



Smoothing Contours in TIN MODEL

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When creating DXF contours from a TIN model, there are a few options to help clean up the lines and make hard, mathematical contours look more natural.

TIN MODEL and FINAL PRODUCT WIZARD apply these options in the exact same way. In TIN MODEL, select EXPORT-DXF and configure the contour parameters. In the FINAL PRODUCT WIZARD, the same options appear on the Contours tab.

FIGURE 1. Contour Export Options

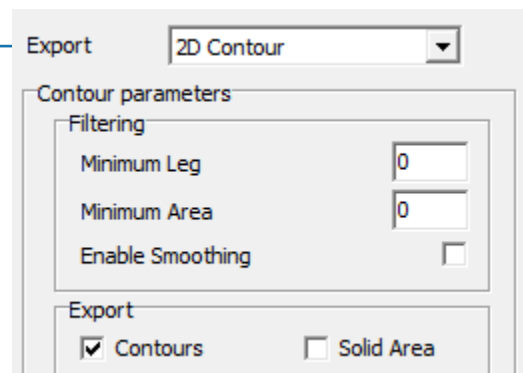
Minimum Leg ensures that the distance between 2 contour points are at least the specified distance apart, removing points until this is true.

Minimum area deletes any closed contour where the area is less than the specified area.

Enable Smoothing creates a B-Spline curve between the points. It tries to replace a jagged contour with smooth, curved line that matches the original contour. The resulting line will have 8 times as many points to draw this curve. If the resulting file size is too large, you may still want to have a small Minimum Leg applied.

When creating the contours, keep in mind that the Minimum Leg is applied first, then the Minimum Area and finally Smoothing. This sequence may make small contours smaller before the area filter is applied eliminating some contours altogether.

It is also important to note that applying these options can move the line off the known measured depths and you can end up with depths on the wrong side of the contour. [Figure 2](#) shows the combined effect of Minimum Leg and Smoothing on the 35 foot contour. You can see points less than 35 on the wrong side of the green and blue contours circled in orange. The best way to minimize this is to limit your Minimum Leg.



IMPORTANT: As the Minimum Leg increases, it is more likely to result in depths on the wrong side of the contour line.

FIGURE 2. Effects of Minimum Leg and Smoothing

Contour Color	Options Applied
Black	Original Contour
Red	Smoothing
Green	Minimum Leg = 5
Blue	Smoothing + Minimum Leg = 5

