TRIMECH Manufacturing

The Mill and Drill

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DEAR CUSTOMER

Welcome to your weekly installment of *"The Mill & Drill"*, TriMech Mfg.'s Technical Newsletter for FeatureCAM. This newsletter is intended to keep you, the hip TriMech FeatureCAM User, on the cutting edge of your FeatureCAM seat. Don't forget to visit www.trimech.com for additional information.

NOTICES

The Mill and Drill is taking the rest of the year off...

Since the next two Fridays are Christmas Eve and New Year's Eve, this will be the last *Mill and Drill* of 2004. As always, we at TriMech Manufacturing thank you for your business, and we wish you a safe, happy, and prosperous new year. See you in 2005!

Did you miss a newsletter?

Don't worry, the newsletters are posted, every issue, in PDF format on the TriMech Web Site (www.trimech.com). Just hover over TriMech Manufacturing, Technical Support and you will see "The Mill & Drill" letters to the right side.

Is there anybody else at your company who would like to receive the newsletter?

Send us their name and e-mail address, and we'll add them to the list.

FeatureCAM TRAINING SCHEDULE

Note: Our main training facility is in Fishersville, VA, but we can make special arrangements for classes at any of our other TriMech offices (Columbia, MD; Pittsburgh, PA; Richmond, VA; Durham, NC; and Charlotte, NC). We also provide on-site training. Call (540) 949-7703 for rates and details.

Fishersville, VA	
FeatureCAM Basic (2 days)	Jan.12, 13
FeatureCAM Advanced Milling	Dec. 21
FeatureCAM Turning	TBA

TIPS AND TRICKS

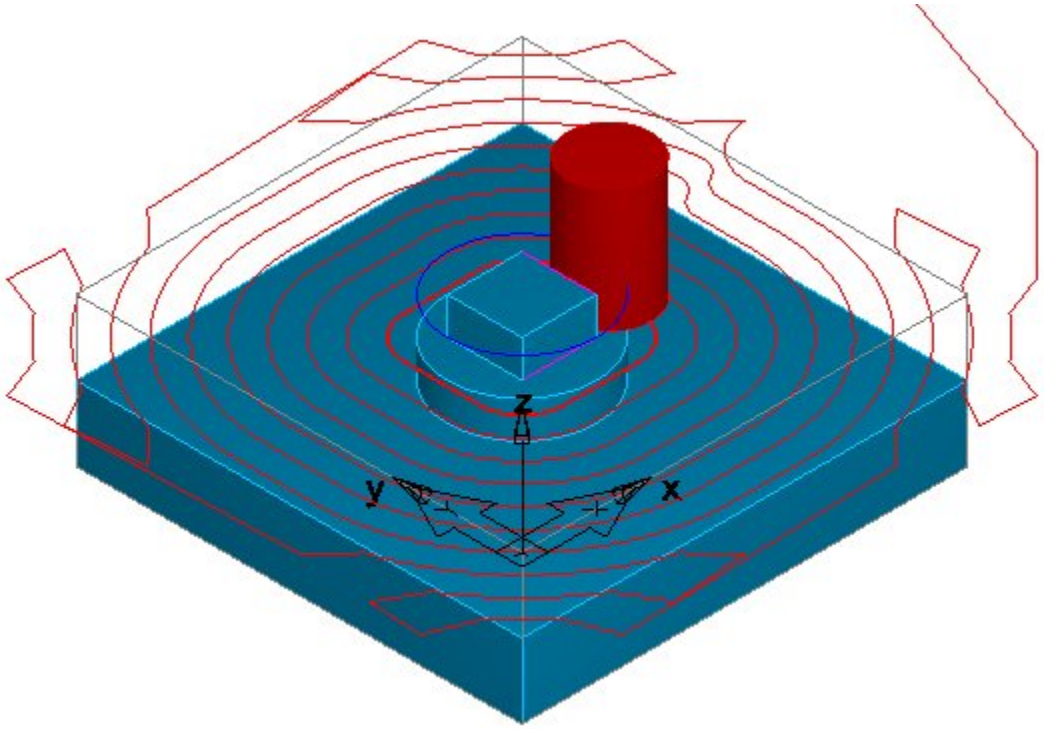
Total Stock

When you create a feature, FeatureCAM does a great job of automatically recognizing what stock needs to be removed. (You'd be amazed how many CAM packages *can't* do this!) But once in a while, you might want to override the stock that the feature sees. For example, if you create a big window through a thin aluminum plate with a pocket feature, and you don't want to turn the whole thing to chips; you just want to cut out the slug. You could finish only, but what if you want to rough and finish? This is where **Total Stock** comes in handy. You will find it on the **Milling** tab of the **Rough** operation, and its

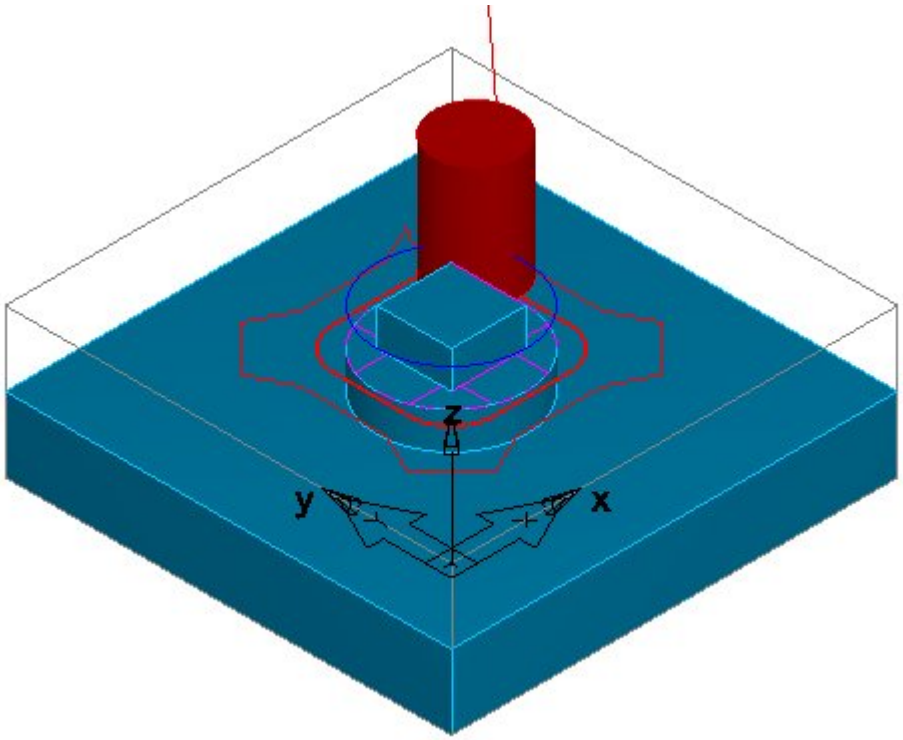
purpose it to override the amount of stock is on the profile. That's right, you can *lie* to the feature! If you put a value of 1 inch in the field, the rough passes will be created to cut exactly 1 inch of stock off the entire profile whether the stock is really there or not. If you put a 0 in Total Stock, the feature will take exactly one rough pass -leaving the finish allowance - and then the finish pass.

Stock Curve

There's another way to control what stock a feature sees. Consider this example: you cut a boss on a block of material, and naturally it removes all of the stock that is on the outside of the boss curve. So far, so good. Next, you cut a smaller boss on top of the first boss. This feature also cuts all of the stock away - most of which is already gone. So, it cuts a lot of air. Here's an example where a square boss is going to be cut on top of a round boss. Take a look at this toolpath for the square boss:



Remember, that round boss has already been cut, so we're talking ***big*** air here. To fix this, we need to set a different stock curve. Inside of just about every feature there is a **Stock Curve** button on the **Dimensions** tab where you can control the shape of the stock for that feature. In this case, we will select the circular curve that is the boundary for the round boss, because that is exactly what the stock for this feature will be. Check out how our toolpath improves:



BIG improvement, huh? Obviously, machining order is important here, so if you reorder any of your features, make sure the selected stock curves still make sense.

Happy Holidays from the TriMech Team!!

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QUESTIONS/COMMENTS?

Please send any tips/tricks, feedback (regarding this newsletter)
or requests to be added/removed from our distribution list to...
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