

Rolling Offset Calculator

Finds the true rolling offset, bend travel, mark locations, and estimated shrink from horizontal and vertical displacement, bend angle, and a reference mark.

Generated October 10, 2026

<https://www.elecatrix.com/conduit-bending/rolling-offset-calculator/>

Inputs		
Input	Value	Unit
Horizontal offset	3	in
Vertical offset	4	in
Bend angle	30	deg
First mark	10	in
Results		
Result	Value	Unit
True rolling offset	5	in
Travel between bends	10	in
First mark	10	in
Second mark	20	in
Offset multiplier	2	x
Estimated shrink	1.3397	in
Calculation details		
Detail	Value	Unit
Calculation basis	True rolling offset is the right-triangle resultant of horizontal and vertical offsets. Bend travel uses the selected offset angle.	
Layout boundary	Field-layout estimate only; confirm reference side, bend direction, conduit spacing, springback, bend sequence, available straight length, and bender behavior before marking.	
Formulas		

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$$O_{\text{true}} = \sqrt{H^2 + V^2}$$

$$M = (1/\sin(\theta))$$

$$T = O_{\text{true}} \times M$$

$$M_{\text{second}} = M_{\text{first}} + T$$

$$S = O_{\text{true}} \times \tan((\theta/2))$$

Warnings and limitations

This rolling-offset estimate is a field-layout aid. Confirm conduit orientation, bend sequence, springback, bender markings, support, available straight length, and job conditions before bending.