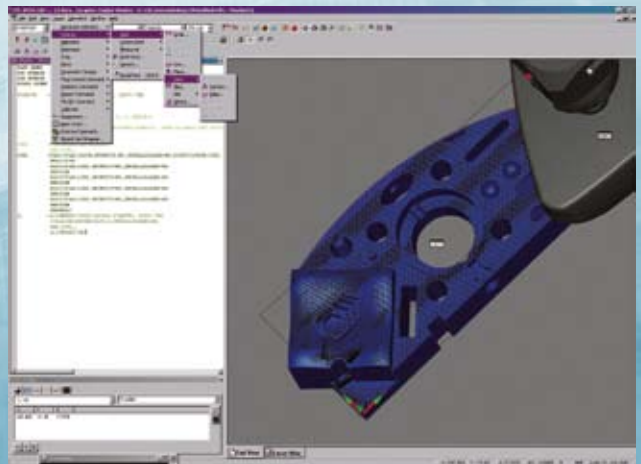
In addition to simplifying measurement of contoured parts like blades, dies, molds and models, PC-DMIS CAD++ has a complete suite of thin-walled (sheet metal) functions. With strong roots in the automotive industry, these routines make inspecting these difficult parts fast and trouble free.

Along with all the capabilities of PC-DMIS PRO and PC-DMIS CAD, PC-DMIS CAD++ lets you:

• Quickly define scan paths and extract nominal values and vectors.

• Scan and measure contoured and sheet metal parts using Touch Trigger Probes; Analog Probes and Laser Probes and take full advantage of CW43L servo wrists.

• Use any of a full range of scanning methods.

• Easily measure thin-walled features using pre-defined routines.

• Automatically scan and reverse engineer unknown surfaces and features.

• Effectively use your manual CMMs to scan both thin-walled and contoured parts.

• Dynamically compensate for variations in sheet metal parts using a wide variety of specialized functions.

• Effortlessly align the most complex parts using iterative alignments.

• Analyze your results in either 2D or 3D.

Analyze complex, contoured parts

Interface to non-contact, laser scanners

Reporting

Each PC-DMIS CMM product (PRO, CAD and CAD++) includes its own upwardly compatible and fully scalable set of reporting capabilities:

• Produce graphical reports of parts and features using built-in tools for mapping contours, zone reporting, coloring coding and analyzing features, etc.

• Store results in an open-architecture database or export them in a variety of formats, including Microsoft® Excel.

• Analyze manufacturing data and send feedback directly to devices on the shop floor.

• Use macros and HLP (High Level Programming) Languages to develop custom algorithms for evaluating, reporting on all aspects of your manufacturing operations.

• Direct output to the PC-DMIS Web Reporter® and send it immediately as it becomes available.

• Enjoy full control over report format and contents using Hyper Reports™.

• Easily configure tabular reports that conform to company and customer standards.

• Monitor your processes using the DataSuite™ family of SPC products

Powerful DataPage SPC analytical tools

Upgrades

Hexagon Metrology offers a choice of upgrade packages for all brands of its CMMs and for most other manufacturers' equipment.

PC-DMIS software-only retrofits let you:

• Interface directly to existing hardware without modifying it, significantly improving measurement capability at minimal cost. Typically, retrofits install in less than a day, and you can still run existing part programs.

• Take full advantage of EMS by sharing programs and data with other EMS components.

• Link your CMM to your CAD system. Use any of PC-DMIS generic translators, DCTs and DCIs.

• Get software that grows with you. Over sixty engineers are busy today developing the software that you'll need three years from now.

• Join 20,000 other users and upgrade to the world's most popular CMM metrology software.

PC-DMIS software/hardware upgrades give you the benefits of PC-DMIS, and they let you:

• Bring your equipment to current standards. Hexagon Metrology offers innovative hardware upgrades for manual and DCC machines in all price ranges.

• Enhance the speed and accuracy of your CMM. New hardware and sophisticated volumetric compensation techniques vastly improve machine performance.

• Interface to the newest measurement devices. Hexagon controllers support equipment such as scanning probe heads, non-contact probes, fixturing systems and the like.

• Improve maintainability and reliability. Eliminate the problems and expense associated with finding the parts and expertise needed to fix obsolete equipment.

DCI/DCT

While PC-DMIS CAD and CAD++ include built-in translators into and out of most standard CAD formats, some customers need more. For users requiring even closer integration between the measurement equipment and their CAD systems, there are two options: Direct CAD Interfaces (DCIs) and Direct CAD Translators (DCTs).

DCIs directly link PC-DMIS to CAD systems. There is no tighter connection possible between your CAD system and your CMM.

With DCIs, you can:

• Create part programs directly on your native CAD models, with all geometry represented using the CAD system's internal algorithms.

• Evaluate measurement results directly against the native CAD geometry.

• Eliminate any translations of geometry between CAD and CMM formats.

• Save time by doing away with the need to translate large files into and out of different formats.

• Connect to many popular CAD systems, including Unigraphics, Solidworks, Pro-E, CATIA V5, IDEAs and ACIS.

• Reduce version control problems with direct access to the latest revision of your models.

DCTs tighten the connection between PC-DMIS and CAD even when you don't have direct access to the CAD system by allowing you to:

• Transform CAD files directly into and out of PC-DMIS format without using a neutral format like IGES to move files.

• Use your native CAD model without consuming a CAD license.

• Accept customer files in their native format without having to purchase an additional CAD system.

• Transform files from a variety of CAD systems, such as Unigraphics, Pro-E, and CATIA V5.

STI+

Wilcox Associates' new Single Touch Interface™ (STI+) makes it easy to add custom front ends to PC-DMIS.

STI+ is available as an option for PC-DMIS PRO, CAD, and CAD++.

STI+ customers can:

• Create custom user interfaces without needing high-level programming skills.

• Guide users effortlessly through complex operations with easy-to-use menus, prompts, and automatic routines.

• Take full advantage of PC-DMIS's capabilities while isolating the inspectors from complexities.

• Build in routines to manage hardware devices; automate machine startup, error recovery, and probe calibration; and support external devices like bar code readers for part recognition.

• Add job and part specific help files

Visually alert operators to problems

Wilcox

Founded in 1990, **Wilcox Associates, Inc.** is the developer of PC-DMIS, the world's leading CMM software, and Enterprise Metrology Solutions (EMS), a tightly integrated suite of software products focused on the collection, evaluation, management and presentation of manufacturing data. These products allow manufacturers to quickly capture dimensional data, analyze it and act on it to reduce scrap, improve throughput and reduce costs.
Wilcox Associates, Inc. employs over 100 talented software engineers located worldwide working in a collaborative environment. They are dedicated to bringing our customers the best metrology software technology possible.

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