

Conduit Bend Angle Calculator

Calculate bend angle from measured rise and travel, then show multiplier, mark spacing, and geometry shrink.

Generated October 10, 2026

<https://www.elecatrix.com/conduit-bending/conduit-bend-angle-calculator/>

Inputs		
Input	Value	Unit
Rise	4	in
Travel	8	in
First mark from conduit end	24	in

Results		
Result	Value	Unit
Rise used	4	in
Travel used	8	in
Calculated bend angle	30	deg
Offset multiplier	2	x
First bend mark	24	in
Second bend mark	32	in
Geometry shrink	1.0718	in

Calculation details		
Detail	Value	Unit
Calculation basis	The bend angle is the inverse sine of rise divided by travel. The multiplier is the inverse ratio travel divided by rise.	
Layout boundary	Geometry screen only; verify the actual conduit, bender markings, field reference, springback, and bend direction separately.	

Formulas		
$\theta = \sin^{-1}((R/T))$		

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$$M_{\text{offset}} = (T/R)$$

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

$$S_{\text{shrink}} = R \times \tan((\theta/2))$$

Warnings and limitations

This inverse geometry result is a planning estimate. Confirm measured reference points, bend direction, conduit condition, springback, and actual bender markings before using it in the field.