



PCDMIS Gear 2.5

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PC-DMIS® Gear 2.5

- Release Notes -

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1. General System Requirements

Minimum Requirements:

- PC-DMIS Gear 2.5 operates under 32-bit and 64-bit Vista; and 32-bit and 64-bit Windows 7. No other operating systems are supported.
- Pentium-IV or higher processor is suggested.
- 2 GHZ XEON or Intel processor.
- 2 GB of RAM is recommended.
- 1 GB of free hard drive space minimum for the application.
- SVGA capable monitor.
- DVD drive.
- USB port available.
- Supports a screen resolution of 1280 x 1024 or higher.
- Microsoft® .NET 4.0.
- Internet Explorer versions 7, 8, or 9.0.9 and higher.

Recommended Minimums:

- PC-DMIS Gear 2.5 operates under 32-bit and 64-bit Vista; and 32-bit and 64-bit Windows 7. No other operating systems are supported.
- 2 GHZ or higher Duo-Core processor for improved performance.
- 4 GB of RAM or higher.
- 2 GB of free hard drive.
- SVGA capable monitor.
- DVD drive.
- 2 USB ports available.
- Microsoft® .NET 4.0.
- Internet Explorer version 9.0.9 and higher.

NOTE: Depending on your specific needs, the recommended system specifications for this version of PC-DMIS Gear 2.5 may be much higher. A more substantial computer system may be required to accommodate part programs using Automation or complex Reporting objects. Be sure to consult with your PC-DMIS Gear distributor to find out the type of computer system you will need in order to run this software at its optimum capability.

IMPORTANT: When using 3rd-party drivers you should contact your local Hexagon representative to ensure Operating System compatibility.

ANTI-VIRUS SOFTWARE: The Sophos® Anti-virus tool was used by Hexagon while testing PC-DMIS Gear 2.5. The performance of any other anti-virus tool will need to be confirmed by the user.

<http://sophos.com/products/enterprise/endpoint/security-and-control/>

2. Installing PC-DMIS Gear 2.5

To install the application, follow these steps below:

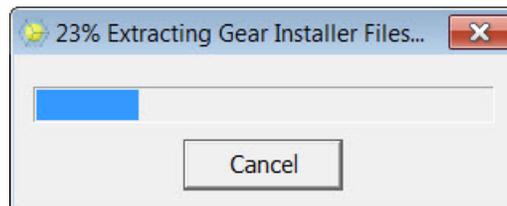
Step 1: Check System Requirements

Before you attempt to install a new PC-DMIS Gear 2.5 version, ensure that your computer system meets the minimum system requirements. Your IT person can help you with this.

- To get your computer's properties, highlight the **My Computer** icon, right-click on it, and select **Properties**.
- To check the display properties for the graphics card, select **Start | Settings | Control Panel**, and then select **Display and Settings**.

Step 2: Install PC-DMIS Gear 2.5

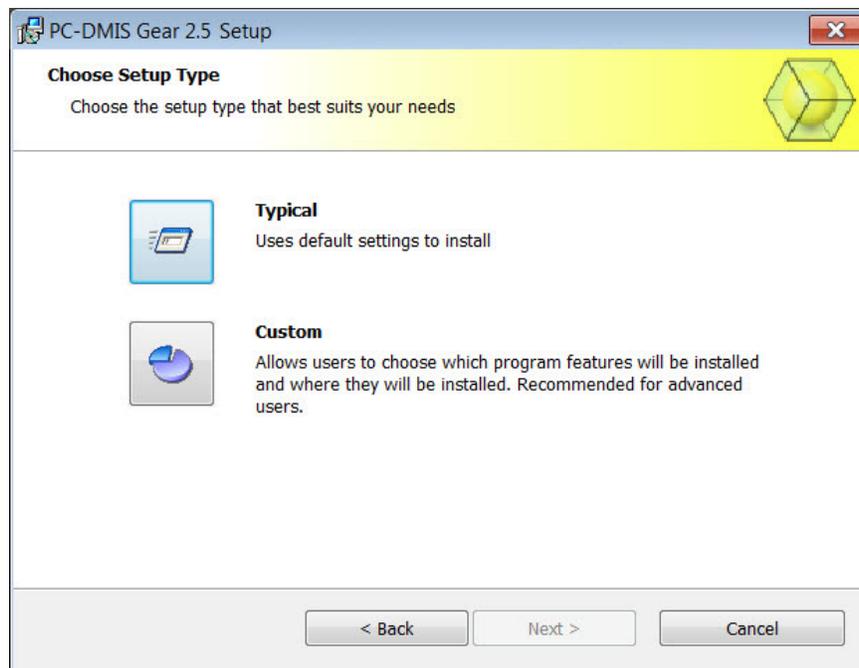
1. Ensure your USB portlock is connected to your machine.
2. Locate the PC-DMIS Gear 2.5 install file on your installation media; or if you downloaded it, open the directory containing the downloaded file.
3. Double-click on the .exe file to begin the installation process. If presented with a security warning, click **Run**.
4. The files will be extracted to a temporary directory:



5. The main setup interface then appears:

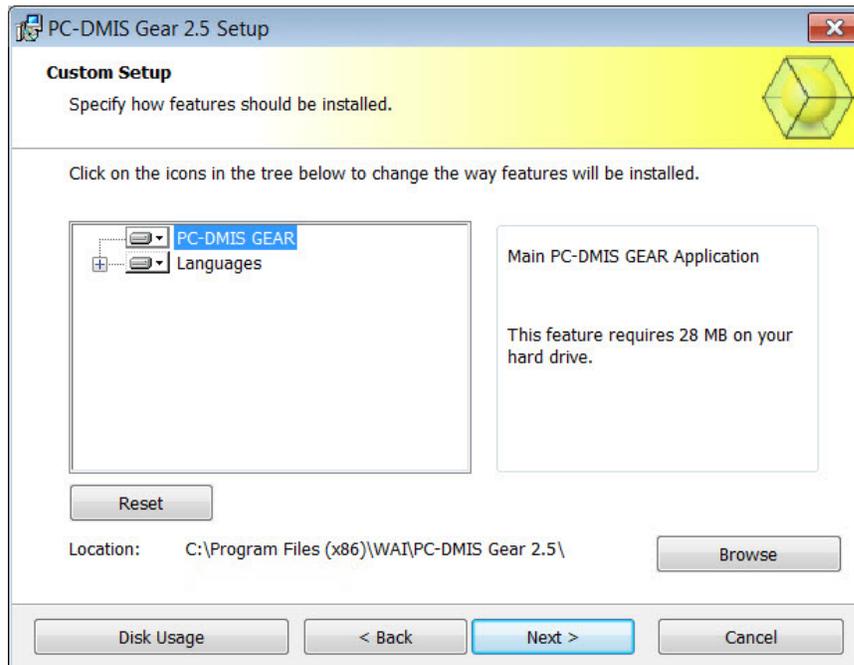


6. Click **Next** to start the installation. The **Choose Setup Type** screen appears:



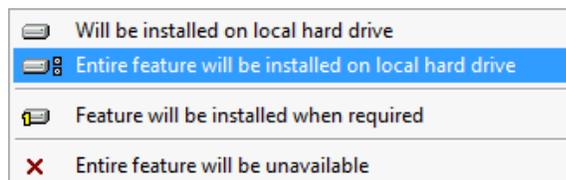
7. Choose a setup type.

- **Typical:** This option sends the file to this default installation location:
C:\Program Files (x86)\WAI\PC-DMIS Gear 2.5 (Release)\
- **Custom:** This option lets you specify the components to install, as well as the installation location. You will see this screen:



Customize Installed Features

By default, all program components are selected to be included in the installation. You can use the tree view to customize when or if these features are installed. To do this, click the small drop-down icon  next to the component to exclude. You will see a drop-down list.



Choose the desired option:

- **Will be installed on local hard drive** - The selected feature will be installed.
- **Entire feature will be installed on local hard drive** - The entire feature will be installed. This means sub-features of the selected feature will also be installed.
- **Feature will be installed when required** - The feature will only be installed if required during the installation process. Some files are informational and are not required for the application to run. These may include documentation or other files.
- **Entire feature will be unavailable** - This excludes the component from installation.

Click **Reset** at any time to reset the items to the default selection.

Customize Installation Location

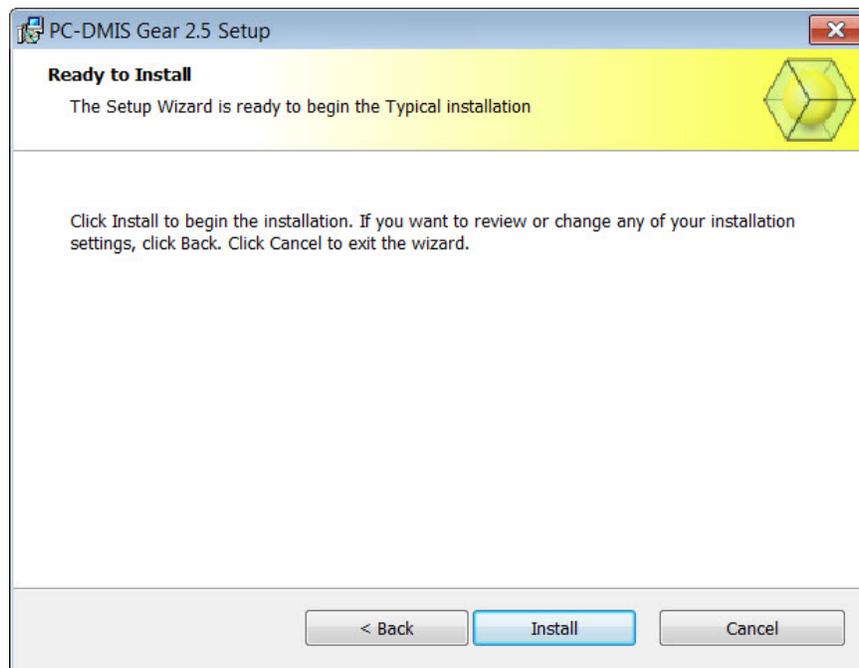
By default, the program installs to this location:

C:\Program Files (x86)\WAI\PC-DMIS Gear 2.5 (Release)\

To change the default location, click the **Browse** button and navigate to the directory on your computer you want to hold the program files. When you click **OK**, the **Location** field will change to show the selected location.

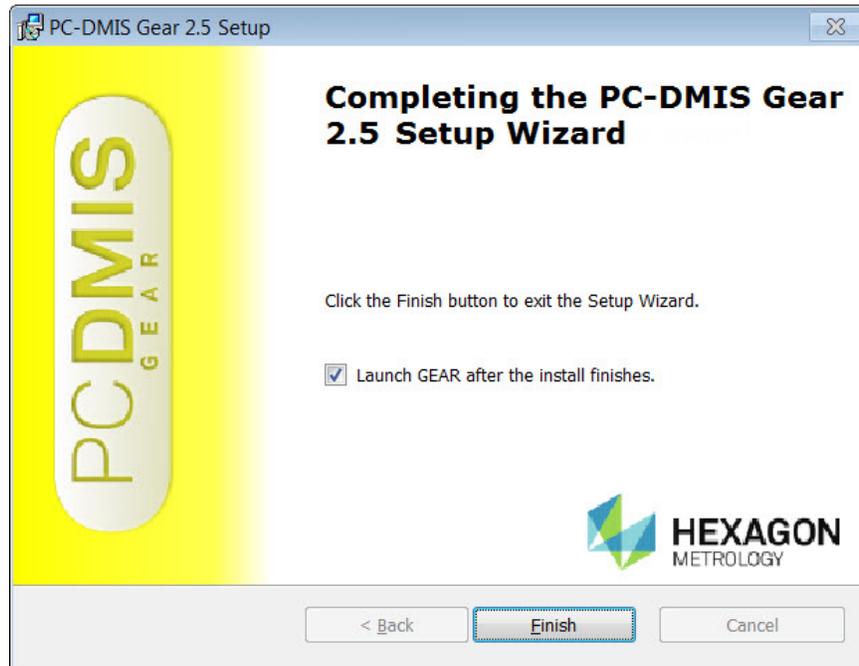
Click **Next** when finished customizing the install.

8. Once the installation has all the information it needs, you will see the **Ready to Install** screen:



9. Click **Install** to proceed with the main installation.

10. Once installation finishes, you will see this final screen:



- **Launch GEAR after the install finishes** - Marking this check box launches the application once you click **Finish**.

11. Click **Finish** to close the installation program. PC-DMIS Gear 2.5 is now installed.

Step 3: Launch PC-DMIS Gear 2.5

1. When launching this version of PC-DMIS Gear, choose **Start**, then **All Programs**, then the **PC-DMIS Gear 2.5** folder, and then **PC-DMIS GEAR**.
2. From the list of shortcuts, right-click on the **PC-DMIS GEAR** icon and select **Open** or **Run as administrator** (see “Administrator Privileges Explained” below).



Administrator Privileges Explained

When you select the PC-DMIS Gear option to measure a gear, PC-DMIS Gear starts PC-DMIS in order to perform the measurement. Therefore, whether you run PC-DMIS Gear as a standard user or as an administrator depends on how you are running PC-DMIS:

- If you are running PC-DMIS as an administrator, you need to run PC-DMIS Gear as an administrator.
- If you are running PC-DMIS as a standard user, you can run PC-DMIS Gear as a standard user or as an administrator.

3. Information about this Release

We at Hexagon Metrology are proud to bring you this new version of PC-DMIS Gear 2.5. This Enterprise Metrology Solutions platform brings together new aspects of PC-DMIS Gear for the development of a complete manufacturing process control solution. Available in this release are variations of PC-DMIS Gear designed to assist with every aspect of the fabrication and quality control process. The newly created packages include Cylindrical Gear, Bevel Gear and Vision.

The testing of this version has been significant. We'd like to take a moment to discuss this process and also make you aware of the various components of testing.

Testing is comprised of two parts. These can be described as functional testing and integration testing. The vast majority of testing effort goes on in the functional area. This is the testing that determines that specific functions that are core to the software, regardless of what type of machine is used, are working correctly. The integration testing is essentially a testing of the interface with a particular type of machine.

In the ideal scenario, Hexagon Metrology would have access to at least one of every piece of hardware that is operating in the field running PC-DMIS Gear. However, in practical terms, this is impossible. This integration test plan is then performed on as many types of machines as we have available.

Should you experience problems with your system after installing PC-DMIS Gear 2.5, it could possibly be an integration problem. If it is a problem of this nature, it will probably be evident immediately upon first use of the possibly untested configuration. Should such a problem materialize, you will be given the highest priority for correcting these problems. Please call Tech Support immediately to report any integration problems.

For existing users of PC-DMIS Gear who currently have earlier versions of PC-DMIS Gear installed, it is advised that PC-DMIS Gear 2.5 be installed into a new directory. In this way, you can be assured of continuous use of the existing version should problems arise with this newer version.

4. New Product Information

Major Enhancements

Gear 2.5 Major Release

- Added the Vision gear module by which PC-DMIS is capable of measuring tiny gears with a vision machine. (Only 2D features are supported. Helix/lead is not supported in the Vision gear module.)
- Added Operator Mode. In Operator Mode, PC-DMIS Gear 2.5 is capable of managing gear measurements according to different gear types, different plants, etc. Operator Mode is only for the operator to use. It simplifies the gear measurement step. The operator does not need any more detailed information/parameters of the gear.
- Added new input type of definition of involute position/region – Roll Length and Roll Angle for cylindrical gear module.
- Added new input type of definition of pitch position – Radius and Z-Coordinate for bevel gear module.
- Improved the user interface to make Gear 2.5 more friendly and easy to use.

See the "Enhancements – Gear 2.5 Major Release Updates" topic below for a listing of all enhancements.

5. Release Notes

Version 2.5 of PC-DMIS Gear is a significant development release of the software.

Initial Release Date: October 29, 2012

**** Prior to the release of PC-DMIS Gear 2.5, Version 2.4 was the last official release of PC-DMIS Gear by Hexagon Metrology.

Enhancements – Gear 2.5 Major Release Updates

Menus

- Added the **Import**, **Export**, and **Recent Files** options to the **File** menu
- Added additional languages to the **File | Language** menu option
- Renamed the **Measure** menu to **Operation**, and renamed these menu options:
 - **Measure** to **Measure Gear...**
 - **Analyze** to **Evaluate Gear...**
 - **Master Flank...** to **Create Master Flank Data...**
 - **Modify Geometric Parameters...** to **Define Gear...**
 - **Alignment Creation...** to **Align Gear...**
 - **Operator Mode** to **Switch to Operator Mode**
- Reordered the options on the **Operation** menu
- Added the **Switch to Programmer Mode** menu option to the **Operation** menu
- Added the **Show Report Window** option to the **View** menu
- The options that appear on the **File**, **Operation**, and **View** menus reflect whether a cylinder gear file or a bevel gear file is open
- Improved the layout of the **About PC-DMIS Gear** dialog box (**Help | About PC-DMIS GEAR...**), and changed the website reference to www.pcdmis.com

Status Bar

- Removed the part program path from the status bar
- Replaced the “Connected” and “Disconnected” indicators with an icon that indicates whether PC-DMIS is running
- Added an icon that indicates the current language

Parameters Tree Window

- The Parameters Tree Window will appear when you create a new Gear file

Toolbar

- Renamed the **Analyze** icon to **Evaluate**, and the **Probe** icon to **Calibrate**
- Reordered the icons on the toolbar

PC-DMIS Gear Settings

Made the following improvements to the **PC-DMIS Gear Settings** dialog box:

Gear Options tab:

- Added the ability to specify the type of involute position/region for pitch point, profile, and helix measurements for the new **Roll Length** and **Roll Angle** boxes
- Added the **Always set PC-DMIS invisible while transferring measured data from PC-DMIS to Gear** and **Always set PC-DMIS invisible while creating measurement program** boxes
- Changed the default path for the **Default Working Folder** box to C:\Users\Public\Documents\WAI\GEAR\2.5\Gear Data
- Changed the default path for the **Log File Name** box to C:\Users\Public\Documents\WAI\GEAR\2.5\GearLog.txt
- Added additional languages to the **Default Language** list
- Improved the layout of the options on the tab
- Moved the tab to the first location in the dialog box

PC-DMIS Options tab:

- Added the **PC-DMIS Offline** check box
- Changed the **Point Density** units from pts/mm(inch) to pts/mm
- Improved the layout of the options on the tab

Output Settings tab:

- Changed the default path for the **Directory** box to C:\Users\Public\Documents\WAI\GEAR\2.5\Gear Data
- Added the **Page Information** box and the **Change** button
- Improved the layout of the options on the tab

Defining a Gear

Made the following improvements to the **Gear Definition** dialog box:

- Renamed the dialog box to **Define Gear**
- Removed the **Align**, **Measure**, and **Analyze** buttons (cylinder gear only)
- Renamed the **Import** button to **Read DEF**, and the **Export** button to **Write DEF** (cylinder gear only)
- Added the **Evaluation Setup** tab for a bevel gear

Parameters tab for a cylinder gear:

- Renamed the **Tooth** box to **Tooth No.**

Pitch/Runout tab for a cylinder gear:

- Renamed the **Diameter of Pitch Measurement** box; it will now change to **Diameter**, **Roll Length**, or **Roll Angle** depending on the option selected for the **Type of input for definition of involute position/region** option on the **Gear Options** tab
- Renamed the **Z Coordinate of Pitch Measurement** box to **Z Coordinate**
- Added the **Default** button

Profile tab for a cylinder gear:

- Removed the **Number of Teeth to Measure** box
- Replaced the **Teeth to be measured** box with the **Teeth List to be measured** list; also added a box for the number of teeth to measure
- Renamed the **Start Diameter (near root)** box. It will now change to **Start Diameter (near root)**, **Start Roll Length (near root)**, or **Roll Angle (near root)** depending on the option selected for the **Type of input for definition of involute position/region** option on the **Gear Options** tab
- Renamed the **End Diameter (near root)** box. It will now change to **End Diameter (near root)**, **End Roll Length (near root)**, or **End Angle (near root)** depending on the option selected for the **Type of input for definition of involute position/region** option on the **Gear Options** tab
- Renamed the **Z Coordinate of Profile Measurement** box to **Z Coordinate**
- Added the **Default** button

Helix/Lead tab for a cylinder gear:

- Removed the **Number of Teeth to Measure** box
- Replaced the **Teeth to be measured** box with the **Teeth List to be measured** list; also added a box for the number of teeth to measure
- Renamed the **Start Z coordinate (near lower face)** box to **Start Z (near lower face)**
- Renamed the **End Z coordinate (near lower face)** box to **End Z (near lower face)**
- Renamed the **Diameter of Measurement** box; it will now change to **Diameter**, **Roll Length**, or **Roll Angle** depending on the option selected for the **Type of input for definition of involute position/region** option on the **Gear Options** tab
- Added the **Default** button
- Improved the layout of the options on the tab

Tip/Root Circle tab for a cylinder gear:

- Removed the **Number of Teeth to Measure** boxes for tip circle and root circle
- Replaced the **Teeth to be measured** boxes with the **Teeth List to be measured** list; also added boxes for the number of teeth to measure
- Added the **Default** button

Analysis Setup tab for a cylinder gear:

- Renamed to **Evaluation Setup** tab

K-Charts (cylinder gear only):

- Renamed the **K-Chart Definition for Profile** dialog box to **Define K-Chart for Profile**
- Improved the layout of the options in the **Define K-Chart for Profile** dialog box
- Added the Custom K-Chart 1 (With Tip and Root Relief) and Custom K-Chart 2 (With Tip Relief Only) types to the K-Chart for Profile
- Renamed the **Type** area to **Input Type** in the **Define K-Chart for Profile** dialog box
- Created a separate **Define K-Chart for Helix/Lead** dialog box for the K-Chart for Helix/Lead

Parameters tab for a bevel gear:

- Renamed the **Tooth Width** box to **Face Width**
- Added the **Flank Type** list
- Removed the **Master Flank File** box
- Renamed the **Master Flank** area to **Master Flank Data**
- Added the **Import** button
- Added the **Clear** button
- Added the **Outer Cone Distance** box and the **Invert vector for each point** check box

Pitch tab for a bevel gear:

- Renamed to **Pitch/Runout** tab
- Improved the layout of the options on the tab

Topography tab for a bevel gear:

- Removed the **Number of teeth to measure** box
- Replaced the **Teeth to be measured** box with the **Teeth List to be measured** list; also added a box for the number of teeth to measure

Aligning a Gear

Made the following improvements to the **Align Gear** dialog box:

- Renamed the **Alignment File** area to **Saved Alignment File**
- Added the **Clearance Height** and **Check Distance** boxes for a cylinder gear
- Added the **Check Distance** box for a bevel gear
- Removed the **Define**, **Align**, **Measure**, and **Analyze** buttons
- Improved the layout of the options in the dialog box, and in the **Parameters of the face/root cone measurement** dialog box for a bevel gear

Measuring a Gear

- Added the PC-DMIS Probe Readout window and execution mode options for measuring a gear
- Renamed the dialog boxes that appear when using the Alignment Wizard to measure the plane and circle features, and the face cone or root cone for a bevel gear
- Placed the buttons located along the top of the Operator Mode panel into the new **Current Container** area, and removed the **Save** and **Analyze** buttons

Made the following improvements to the **Measure Gear** dialog box:

- Added the **Check Distance** box
- Changed the **Use Analog Probe to scan Profile and Lead** check box to **Use Analog Probe**
- Added the **Probe Has Wrist** check box for a bevel gear
- Added the **Use Alternate Probe File For Topography** check box and the **Probe File** box for a bevel gear
- Added the **Scan Setting** button and **Scan Setting** dialog box for a bevel gear
- Removed the **MasterFlank Setting** button for a bevel gear
- Created a **Measure master flank data** dialog box separate from the **Measure Gear** dialog box for a bevel gear
- Removed the **Master Flank Parameters** dialog box and added its options to the new **Measure master flank data** dialog box for a bevel gear
- Improved the appearance of the **Master flank grid points** dialog box for a bevel gear
- Removed the **Define**, **Align**, and **Analyze** buttons
- Improved the layout of the options on the tab

Evaluating a Cylinder Gear

- If you measure the profile and select the **Profile/Helix** check box, but do not specify enough points for the profile, a message now appears and indicates that you did not specify enough points
- Removed the **Define**, **Align**, and **Measure** buttons

6. Contact Hexagon Metrology

For further information regarding this release of PC-DMIS Gear 2.5, please feel free to contact <http://hexagonmetrology.us/contact-us> or visit www.pcdmis.com.

Hexagon Metrology Technical Support can be reached by calling (800) 343-7933.