



# MEASUREFIT PLUS

GD&T and Fitting Software

## Analyze measurement relationships to get the big picture

- Get the most from your tolerance zones
- Instantly see potential assembly problems
- Reduce scrap and improve yields
- Reverse engineer existing parts

OGP® MeasureFit® Plus is an elegant fitting software solution, designed to use data generated by MeasureMind® 3D MultiSensor, Measure-X®, Scan-X®, and SmartCheck® metrology software for 2D composite profile and GD&T analysis applications. Single or multisensor data — video, laser, and touch probe — is automatically sent to MeasureFit Plus during a part measurement routine — no operator intervention required.

MeasureFit Plus is powerful. It analyzes all part features simultaneously and automatically performs the most valid fit method based on absence/presence of datum features and geometric tolerances. GDT results and color coded graphic results are immediately displayed, and statistical summaries are available by sending multiple output reports to third party statistics packages. Each fit method provides Z rotation and XY translation values to help with tooling modifications. Trouble spots, trends, and potential assembly problems become crystal clear.

Use MeasureFit Plus off-line to import/export DXF files, which may be transformed to MeasureFit Plus project files containing datums, GDT tolerances, and material condition of features. Or use MeasureFit Plus for reverse engineering by automatically creating a DXF file from undefined point data.

### Features

- Easy-to-use icon, tab, and slider interface
- DXF and MeasureFit® Plus project import/export
- Macro creation, storage, playback
- Right angle alignment
- Multiple fitting algorithms
- Standard GD&T graphics
- Easy-to-create dimensioning
- Enhanced language capabilities
- Extensive on-line and context-sensitive Help
- Analyze multiple Datum Reference Frames in a single project
- Instantaneous global inch/metric toggle

### System Requirements

- Compatible with current versions of OGP® MeasureMind® 3D MultiSensor, Measure-X®, Scan-X®, and SmartCheck® metrology software

### Minimum Computer Requirements

- Windows™ 95, 98, 2000, or XP
- Pentium® class processor
- 128 MB RAM
- 10 MB free space on hard drive
- VGA card
- CD-ROM drive
- Mouse (3-button preferred)
- 104-key keyboard

### Graphical Display Features

- Whisker plots, where —
  - Size** of whisker shows deviation between measured point and nominal
  - Color** of whisker shows where measured point fits in relation to tolerance band; user-selectable colors, up to 7 tolerance bands
  - Direction** of whisker indicates whether there is excess or lack of material
- Tolerance envelopes – colored areas indicate permissible tolerance zones

### Automatic Fitting Algorithms

- Datum Reference Frame Evaluation fit method performs jiggle fit within constraints defined by Datums and RFS/LMC/MMC modifiers, applied to datum features and measured features
- Minimization of Sum of the Squares of Deviations (Least Squares/Best Fit)
- Minimization of Maximum Errors
- Minimization of the Sum of the Absolute Values of Deviations

### Standards Compliance

- Datum alignment and geometric tolerance evaluation in compliance with ASME Y14.5 – 1994 and ISO 1101 – 1983
- Calculation automatically based on material identity of a feature, including **Maximum Inscribed Circle (MIC)** for an inside diameter, and **Minimum Circumscribed Circle (MCC)** for an outside diameter

### Macros

- Macro function automatically records user operations for future automatic playback and part inspection
- Supplied macro examples, including —
  - Group features and assign profile tolerance
  - Use multiple coordinate systems
  - Create multiple groups/assign tolerances
  - Perform right angle alignment
  - Create MeasureFit Plus project from DXF file
  - Compare data stream to MeasureFit Plus project
  - Output data w/picture
  - Play, step, edit macros

### Available Feature Information

- **Features List** – information about individual features in the model window
- **Data points** – examine every data point in a feature
- **Nominals** – display nominal dimensions and XYZ location of any feature
- **Results** – display geometry result values



**Optical Gaging Products Inc.**

A Quality Vision International Company

Multisensor Measurements for Manufacturing Professionals

**World Headquarters and Technology Center:** 850 Hudson Avenue • Rochester, NY 14621 USA • Tel 585.544.0400 • Fax 585.544.8092  
**OGP Shanghai Co, Ltd:** 17 Lane 593 • East Jin An Rd • Pu Dong New District • Shanghai, China 201204 • Tel 86.21.5045.8383/8989 • Fax 86.21.6845.8800  
**OGP Messtechnik GmbH:** Nassastr. 11 • 65719 Hofheim-Wallau, Germany • Tel 49.6122.9968.0 • Fax 49.6122.9968.20  
**Optical Gaging (S) Pte Ltd:** 21 Tannery Road, 347733 Singapore • Tel 65.67.41.8880 • Fax 65.68.46.8998  
**Internet:** www.ogpnet.com • intl-sales@ogpnet.com