

DMP-4000

Dimensional Measurement Software

The screenshot shows the DMP-4000 software interface with several key components and annotations:

- Feature view:** A window in the top right corner displaying the status of the current feature.
- Part view:** A central window showing CAD-like graphics of a part with measurement points.
- Result view:** A table at the bottom right showing measurement results for various features.
- Stat view:** A window at the bottom right displaying a Stat Plot for the measurements.
- Control view:** A window at the bottom left for quick settings.
- Tool View:** A window in the center for setting tool parameters.
- Image view:** A window at the bottom right showing a live or bitmap image of the part.
- Light view:** A window at the top left for light control.
- Step view:** A window at the bottom left showing step-by-step results.
- Program view:** A window at the bottom left listing the part program.
- DRO view:** A window at the top left showing instant results in DRO format.

N	Name	Type	Actual	Nominal	Tol	Tip	Dev.	Out	IPP
1	Circle1	Diameter	0.8604	0.8600	0.0254	0.0254	0.0004	0.0000	PASS
2	Circle2	Diameter	0.8593	0.8600	0.0254	0.0254	-0.0007	0.0000	PASS
3	Circle3	Diameter	0.8566	0.8600	0.0254	0.0254	-0.0034	0.0000	PASS
4	Circle4	Diameter	0.8562	0.8600	0.0254	0.0254	-0.0038	0.0000	PASS
5	Circle5	Diameter	0.8526	0.8600	0.0254	0.0254	-0.0074	0.0000	PASS
6	Circle6	Diameter	0.8572	0.8600	0.0254	0.0254	-0.0028	0.0000	PASS

The DMP-4000 software is a PC-based, dimensional measurement software, for motorized Coordinate Measuring Machines (CMM). The software uses the latest digital image processing technology to capture and analyze video images for dimensional measurement. It then compares the measurement to nominal values and tolerances to identify conditions of non-conformance. The DMP-4000 tolerance functions conform to ASME Y14.5M 1994.

The software works with Windows2000/XP. It takes the advantage of the latest operating systems and provides a familiar, graphical environment to complete your measurements. The software can be easily linked to other Windows applications, such as spreadsheets, SPC and best-fit packages.

The software is designed for image documentation, product inspection and quality control. The software reads the stage locations from linear scales and extends the measurement range to the size of the stage. The software is easy to use and it will deliver reliable and repeatable precision measurement results on the hardware of your choice.

Main DMP-4000 Features

- Support FireWire, CameraLink, USB and other interface digital camera or frame grabber for live image display, measurement and annotation.
- Three-axes and optional laser for high precision Z measurement and profiling.
- Support major motion controllers for stepper, servo and linear motors.
- Advanced edge detection for sub-pixel accuracy measurement.
- CAD import and export.
- Programming zoom, lighting and stag mapping.
- Supports inch, millimeter, mil and micron units, Cartesian and Polar coordinates.
- Datum reference frame for alignment and tolerance.
- User-defined measurement calculations.
- Up to 32000 points per feature.
- Save, open, run and edit part program capability.
- Group editing.
- Real-time linked to other applications, such as spreadsheets, SPC and best-fit.
- Flexible data format for post processing.
- Color or monochrome images acquisition, archiving and retrieval.

Features and Functions

File

- New
- Open
- Save
- Save As
- Header
- Run
- Run Step
- Run Repeat
- Import
- Set Origin
- Export
- Recent Files
- Exit

View

- Zoom In
- Zoom Out
- Zoom Window
- Zoom All
- Zoom View
- Shift
- Rotate
- 3D Graphics

Tool

- Find
- Teach
- Copy
- Test
- Update
- Edit
- Crosshair Tool
- Edge Tool
- Circle Tool
- Arc Tool
- Linewidth Tool
- Slot Tool
- Ellipse Tool
- Area Tool
- Focus Tool
- Cross Target
- Rectangle Target
- Circle Target

Output

- Format
- DDE Link
- Save Results
- Print Results
- Send Results
- Edge Points
- Result Buffers

Measure

- Edit
- Distance
- Circle
- Linewidth
- Angle
- Area
- Slot
- Ellipse
- Position
- Circularity
- Concentricity
- Straightness
- Angularity
- Parallelism
- Perpendicularity
- Size
- Statistics
- User Measure
- Create Result Buffer
- Add Result Buffer

Help

- Help
- About

Video

- Freeze
- Live Image
- Stored Image
- Import Image
- Draw Text
- Show Edges
- Histogram
- Enlarge
- Maximize
- Select Image
- Overlay
- Subtract
- Switch
- Compare
- Copy Image

Setup

- System Setup
- Lock Tool X
- Lock Tool Y
- Calibration
- Home
- Move Abs
- Move Inc
- Password
- Stage Mapping

Construction

- Zero
- Frame
- Offset
- Project
- Mirror
- Rotate
- Parallel
- Intersect
- Bisect
- Perpendicular
- Create Variable
- Math

Feature

- Tool
- Relative Tool
- Point
- Line
- Arc
- Circle
- Define Feature
- User Feature
- Gauge Ball
- Gauge Diameter

Edit

- Setup
- Modify
- Insert
- Delete
- Select All
- Remove Last
- Rename
- Print
- Cancel
- Duplication
- Set Break Point
- Clear Break Point

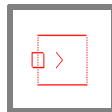
Auxiliary

- Comment
- Prompt
- Calibrate X
- Calibrate Y
- Set Calibration
- Camera
- FormFit C.
- Send User C.
- Get User C.
- In Port
- Out Port

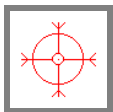
Image Tools



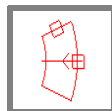
Crosshair Tool: Manual define a single point.



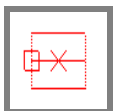
Edge Tool: Automatically find all points on an edge.



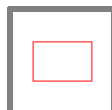
Circle Tool: Automatically find all points on a circle.



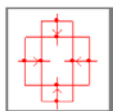
Arc Tool: Automatically find all points on a radius.



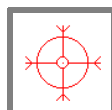
Linewidth Tool: Automatically find all points on two parallel edges.



Area Tool: Automatically find the area and centroid of an area.



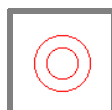
Slot Tool: Automatically find all points on four sides.



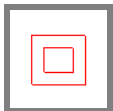
Ellipse Tool: Automatically find all points on an ellipse.



Cross Target: Automatically find a cross pattern.



Circle Target: Automatically find a circle pattern.



Rectangle Target: Automatically find a rectangle pattern.

Results

Measure Circle							
Tolerance		Special				Output	
<input type="radio"/> None <input checked="" type="radio"/> +/- Tol		Frame: MCS	Measure: Diameter			Print: None	
Name: Circle1	Actual	Nominal	+Tol	-Tol	Deviation	Out	P/F
<input checked="" type="checkbox"/> Diameter	1.1812	1.1812	0.0010	0.0010	0.0000	0.0000	PASS
<input type="checkbox"/> Radius	0.5906	0.5906	0.0010	0.0010	0.0000	0.0000	PASS
<input type="checkbox"/> Circularity	0.0192		0.0010		0.0192	0.0182	FAIL
<input type="checkbox"/> X	0.0097	0.0097	0.0010	0.0010	0.0000	0.0000	PASS
<input type="checkbox"/> Y	0.3104	0.3104	0.0010	0.0010	0.0000	0.0000	PASS
<input type="checkbox"/> Z	0.0000	0.0000	0.0010	0.0010	0.0000	0.0000	PASS

Output selection and tolerancing

Link	
Spreadsheet General ICAMP FormFr	
Application: Excel	Connect
Sheet: Sheet1	Disconnect
Header Cell: A1	Poke
Data Cell: A1	Browse
Data: Hello	<input type="checkbox"/> Auto Connect
Path:	
Cell Mode: Auto	Series in: Row
<input type="radio"/> Assign	<input type="radio"/> Column
<input type="radio"/> Selected	<input checked="" type="checkbox"/> Multiple Line
	<input type="checkbox"/> Append
	Column Offset: 0
	Row Offset: 0

Seamless and real-time link to third party software.