

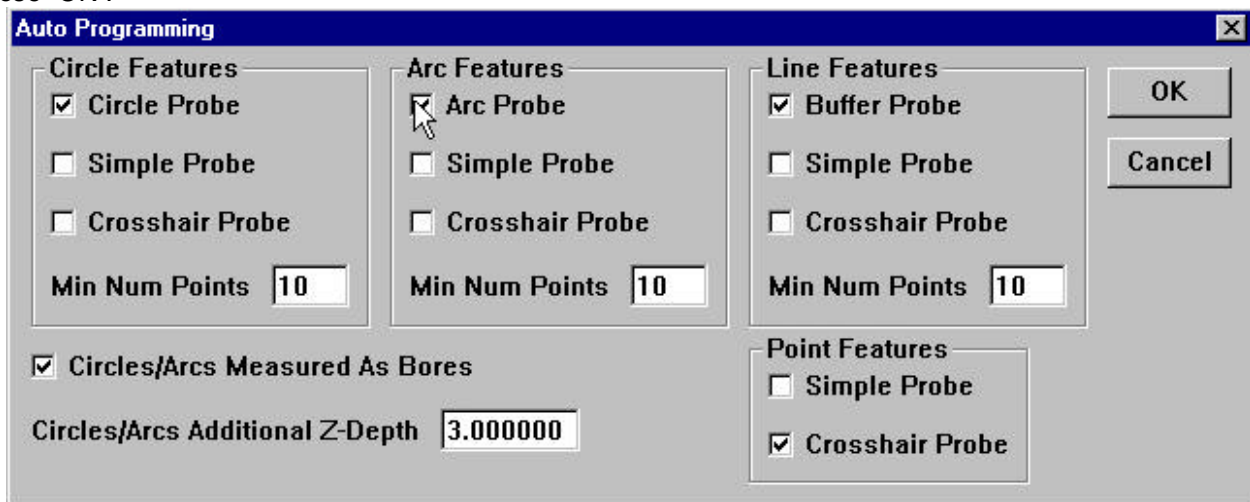
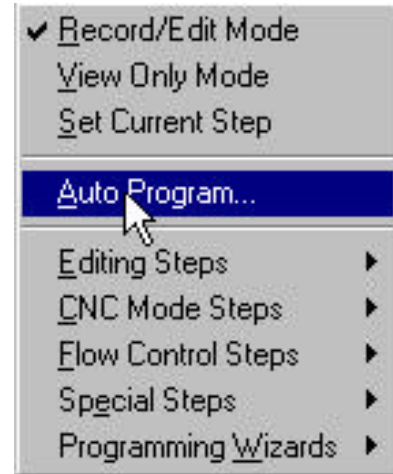
Auto Programming from Features in QC5000

Use this method when importing drawings (DXF) or if parts were measured without programmings in mind, but the features are still in the list.

Part programs can be created quickly and easily using the "Self Teach" mode. This programming method is used when a "DXF" (CAD/CAM) file is not available. If such files are available, prepare the files first then modify this method to utilize them in programming.\

Recording a Self-teach program (No DXF file)

Select Record New from the Program pull-down menu.
Enter the name of the program in the Program dialog box.
Press OK.
Measure all of the features required to construct the relationships.
Construct points, angles, and distances.
Repeat steps "4" through "5" in the previous section.
Measure all of the features required to construct the relationships.
Highlight features
Select Tools/ Programming / Auto Program from Features
Set the probe type and minimum number of points for the features selected.
Choose "OK".



The program steps will be added to the program view.
From the Program Menu select End Recording and then Save.

Auto program from an Imported DXF

This is done when a drawing file is present.

Importing preliminaries.

To auto program from imported features:

Make sure you zero on a physical feature on the part.

Make sure the imported drawing is zeroed on the same feature prior to importing.

To do this just import the DXF.

Move the zero to the desired feature by selecting the feature and choosing Zero in X, Y, and Z axis.

Save the DXF with a new name. Select all and choose File export as DXF.

If this is correct you can now do "goto linear" moves to all features to check this.

Creating the program

- Select File\ New Part
- Select Record
- Skew and zero on the new part
- Run the program
- When it completes import the DXF.
- Select record into.
- Select the features to auto program.
- Select tools \programming\ auto program.
- Tolerance the features.
- Group-edit the program steps.
- Save the program.
- Run the program.
- Create the report
- Unload

Tolerancing a feature

- From the part view or the feature list highlight the feature to be toleranced.
- Press the Tolerance button in the Results window.
- Select the tolerance type.
- Enter the tolerance information and action in the dialog box. Note that the nominals may need to be changed since this is not CAD data. Press OK. Press Continue.
- Repeat for all toleranced features.
- Select, Save under the program menu when complete. Record into an existing program:
- Select Program View under the Windows menu.
- Highlight the program step where the additional programming will follow.
- Select Record Into under the Program menu.
- Add the additional steps into the program.
- Click on End Recording when finished and then save.

To group tolerance select all steps and choose Tools / tolerance / (Type of tolerance)

Note:

Group tolerancing and editing should be done prior to running the program.

	Nominal	Nom -	Nom +
X	*****	0.005	0.005
Y	*****	0.005	0.005
Z	*****		

Named Tolerances: Five Microns

Editing a program

To edit a sub-step for position or tool size and direction.

Double-click on the program step to be edited.

Double-click on the probing coordinates or tool selection to be changed.

Modify coordinates in the dialog box. Press OK.

To Move, Copy, or Delete steps within a program, highlight the step to be edited.

Select the appropriate action under the Edit menu.

Save Program when finished.

Group edits

Select Program View under the Windows menu.

Select the substep.

Right click, Select tools / Programming / Select all similar steps

Choose Tools / Programming/Editing/ Edit Selected steps

Note

The success of this method depends on the quality and simplicity of the DXF that is imported. Please read all available documentation regarding auto programming before attempting this advanced programming function.

jlb

Features		Program		
report header		QC5000 Program		
		<n>		
Status	Cx	Tool	Action	Data
			Program Properties...	
			Initial settings...	
			Measure "Line 1"	
			Select probe "Buffer"...	
			Wait for point(s) at (0.00000,0.00000,	
			Finish measurement	
			Measure "Line 2"	
			Select probe "Buffer"...	
			Wait for point(s) at (0.00000,0.00000,	
			Finish measurement	
			Measure "Line 3"	
			Select probe "Buffer"...	
			Wait for point(s) at (0.00000,0.00000,	
			Finish measurement	