QC-5000 System Training Agenda

- ❖ *This syllabus is considered for students with experience in quality control and with basic knowledge of computer,*
- ❖ *blueprint reading and geometric dimensioning and tolerancing.*
- ❖ *This syllabus refers to the QC5000 Users Guide Revision 3, 2004.*
- ❖ *Based on the acknowledgment and Instructor's recommendation Metrology&Tooling/DiMetrix will issue TRAINING CERTIFICATES confirming satisfactory class completion.*

Section 1
Introduction
- ➢ Registration
- ➢ Facility Information / Safety Precautions
- ➢ Review of Training Syllabus

Overview of Video System Components
- ➢ Machine and Computation System Nomenclatures
- ➢ Machine and Video Camera Maintenance
- ➢ Component Calibrations

Startup and Shut Down Procedures
- ➢ Preparation and Sequence
- ➢ Homing Procedure
- ➢ Using the Joystick and Trackball
- ➢ Shutting Down of Software and Operating System

Work Space of QC-5000
- ➢ Tool Bars   **REF 1: pg 55**
  - • Datum
  - • Measure
  - • Program
  - • Probe
- ➢ Workspaces (Saving and Recalling)
- ➢ Main Menu (Pull Down Menus)
- ➢ Part View Window / Result Window   **REF 2: pg 50**
- ➢ DRO Window / Template Windows / Status Bar
- ➢ Moving, Sizing and Customizing
  Windows and Tool Bars   **REF 3: pgs 55-57**
- ➢ Backup and Restore

Video Edge Detection
- ➢ Saving Images
- ➢ Manual Target   **REF 4: pg 86**
- ➢ Auto Targets   **REF 5 & 6: pgs 98-100, 89-90**
- ➢ Measuring/Capturing Features with Targets
- ➢ Auto Focus (Height Probe)   **REF 7: pgs 95-96**
- ➢ Worm Tool Applications (if time   **REF 8: Explode Data Points**
  allows)

Rev: 4
                                        Revision Date: 07/2015

QC-5000 System Training Agenda

Section 2

Constructing & Tolerancing Features
- ➤ Model Window Zooming/Rotating
- ➤ Exporting Model Window
- ➤ Construct Buttons
  - • Point
  - • Line
  - • Arc
- ➤ Results Window
- ➤ Bi-Directional Button
- ➤ GD&T Options
- ➤ Profile (if applicable)   **REF 9: pgs 156-171**

Routine Creation
- ➤ Record vs. Edit
- ➤ Initial Settings
- ➤ Comments / User Messages
- ➤ Setting Full CNC Mode

Alignments
- ➤ Setting the Origin   **REF 10: pgs 139-143**
- ➤ Setting the Skew (Secondary Line)
- ➤ Datum Place
- ➤ Assigning Alignments (Reference Frames)

EXERCISE 1: Create Automatic Routine (group exercise)

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Section 3

Touch Probe Sensor (if applicable)
- ➤ Set Up
  - Configuring a Tip
  - Calibrating a Tip
  - Dock Station (if applicable)   **REF 11: Setting up a Docking Station**
  - Probe to Optics (sensor align)
- ➤ Measuring Features
  - Safe Points
  - Probing a Point
  - Probing a Line
  - Probing 3D (auto-fill)

Laser Sensor (if applicable)
- ➤ Calibration (sensor align)
- ➤ Measuring a Point
- ➤ Measuring a Line
- ➤ Measuring a Point Cloud (grid scan)

Outputs
- ➤ Templates (Eurotol)
- ➤ Customizing Templates
- ➤ Markup and Sending Images to Reports
- ➤ Sending Data to Excel (DDExport)   **REF 12: DDE to Excel Output**
- ➤ Overlay Charts (if applicable)   **REF 12: pg 84**

Simple Editing
- ➤ Edit Mode
- ➤ Set Current Step Button
- ➤ Inserting Steps
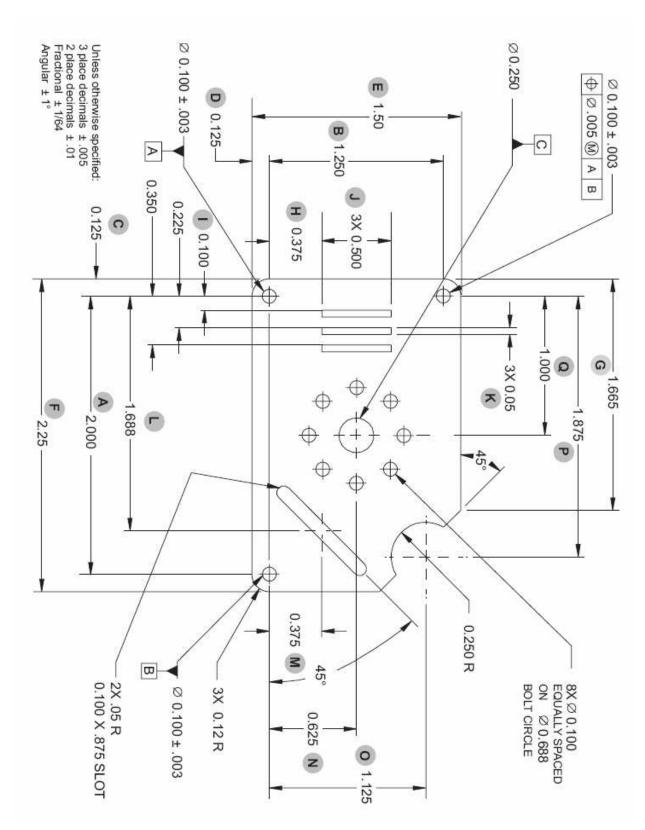- ➤ Copying Steps

Class Summary
- ➤ Questions
- ➤ Survey

Unless otherwise specified:
3 place decimals ±.005
2 place decimals ±.01
Fractional ±1/64
Angular ±1°

∅ 0.100 ± .003

D 0.125

A

∅ 0.250

∅ 0.100 ± .003

C 0.125

0.350

0.225

I 0.100

H 0.375

B 1.250

J 3X 0.500

E 1.50

⊕ | ∅ 0.100 ± .003
⊕ | ∅ .005 Ⓜ | A | B

C

F 2.25

A 2.000

L 1.688

K

Q

G 1.665

1.000

1.875

P

3X 0.05

45°

0.250 R

8X ∅ 0.100
EQUALLY SPACED
ON ∅ 0.688
BOLT CIRCLE

2X .05 R
0.100 X .875 SLOT

B

∅ 0.100 ± .003

3X 0.12 R

M 0.375

45°

0.625

N

O 1.125