



FAQ #48: How do I make a new WireEDM machine?

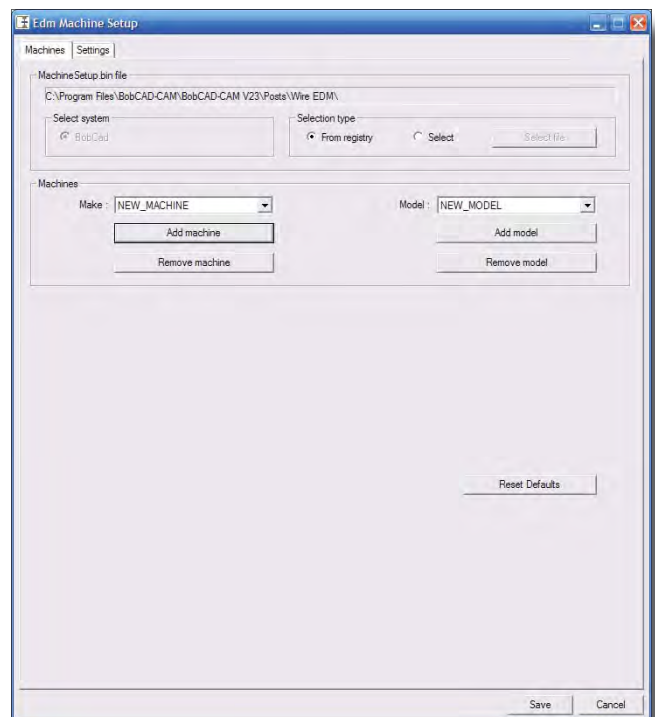
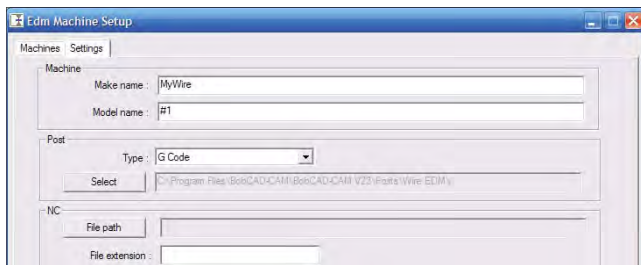
Q: I don't see my wire machine listed in the supported setups. How do I get it in there?

A: A wire EDM machine setup in BobCAD-CAM V23 consists of a setup that describes the machine's capabilities, the post processor configuration file, and the cutting conditions database. It's just as possible for an end user to set up as it is for us. Here are the steps:

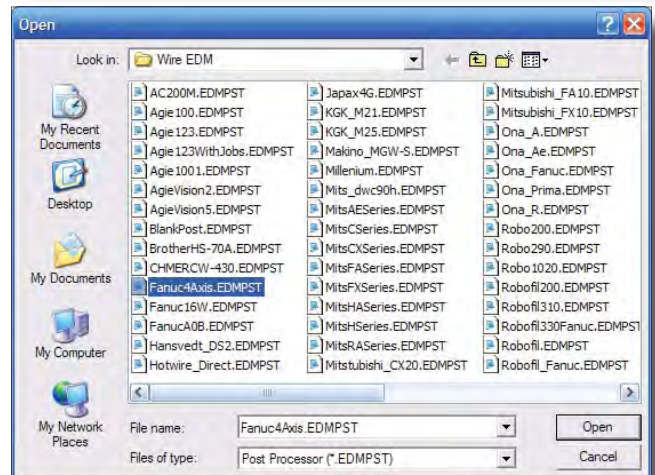
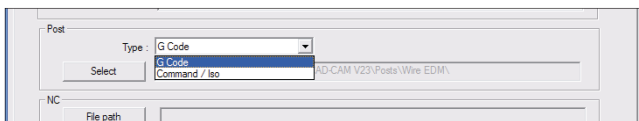
Step 1: Close BobCAD if it's open. Double click the EDMMachineSetup.exe program normally located in the BobCAD-CAM installation folder, usually C:\Program Files\BobCAD-CAM\BobCAD-CAM V23\, and the program will start.

Step 2: Check for the make and model of the machine. If the make exists but the model doesn't, click on **Add Model**. If the whole machine make doesn't exist, click on **Add Machine**. Both a new make and a new model will be added.

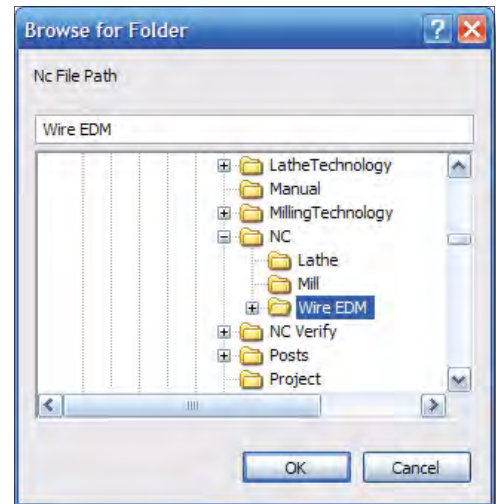
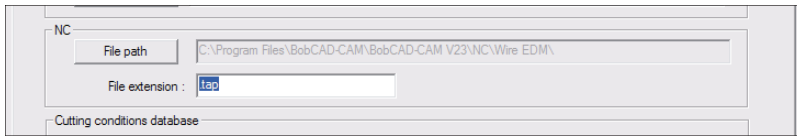
Click on the **Settings** tab and type in the new name for the make or model. In this example, both are to be added.



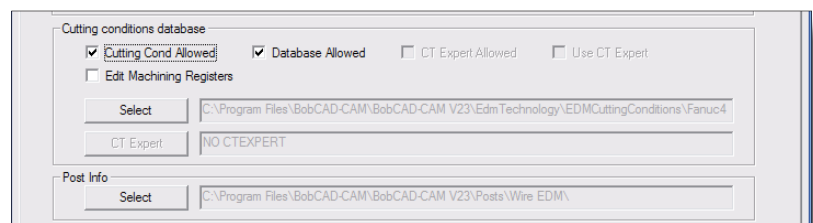
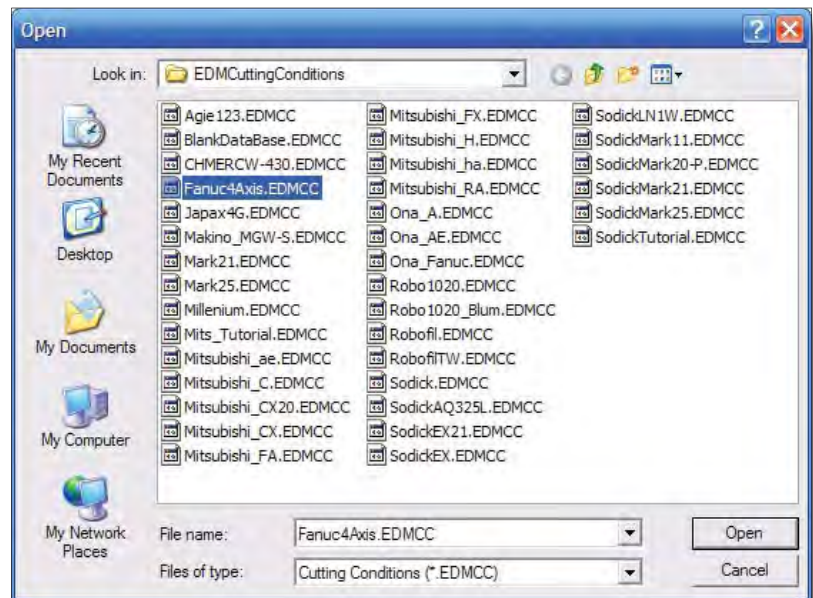
Click on the **Post** button and choose the post processor to be used for this machine. See **FAQ #24** for a brief description of how to edit the post processors using a utility program that already ships with BobCAD-CAM. **FAQ #24** also overlaps this topic somewhat as well. The drop down box allows the user to choose the output format of the NC code, either **G Code** or **Command/Iso**. Choose the appropriate format for the machine being configured.



Click the **Select** button under **NC File Path** and choose a default folder to save post processed NC code to. BobCAD-CAM will use this folder by default when this machine is loaded. Also type in the file extension to be used with this machine for the NC files. Don't forget to include the leading dot (".") before the extension.



The cutting conditions (CTC, *Cutting Technology Conditions*) database is very important for EDM - much more so than for the other machine types. If a database doesn't already exist for this machine, one will need to be created. Creating and editing these databases is too big a topic to include in this FAQ, but there are other resources available on it. See **FAQ #23** and also **Chapter 6** of the *WireEDM Getting Started Manual* (available from www.bobcadsupport.com in PDF format and also ships in hardcopy with the software). If one already exists, check the **Cutting Cond Allowed** and **Database Allowed** boxes, and then click on the **Select** button. Navigate in the dialog that will appear to the folder containing the desired database file (usually a .EDMCC file, but may also be a .SODCC for Sodick-specific databases and .BROCC in the case of Brother-specific databases). Click on the desired file and then click **OK** in the dialog. The machine configuration will point to the chosen database.



- **Cutting Cond Allowed** - This check box enables and disables cutting conditions completely. Normally it will be on.
- **Database Allowed** - This checkbox enables database lookups for cutting conditions. If a database exists, check this to allow selecting the database to be used.
- **CT Expert Allowed** - Sodick wire machines permit the use of specialized databases. If the machine being configured is a Sodick and a CT Expert file for it exists, check this.
- **Use CT Expert** - This checkbox enables the software to use the CT Expert file.
- **Edit Machining Registers** - Not all wire machines allow direct editing of the settings registers through an NC program. Check this to enable doing just that.

In the case of Sodick machines, the CT Expert file may be chosen in the same way as the standard conditions

database, i.e., click the **CT Expert** button and then choose the necessary file.

The **Post Info** button is used strictly in the case of AgieVision controls. BobCAD-CAM V23 ships with the necessary files already. If using this type of machine, click on the **Select** button and choose the correct file for the machine being configured.

In the **Parameters** section, choose the options that best fit the machine:

- **Number of Work Coordinates** - This is the maximum number of work coordinate systems (work offsets) the machine can support.
- **AWT Minimum Distance** - This field specifies the minimum distance away from the part that the auto threader requires to work properly.
- **Maximum Arc Radius** - This value represents the maximum radius of an arc that the machine can cut. BobCAD-CAM will not produce any arcs bigger than this number in the final NC code.
- **Maximum Taper Angle** - If the machine has a maximum taper, enter the angle in degrees here.
- **4Axis Entities Allowed** - This checkbox instructs BobCAD-CAM that the machine can accept 4Axis entities in the form given in the post processor in the **Contour 4Axis** heading.
- **Use 4Axis Entities** - This checkbox allows BobCAD-CAM to use the entities in the above section.
- **Subprograms Allowed** - If the machine can accept subprograms, check this box.
- **Use Subprograms** - If it is desired to actually use subprograms for shape descriptions in the NC output, check this.
- **Auto Threading Allowed** - If the machine supports automatic wire threading, check this box.
- **Use Auto Threading** - If the above box is checked, check this if it's desired to use the machine's wire threader.
- **Submerged Machining Allowed** - Not all machines have facilities to submerge the part in the dielectric fluid. Check this if the one being configured does.
- **Use Submerged Machining** - Check this to submerge all parts if the above is also checked.
- **Output Wire Guide Positions** - This check box instructs BobCAD-CAM to output the positions of the wire guides in the NC program rather than the coordinates of the part.
- **Output Comments** - If this is checked, BobCAD-CAM will output comments into the program.
- **Output File Breaks** - Permits BobCAD-CAM to output file breaks in the post processed code.

Step 3: Click on the **Machines** tab at the top of the dialog. Check over the settings to make sure that the machine make and model names are correct. Click **Save** at the bottom of the box.

When BobCAD-CAM V23 is next started, this machine will be available to choose from the list and will be pre-chosen as the default.

