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Preset & Measure Suite

Product presentation

2026-03-26 Customer Solutions Wetzlar

Presetting and quality measurement on a coordinate measuring machine suitable for the workshop

You produce - we measure

- To ensure the quality of the workpieces, various manufacturing steps must be monitored using measurement technology. If this is done on the milling or eroding machine, the processing machine is not available for the production process during this time.

- Furthermore, inaccurate measurement results cannot be ruled out during the critical warm-up time of the processing machine.

- Therefore, the measurement on a coordinate measuring machine pays off from the first eroding machine:

  - Shorter set-up times
  - Longer machine runtimes (availability)
  - Reduction of lead times
  - Fast availability and more precise offset data directly in the processing machine
  - In addition to generating offset data, quality data is also available

- Can be used on a manual measuring device up to the automated cell in connection with the PC-DMIS software.

In total, the degree of utilization of the processing machine is significantly increased, which increases overall productivity.

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Fully automated eroding and / or milling cell with Hexagon CMM & PC-DMIS Preset & Measure Supervisor

In the case of a fully automatic solution, the coordinate measuring machine, the milling and / or eroding machine and other components are integrated into the production cell. A job manager coordinates the robot loading and tooling as well as the interaction of the processing and measuring machine.

This enables maximum productivity & machine efficiency combined with accuracy and process stability with 24/7 use in production.

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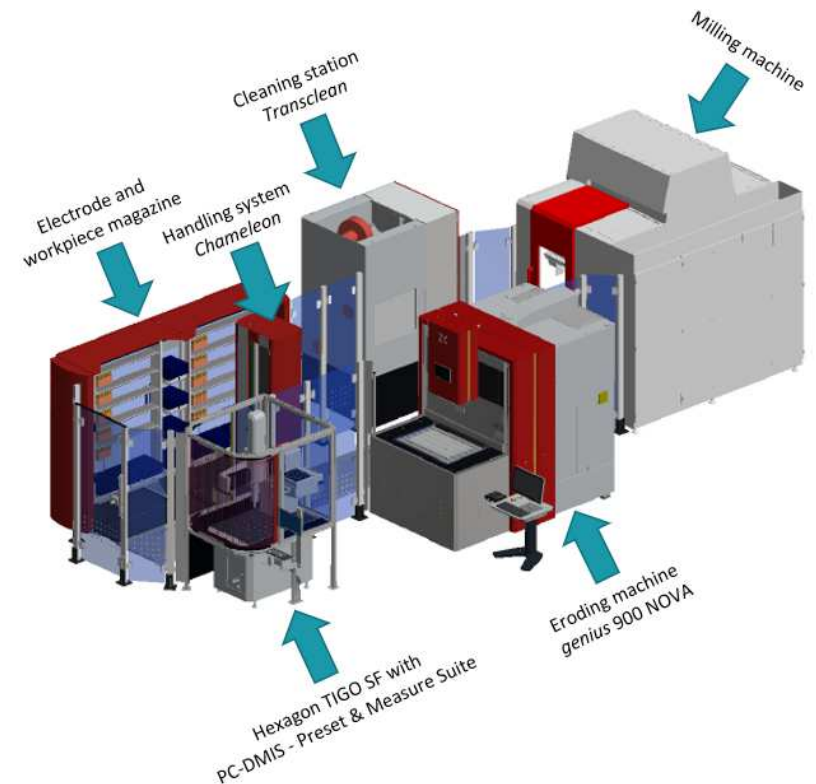
Module 1: Preset & Measure

Graphically supported user interface, which controls the machine operator through the measurement process of PC-DMIS. No special previous metrological knowledge is required. Preset & Measure contains macros for the following functions:

- Calibration of probes
- Calibration of chucks
- Offset data determination for electrodes and workpieces for the chucks
- Quality measurement on electrode contours and / or workpieces
- Plausibility checks are integrated and prevent operator errors

In addition, the measurement data are managed and can be exported to any output format. Fully parameterized post processors are available for this, which can be added by the customer and adapted to the existing processing machines.

Measurement data can be output in various protocol formats and Q-DAS ASCII transfer format.
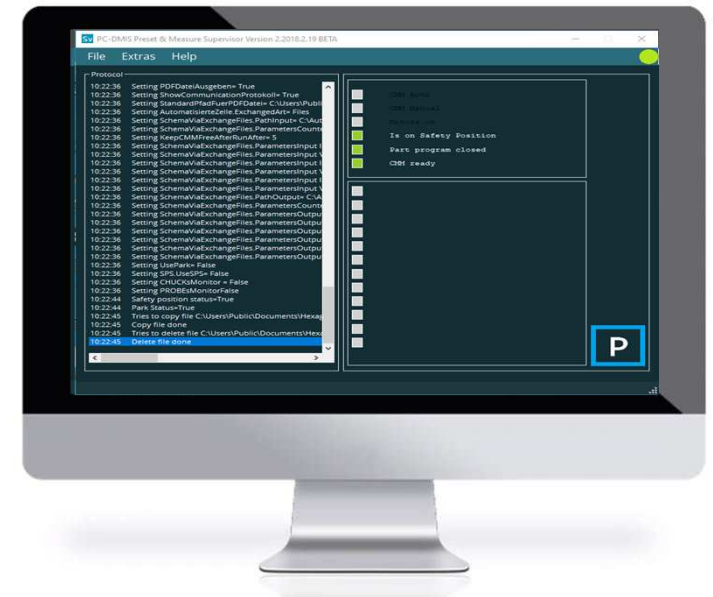
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Module 2: Preset & Measure Supervisor

This module is an interface to the respective control system of an automated cell.

The following control systems are currently supported:

- Zimmer & Kreim: JOBmod CMM
- GF Machining Solutions (System 3R):   WSM – WorkShopManager
- Röders: RMSMain
- EROWA: JMS 4.0 ProductionLine

More possible on request

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Module 3: Preset & Measure Inspection Planner

In connection with a PC-DMIS CAD offline license, this solution offers the possibility to define the measuring points for preset data determination or also for quality measurement on a CAD model. The buttons and secondary information to be used (such as probing parameters and spark gap) are defined here.

The data file can then be automatically converted into a measuring routine in Preset & Measure on the coordinate measuring machine.
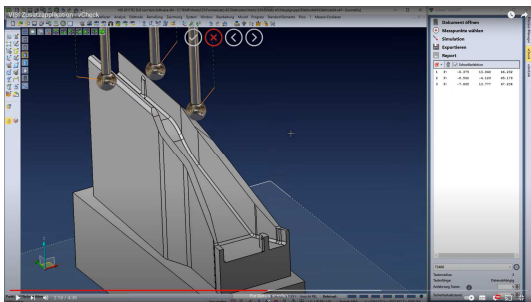
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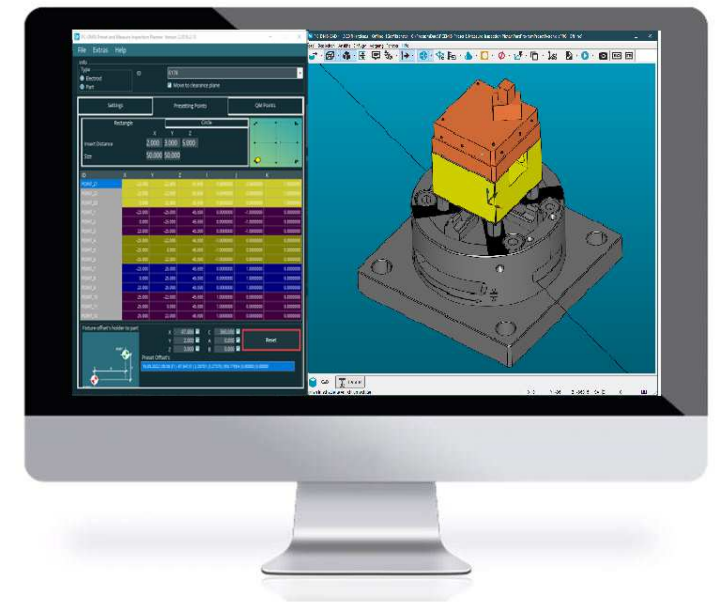
Support of the entire electrode process
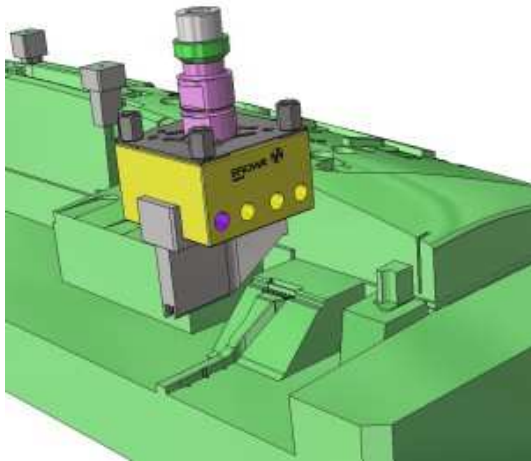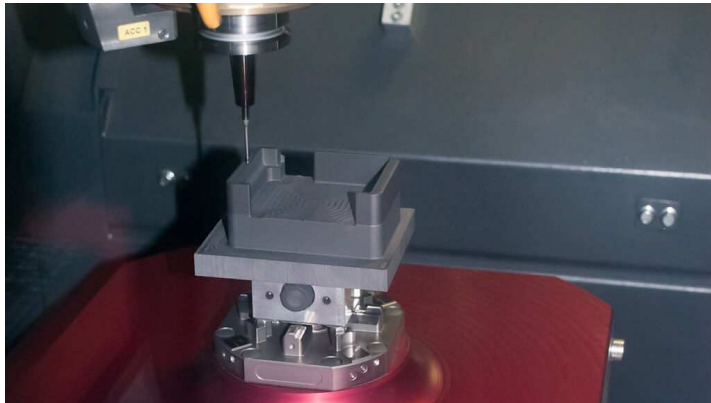

VISI Elektrode

VISI Electrode enables the user to automatically extract the geometry of detailed areas of the model that are to be produced by eroding from the component. A blank is automatically defined for the extracted geometry, the dimensions of which can be changed as required.

VISI additional applications - vCheck

vCheck combines the powerful CAD / CAM software VISI with the quality measurement. The measuring points can be generated directly in VISI and exported to a test plan file for PC-DMIS Preset & Measure. After the measurement has been carried out, the measurement results are fed back into the electrode management. This is the integrated solution for our VISI customers.

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Support of the entire electrode process
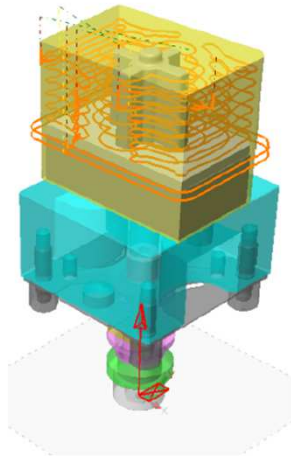

VISI Electrode Machining

VISI Electrode Machining automates the generation of NC programs for milling electrodes.
The new VISI Electrode Machining module automates electrode processing. The information relevant for the processing of an electrode previously defined in the Electrode Manager is used for the automatic generation of the processing project.

The process at a glance

The following functions are carried out automatically by VISI Electrode Machining:

- Workpiece production
- Raw part production
- Definition of obstacles
- Generation of the machining project
- Generation of the toolpaths

The new module VISI Electrode Machining offers a high level of automation of the electrode process in modern mold making and thus also a correspondingly large time saving.

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FAQ

- **What are offset data in die-sinking EDM and how are they determined?**
  The offset data during die sinking EDM describes the center and height offset (x,y,z) and twist angle (c) of an electrode to the zero point clamping system.
  This offset data is transferred directly into the EDM machine as correction values when a specific electrode is used.
  Accurately collecting this data prevents costly eroding errors.

- **Why does this data need to be measured when the electrode is milled directly on the holder?**
  When milling, errors can occur due to tool wear and thermal influences. These are then recognized and compensated for by offset data acquisition.

- **Does using a coordinate measuring machine (CMM) make sense?**
  The hourly rates of a CMM compared to an EDM machine are low. The productivity of the production machine can be significantly increased if the calibration is carried out externally. A CMM can not only determine the offset data but is also used to measure the electrode contour. This data is then evaluated to enable or disable an electrode. The CMM can also take on other tasks, such as measuring the workpiece.

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FAQ

- **Can't the measurement be done directly on a milling machine?**
  On the one hand, there is a cleaning and cooling process of the electrode between milling and measuring. The measurement on the milling machine itself would not really make thermal problems visible, as they would also be included in the measurement.

- **Isn't a CMM too complicated?**
  The Preset & Measure Software Suite was developed with the aim of offering all important functions in a very simple user interface. This solution can then be used independently by the operator of the machine tool after a short instruction. No in-depth knowledge of the measurement software is necessary.

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Have we piqued your interest?

Simply download the software from our server and apply for a non-binding demo license.

https://ftp.hexmet.de/PC-DMIS/PC-DMIS_Preset_&_Measure%20Suite/

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