

**zCAT**

Portable Precision  
THE NEXT DIMENSION



**CAT**

[www.zCAT.com](http://www.zCAT.com)



24.4 in

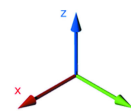
height

6.8 in

diameter

30 lbs

**Fowler**<sup>®</sup>



**MEASUREMENT SOLUTIONS, INC.**

Measurement Problems - SOLVED!



# Portable Precision

## THE NEXT DIMENSION

### A revolutionary solution to a complicated problem

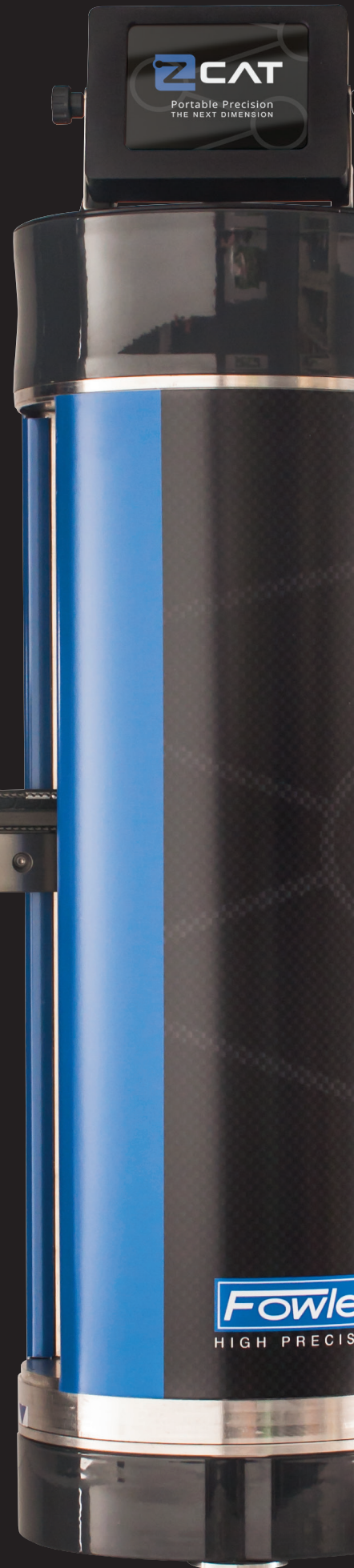
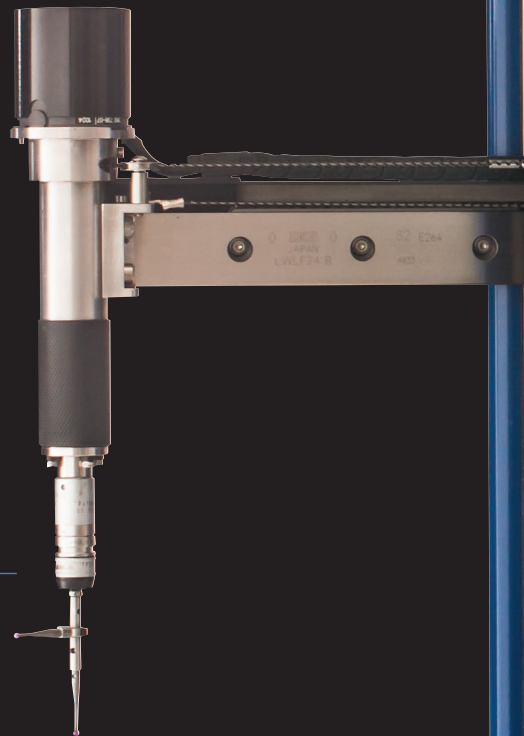
Utilizing advanced technology, software, design and electronics, the zCAT is manufactured as a compact self-contained unit that is fundamentally different than existing CMM technology, design and operation. From initial equipment acquisition through set-up, training and maintenance, the zCAT offers significant cost reductions without compromising measuring accuracy or performance.

### Easy-to-Use

The zCAT is the easiest DCC CMM to use. Built with the intention of lowering the threshold of training needed to successfully operate and even program a DCC CMM, every component, from the mechanics to the software, has been examined for optimal user experience and ease of use.

### Probe System

The zCAT ensures accuracy with an industry-standard probe system. Find comfort in knowing that easy-to-acquire, accurate results are measured by this reliable touch-trigger probe system. Whatever your measurement task, this probe system allows for the optimal stylus arrangement for accuracy.



# zCAT the world's first truly portable DCC Coordinate Measuring Machine

## Software

The zCAT comes with ControlCAT - built-in, easy-to-use, geometric measurement software controlled through an intuitive, icon-based touchscreen interface. Take advantage of the direct computer controlled measurements without the need for a secondary computer. From shop technicians to dedicated CMM operators, anyone can feel comfortable operating the zCAT.

## Programming

Automate measuring processes, and gain accurate data time after time. The unique zCAT clutch seamlessly shifts from direct computer to manual control without the need for flipping switches or clicking buttons. Simply, move the probe manually, and the computer will remember and reproduce the movements for accurate, repeatable measurements.

## Designed and Manufactured in the U.S.A.

We manufacture the zCAT in the United States. From California to Massachusetts, we're taking advantage of American ingenuity, drive, and passion to create a high quality product that will help advance the capabilities of those who use it.

## Portability

The zCAT is the world's first portable direct computer control coordinate measuring machine (DCC CMM). At only 30 pounds, the zCAT conveniently goes with you wherever you need it. No longer are you required to take the part to the CMM; from a surface plate, to a table on the shop floor or on a large part itself, the zCAT can be deployed directly in the manufacturing process.

## Power

Being tethered to an outlet is a thing of the past. The zCAT is powered by a built-in 10.8 volt lithium ion battery, providing enough power to gain precise, accurate measurements for four hours in the field. The zCAT is truly wireless. A power supply charger is included for quick recharges between or during use.

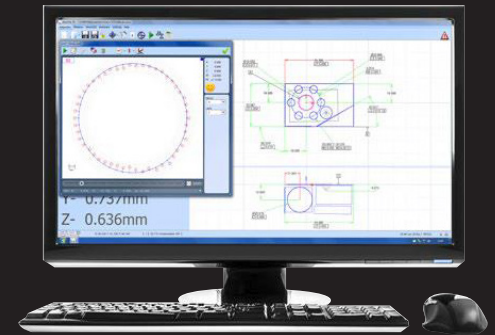


[www.zCAT.com](http://www.zCAT.com)





# Software



## I++ Server Software

### zCAT MK4 3D Software - 54-950-105-0

The whole philosophy of the zCAT is to make measurement easy. zCAT 3D software has been written by engineers for engineers and sets the industry standard for simple-to-use software. Designed around a graphical interface, zCAT 3D can work in 2D or 3D.

zCAT 3D software is becoming the industry standard for 'easy-to-use' software and also has the depth of functionality to make it the choice for either occasional users or full-time inspection professionals.

zCAT 3D software is revolutionary. As a component is measured a representation of it is built up on the screen. The user simply clicks on the measured features to call up dimensions exactly as they would appear on a drawing. Inspection reports can be in the form of fully dimensioned graphical representations as created on the screen, or tabulated reports in various formats that can show nominals, tolerances, errors, pass/fails, geometric tolerances etc. These reports can also be output to an Excel spreadsheet. Further reports are available to show the form of features (roundness, straightness etc.), hole or point positions, or complete batch results on one report. The user's company name also appears on all outputs.

## 3D Measurement Software

### Key Features:

- Automatic measurement routines
- Powerful interactive graphics window
- Automatic feature recognition
- 2D and 3D manual and CNC inspection
- Geometric feature inspection
- Free form curve inspection
- DXF data import/export
- STEP and IGES export for reverse engineering
- Feature construction
- Intelligent feature projection
- GD&T dimensions and tolerances

### Program Tools:

- Teach and repeat programming
- Drag and drop program editor
- Run programs from any point
- Measure a subset of features
- Simple object-based programming
- No complex programming language
- Automated batch inspection
- Password protect programs
- Automatic safety moves
- Feature replicator

### Report Formats:

- Engineering drawing GD&T report
- Simple PASS/FAIL report
- Form plots
- Batch summary report
- Tabulated reports
- Graphical fly-out labels
- Drag & drop reporting
- Real-time SPC
- Combine multiple views
- Export to Excel
- Historical data reporting

Every time a component is inspected, a program for measuring subsequent components is automatically created. The software also calculates 'safe' moves between features, even when the probe is indexing – just another thing that the operator doesn't have to worry about!

Popular throughout the world and available in many languages, zCAT's revolutionary measurement software provides the user with a powerful, yet easy-to-use solution for inspection measurements. This not only increases component throughput but vastly reduces the learning period for new users.

# Software Module



## zCAT CAD Comparison - 54-950-106-0

The zCAT CAD Comparison software module enhances zCAT 3D with the capability to compare measured points to a CAD model. Often this will be the only way to measure complex parts, or perhaps sometimes drawings for the component simply don't exist. Powerful alignment routines allow measurement points to be best-fitted to the model. Color coded errors can then be displayed on the model to produce both graphical and tabulated reports that are extremely clear and very easy to understand.

zCAT's CAD comparison module allows the input of either STEP or IGES files as standard and allows reports to be exported as an Excel spreadsheet. It really does make measuring complex parts easy, especially on the zCAT! The world's first truly portable Direct Computer Controlled (DCC) Coordinate Measuring Machine (CMM).

### CAD Formats

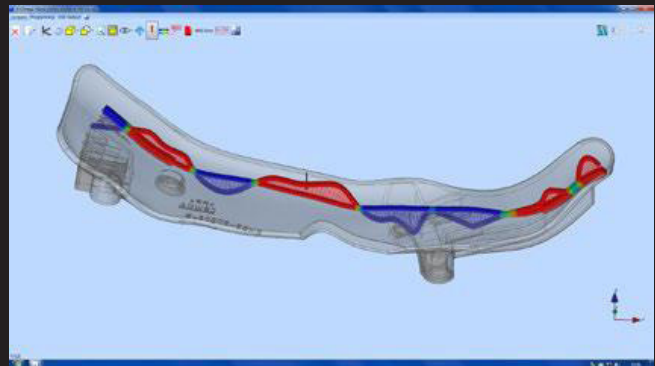
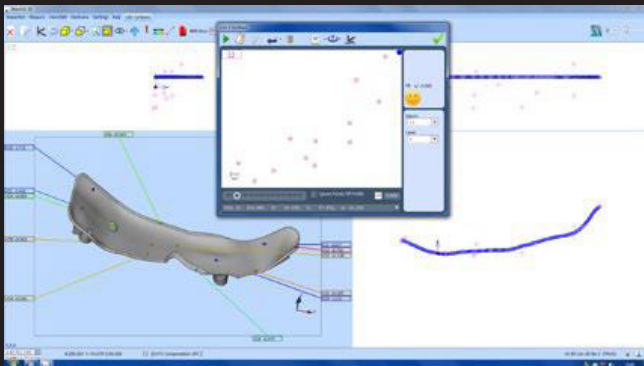
- IGES and STEP import and export
- DXF export
- Re-scale Models
- Simple measurement of complex parts

### Alignments

- Point cloud best-fit
- Feature best-fit
- Best-fit constraints
- Graphical and tabulated reports
- Export to Excel

### Report Formats

- On CAD fly-out labels
- Color deviation whiskers
- Color point markers
- Configurable color options
- Combine multiple views
- Graphical and tabulated reports
- Export to Excel





# Software Module



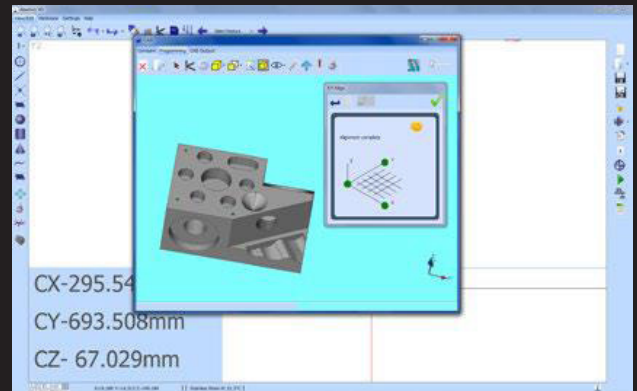
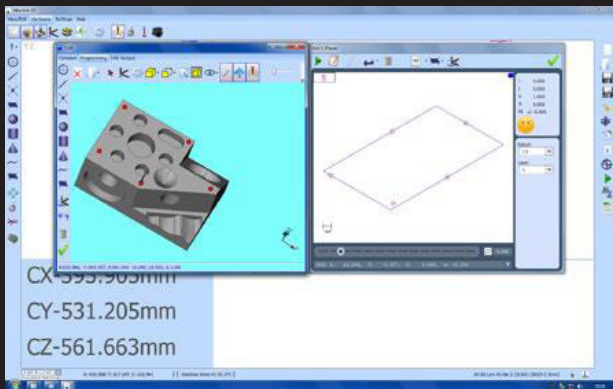
## zCAT Programming from CAD - 54-950-107-0

zCAT 3D software has been setting the industry standard for both ease of use and speed of programming. However, until now this has been best done by using the teach-and-repeat method of programming when measuring a component. But what if you want to prepare the measurement program before you even have the first component? Now, we are pleased to introduce our new CAD programming module, which in true zCAT fashion, allows the simplest programming possible from either an IGES or STEP CAD model.

If you can use zCAT 3D software then you will already know how to use the CAD programming module – it couldn't be easier. Rather than taking measurement points on a component, you can now just click on the surface of the model where you would like the points to be taken.

Feature Predict works in the same way as when measuring, for instance, if you click in four places on the same plane on the model, then the software will automatically create a Plane Measure unit with those four points in it. Then click on a different feature and it will automatically close the Plane window and look for another feature. If you click on a circular feature it will take just one click to produce a circle or two clicks for a cylinder. Suddenly programming in zCAT 3D just got even easier!

zCAT's CAD programming module can be used either on the zCAT or off-line... nothing could be more straightforward.



## Additional Software CMM-Manager Software - Optional



### Benefits

- Unified Metrology Software Solution
  - Use with any portable arm, any CMM, Nikon iNexiv and zCAT
- Full automatic probe path generation
- 3D CAD import and collision avoidance
- Full reporting capabilities with GD&T
- Report output formats
  - PDF, MS Excel, Text, SPC, QC-Calc and more
  - Create custom MS Excel reports by DDE

For more information contact Nikon Metrology (810)-220-4360  
[www.nikonmetrology.com](http://www.nikonmetrology.com) • [www.cmmmanager.com](http://www.cmmmanager.com)




# System Components



zCAT DCC Coordinate Measuring Machine - 54-950-001-0

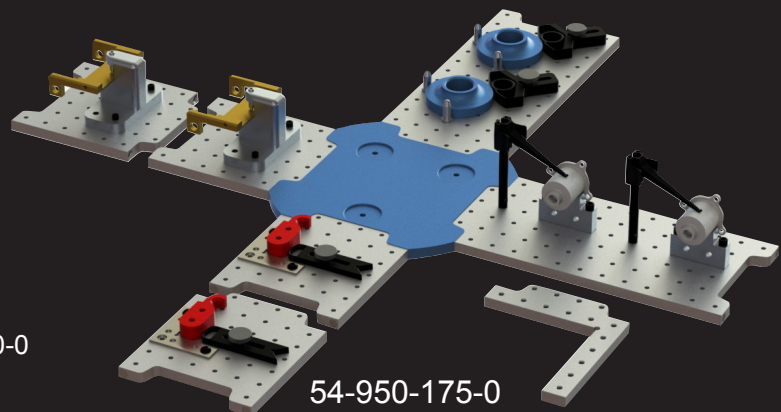
## Components

- zCAT CMM - 4 Axes
- ControlCAT metrology software
  - Easy to use geometric measurement tool
  - Measures manually or DCC. Creates constructions for most common geometrics including:
 

Plane	Line	Point	Sphere	Angle	PCD
Circle	Slot	Cone	Reference	Cylinder	Cloud
  - Reports actual and nominal information to Excel spreadsheet
  - Program remembers geometry and plays back for repetitive part measurements
- Renishaw TP20 probe
- Battery
- Ethernet communication (  Bluetooth optional)
- I++ software interface
- zCAT Wedge excel export software
- Training part and calibration sphere
- Quick start guide
- zCAT dust cover
- Reusable shipping container
- Standard 1 year warranty

## Accessories

- 1mm ball probe module - 54-950-200-0
- Vertical only 2mm probe - 54-950-201-0
- Horizontal only 2mm probe - 54-950-202-0
- Calibration service - 54-950-120-0
- 5 year service and calibration contract - 54-950-110-0
- Extended 5 year warranty - 54-950-115-0
- Loc-N-Load™ Quick-Swap fixture systems
  - Fixture No. 1 - 54-950-170-0
  - Fixture No. 2 - 54-950-175-0
  - Base plate only - 54-950-180-0
  - Work holding kit - 54-950-185-0



54-950-175-0

# zCAT Specifications

Working volume	X and Y 700mm diameter, Z 250mm
MPE <sub>E</sub>	8.0 $\mu$ m
Fixturing accuracy requirement	5mm
Machine speed	User controlled to 150 mmps
Machine air requirement	None required
Construction	Stainless steel for all structural components
Machine power requirements	100-240 V AC $\pm$ 10%, 50-60Hz
Battery life	4 hours with normal use, 3 hours at peak
Power consumption	Peak 15 W, normal 10 W
Manual motion control	User controlled by hand movement of probe
Controller	Onboard PCB provides motion control, error mapping, I++ interface and ControlCAT metrology software
Temperature compensation	Onboard monitoring and compensation
Probe Type	Renishaw TP20 probe
Machine weight	13.6kg, 30lbs
Machine dimensions (W x D x H)	420mm x 172mm x 620mm

*Prices & specifications subject to change without notice.*



**HEADQUARTERS**  
 780 Dedham Street • Canton • Massachusetts 02021  
 (800) 788-2353 • (617) 332-4137 fax  
 sales@fowlerprecision.com

**MEASUREMENT SOLUTIONS, INC.**  
 Measurement Problems - SOLVED!  
 262-278-6049  
 www.measurementsolutionsinc.com