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Vero Newsletter

February 2010   E-mail to a Friend

Hints & Tips

For this newsletter we will take a look at some of the common questions asked where answers are not so obvious. During the training courses, many of these questions are explained but for those who have been unable to attend....

Rest Roughing and the use of STOCK OFFSET - How to obtain the best result

In this issue, we are going to look at the best use of Rest Roughing and stock offset. Typically the use of rest roughing permits the use of larger cutters for previous roughing operations to remove the vast majority of stock material. The rest roughing operation is generally a subsequent operation (set of operations), gradually reducing the tool size and removing additional areas of stock where the larger cutter could not fit - In this case, the correct use of the 'Stock Offset Value' is very important. The 'Stock Offset Value' represents the area of toolpath that can be eliminated during calculation. As this is a roughing operation it is not necessary to machine all miniature areas as these areas will ultimately be machined during semi-finishing operations.

In the example shown below, the cutter used for the original roughing operation is too large to fit into the groove. The secondary rest roughing operation (smaller cutter) is only required to machine into this groove and maintain a consistent stock amount for finishing operations. However, with a stock offset value set to zero, the toolpath will machine a small amount of stock on every Z slice when not necessary. Setting the stock offset value to -1 (minus 1), the system will eliminate any toolpath with an area less than 1mm and in this example, only machine the groove as required.
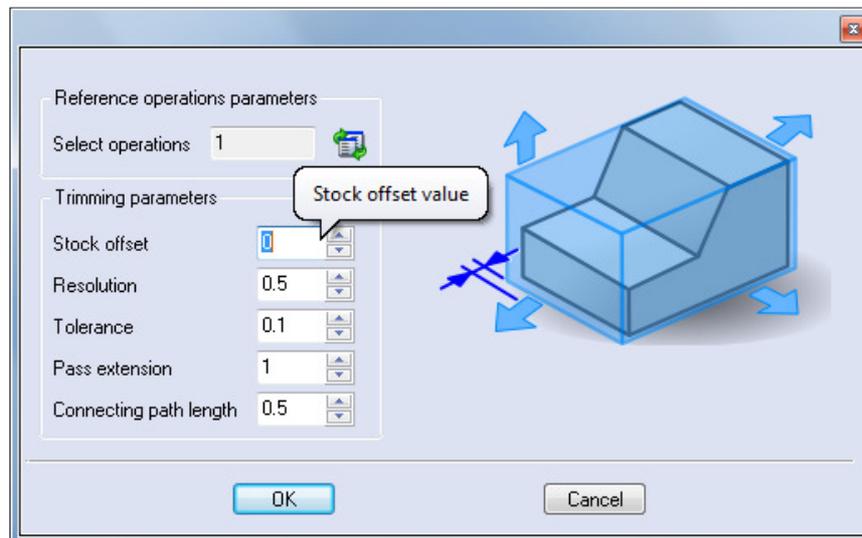
This single parameter can be used to great effect when producing the most efficient toolpath.
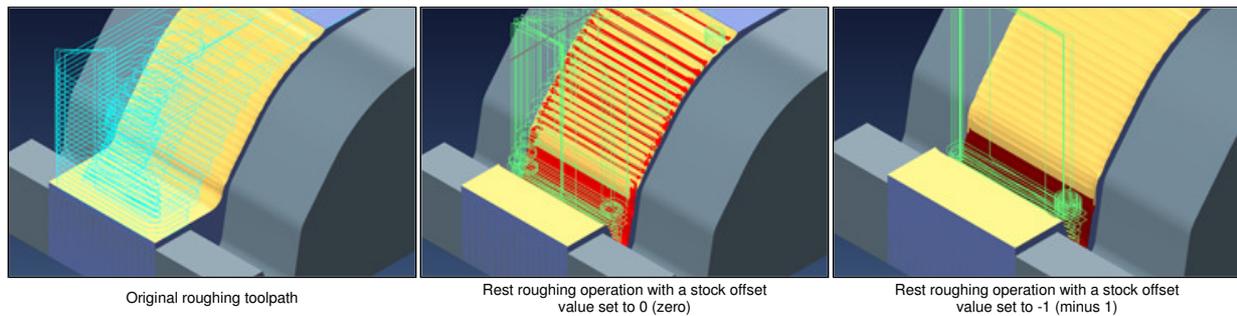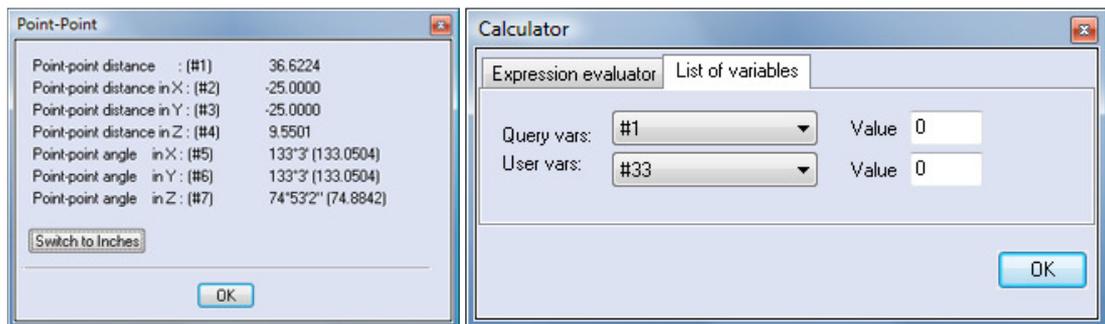

Original roughing toolpath | Rest roughing operation with a stock offset value set to 0 (zero) | Rest roughing operation with a stock offset value set to -1 (minus 1)

Variables and # numbers ?

This is a good tip, and one unknown to many VISI users. Within VISI whenever a numerical value is displayed within a dialogue box, it is assigned a specific # (hash) number. If you need to reuse this number, rather than having to remember or write it down, it is only necessary to insert the relevant # number into the dialogue box to recall the exact value. Please note that the system continually uses the # values from #1 - #32 and these are overwritten by the system each time a new value is calculated. However, it is possible to set # numbers that will not be overwritten by system by creating user defined variables and # numbers above #32. These can be set using the option **? > Calculator > List of variables**.

Point-Point

Point-point distance : (#1)	36.6224
Point-point distance in X : (#2)	-25.0000
Point-point distance in Y : (#3)	-25.0000
Point-point distance in Z : (#4)	9.5501
Point-point angle in X : (#5)	133°3' (133.0504)
Point-point angle in Y : (#6)	133°3' (133.0504)
Point-point angle in Z : (#7)	74°53'2" (74.8842)

Switch to Inches

OK

Calculator

Expression evaluator | List of variables

| Query vars: | #1 | ▼ | Value | 0 |
| User vars: | #33 | ▼ | Value | 0 |

OK

If you have any tips or tricks that you would like to share, please email me with a short description (marc@vero.co.uk) and I will include them within a future Vero Newsletter.

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