pc•dmis Portable

Leica Geosystems

PC-DMIS Portable
for Leica Geosystems Laser Trackers

PC-DMIS PORTABLE

www.leica-geosystems.com/metrology

HEXAGON METROLOGY

Graphical user interface

PC-DMIS Portable – a part of the EMS solution

Standardizing Metrology operations

Part of a bigger picture: The EMS (Enterprise Metrology Solutions) product suite is a tightly integrated family of software products with one focus: to give our customers the ability to effectively collect, evaluate, manage and present the information coming from their manufacturing operations.

EMS streamlines and facilitates metrology processes. It presents users a consistent look and feel across a wide range of measurement devices using a variety of sensors. It consolidates the multiple data streams coming from these sources into one. It provides a powerful set of capabilities for analyzing this data. And, it reports the results in a range of formats suitable for diverse audiences.

With EMS, customers can make full use of their manufacturing data. All of the modules work together seamlessly. Manufacturers have what they need to reduce scrap, to improve throughput and to shrink costs, EMS lets them create truly lean manufacturing systems.

Virtually any measurement sensor can be operated with the PC-DMIS product suite - customers benefit from a company wide inspection software solution for all measurement sensors. PC-DMIS is available in 14 languages.

System operators can be deployed on different systems and are therefore more flexible. Besides, training efforts are reduced.

PC-DMIS Portable is offered in two versions:

- **PC-DMIS Pro** is a fully featured metrology software and the perfect choice for non-CAD applications.
- **PC-DMIS CAD++** extends the range of applications to any CAD related measurement task and provides special tool kits for sheet metal inspection and scanning or point cloud management.

PC-DMIS Portable is the perfect choice for operators working with:

- Leica Geosystems Laser Trackers,
- Leica T-Probe, the walk-around-CMM,
- Leica T-Scan, the handheld high-speed scanner.

pc•dmis Portable

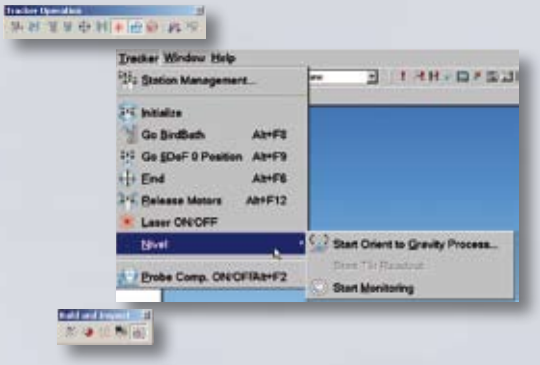
The State of the Art Laser Tracker interface
supports all existing Laser Tracker models based on the Leica emScon interface.

Predefined toolbars give access to the most important settings, operational and measuring functionalities and allow customizing individual settings.

The tracker status bar gives instant feedback about the overall system status, active probes and stations as well as any environmental parameters such as temperature, pressure and humidity.

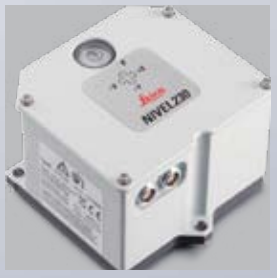
Software aids like RMS quality checking and automatic probe recognition and file generation help minimize operating errors.

Leica Geosystems' versatile range of accessories like the AT MeteoStation, weather monitor, nivel inclination sensor, overview camera and a wide range of reflector supports and hidden point devices are smoothly integrated and easy to use.



State of the art laser tracker interface including:

- *Support for all existing Tracker models based on the Leica emScon interface*
- *Tracker status bar*
- *Tracker parameters pages*
- *Tracker specific toolbar sets*



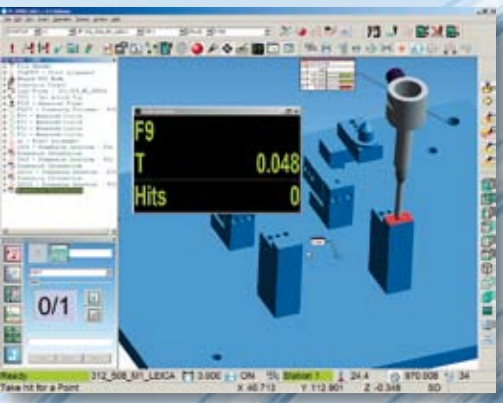
Leica Geosystems Accessories for Laser Trackers are easy to integrate:

- *Overview camera*
- *AT MeteoStation*
- *Nivel inclination sensor*
- *Broad range of reflectors*

PC-DMIS Portable: Simplifying daily measurement processes

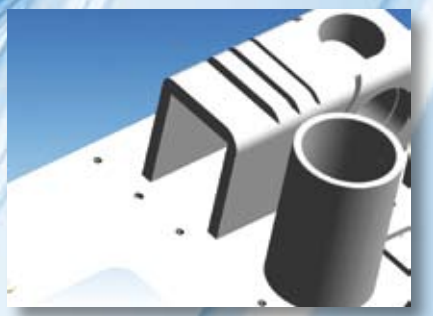
True one-man operation system

One person is enough. Measurements of an object require minimal interaction thanks to remote control use over the full working range or programmable Leica T-Probe buttons. Feedback features such as large flexible dialogues or customizeable sound events help to stay at the large scale object an concentrate on the measurement task. When using the powerful guess mode, PC-DMIS even recognizes which kind of object the operator is currently inspecting – fully automatic.



Build Inspect Processes

Build Inspect Processes have never been easier before.
PC-DMIS offers a powerful but easy to use set of functions from a predefined toolbar. Build/Inspect against CAD or a nominal element in a predefined sequence or use the PC-DMIS Any Order capabilities.
Benefit from the fully customizeable readout window showing all relevant information at a glance.
Change from position checks to CAD surface inspection with one single click.
Build tools with numerical and graphical assistance or integrate fully automatic, unattended inspection routines in DCC mode as fast as never before.



Find nominals from CAD

No more manual definition of features needed! Once aligned, PC-DMIS automatically finds Nominals and IDs from existing CAD entities while measuring any feature type. This reduces the time required to generate part inspection significantly and eliminates data entry errors.

Leica Absolute Tracker, Leica T-Probe and PC-DMIS Portable for Leica Geosystems Laser Trackers: a powerful, highly accurate and extremely reliable metrology solution.

Sheet metal

Working on thin sheet metal parts requires a dedicated tool set. PC-DMIS Portable offers everything you need: Inspect sheet metal parts with guided edge and surface triggers or use auto projection planes and the one point probing assistant to dramatically reduce inspection time.

Quick Start GUI

PC-DMIS Quick Start GUI offers easy access to all main process functions. Operators can make full use of the Laser Tracker's most frequently used capabilities, without being confused by too many details. Part alignment, measurements, the construction of geometrical features and the final analysis is now easier than ever before. When needed, the software's full capabilities are only a few mouse clicks away.

Data import capabilities

Superior CAD performance: Easily work with even the largest CAD files with a graphics engine employing the latest technology.

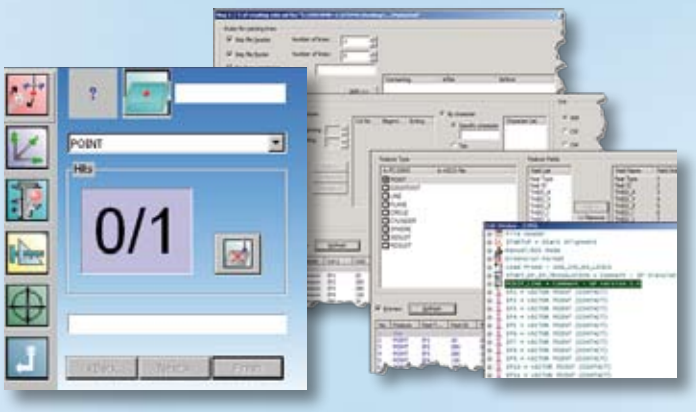
Standard CAD Import of pre-translated CAD models
A direct bi-directional link to CAD uses built-in translators: DES, DMIS, DWG, DXF, IGES, STEP, STL, VDAFS, XYZIJK.

Direct CAD Translation (DCT)
Using a Direct CAD TranslatorTM (DCT), translations into and out of the native CAD format are possible: CATIA 4, CATIA 5, Parasolid, Pro-engineer, Unigraphics.

Direct CAD Interface (DCI)
Direct operations on CAD models are supported via a Direct CAD Interface (DCI) technology: ACIS, AIMS, CATIA, I-DEAS, Pro-engineer, Solidworks, Unigraphics.

PC-DMIS DCIs let users directly access native CAD models. A DCI eliminates the need to translate CAD data. Instead, it actually uses the CAD system's nativa mathematical routines to display and manipulate the model. Hence it eliminates any deviation from the original CAD design.

How often do you receive CAD data from your design department that does not match your specific measurement requirements? PC-DMIS offers a wide range of functions to quickly facilitate those minor changes. Manipulate CAD models using tools for mirroring, adding layers, removing, hiding and changing entities.



Importing any type of ASCII data: Generic Import Parser

The Generic Parser (GP) is designed to parse ASCII text files into PC-DMIS. The source file may contain file header, comments, features, file footer, etc. As long as the information is seperated, GP can parse it according to user-defined rules provided through the Rule Set Wizard.

Alignments

Whether needing a pure 3-2-1 approach, a flexible best fit transformation or even a six surface point alignment – PC-DMIS Portable quickly aligns even the most complex parts.

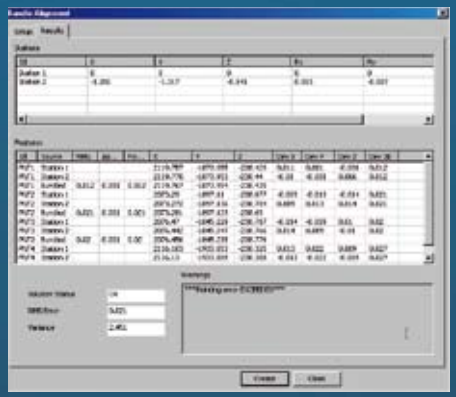
Quickstart Alignments
Provide guided basic alignment methods like Plane-Line-Line or Plane-Line-Circle and many more.

Powerful 7 parameter best-fit transformations
PC-DMIS portable is supporting overall scale computation, input of weighted coordinates, detailed reporting of overall results and overall constraints. PC-DMIS is even offering the ability to recalculate feature nominals from CAD on the fly during the iterations.

321 Alignments
The robust alignment utilities toolbox provides flexible and powerful alignment routines. Measured or constructed features are used to level, rotate and move alignments in all three dimensions. Graphical preview tools help to minimize errors. Any offsets may be applied.

Six surface point alignments
For quick and simple alignments to CAD PC-DMIS portable provides this alignment type on six predefined surface point measurements.

Proven Leica bundle algorithm for accurate multiple station orientations
If it comes to station moves: Easily align multiple stations into the common coordinate system. PC-DMIS Portable includes the robust and approved Leica bundle algorithms for bundle alignment computations. Points, circles or sphere centers may be used as inputs. Immediate numerical feedback and one-touch reports become available.



GD&T evaluation

Increasing demands for higher accuracies and tighter tolerances have created a need for geometrical product specifications PC-DMIS offers an advanced Geometrical dimensioning and tolerancing toolkit.

Reporting

Users at all levels in all fields must measure parts to report on their condition and on the status of their processes in a variety of formats for a range of audiences. Metrology software must excel in these applications. This is where PC-DMIS shines: it delivers information quickly and accurately, in a format perfectly suited to the job at hand. PC-DMIS Portable includes a fully scalable set of reporting capabilities. These make it easy to evaluate, analyze and manage data and to produce concise, accurate reports. In addition, its open architecture and data export functions make it easy to access measurement data using external software packages (e.g. Microsoft® Excel).

The PC-DMIS report engine highlights:

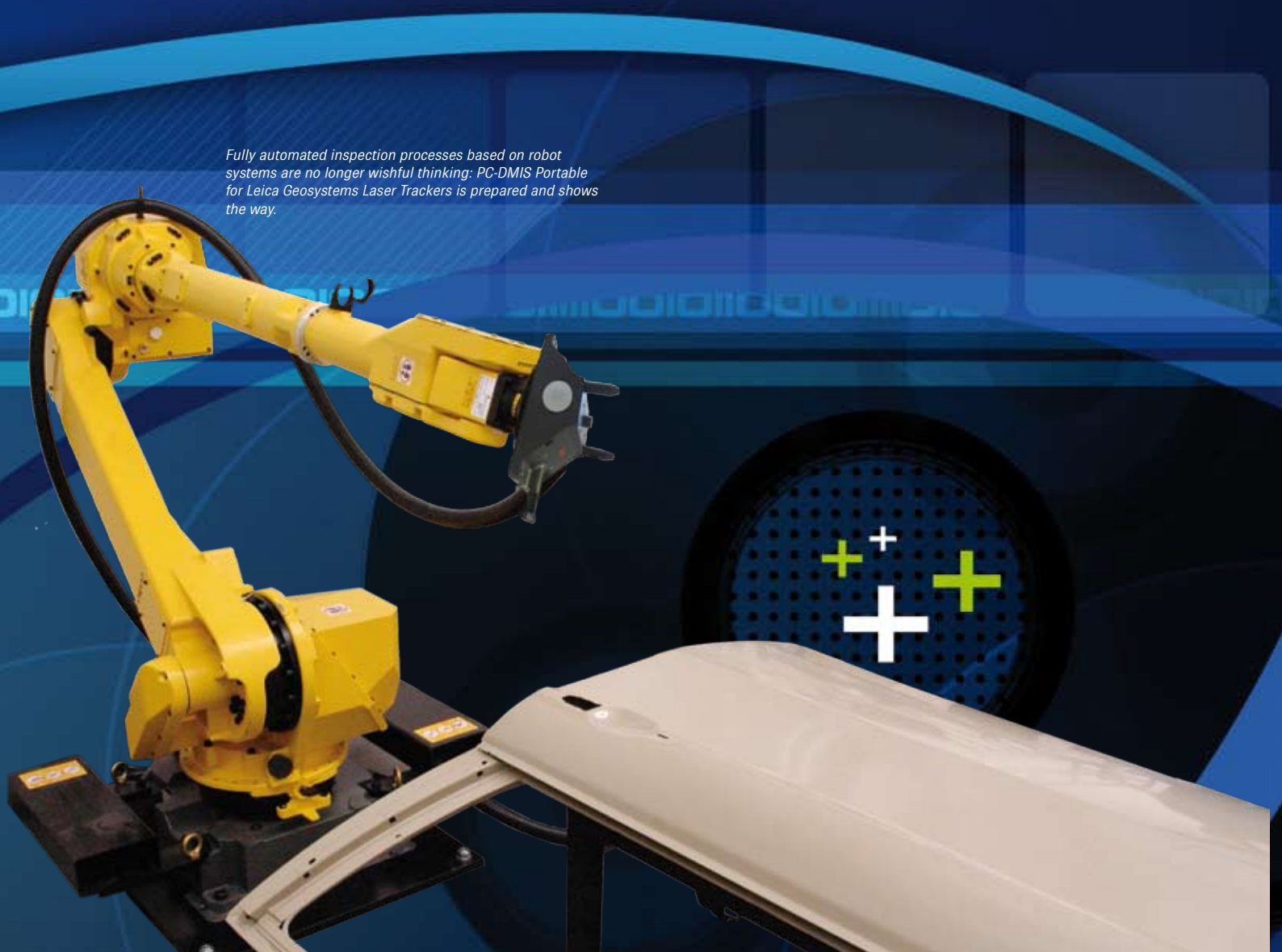
One touch reporting – Select from a choice of predefined numerical and graphical reports or create your own unique report and label templates.

Customized report – Simply drag and drop dimensions from the edit window to the customized report and add CAD views, sketches, pictures and many more to the report.

Part Programming and Automation

The step from manual to automated measurement processes has never been easier before.

PC-DMIS Portable is prepared. PC-DMIS Portable for laser trackers supports automated and even unattended inspection processes. The software creates automatically a part program for any manual measurement job on the fly. A tool set helps truly customizing measurement programs according to customer needs. PC-DMIS becomes the "brain" of the measurement process controlling the import & export of data, all measurement commands, bundle & alignment mathematics, and complete database control. The Human Machine Interface can then be completely customized based on the needs of the automation project with a simple program. Even unexperienced users are guided smoothly and without hassle through complex measurement tasks.



Fully automated inspection processes based on robot systems are no longer wishful thinking: PC-DMIS Portable for Leica Geosystems Laser Trackers is prepared and shows the way.

Whether building the fastest car, the biggest plane, or the most precise tooling, you need exact measurements to improve quality and productivity. So when it has to be right, professionals trust
Leica Geosystems Metrology to help collect, analyze, and present 3-dimensional (3D) data for industrial measurement.

Leica Geosystems Metrology is best known for its broad array of control and industrial measurement products including laser trackers, Local Positioning Technology (LPT) based systems, hand-held scanners, 3D software and high-precision total stations. Those who use Leica Geosystems Metrology products every day trust them for their dependability, the value they deliver, and the world-class service & support that's second to none.

Precision, reliability and service from Leica Geosystems Metrology.

When it has to be right.

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