

Conduit Shrink Calculator

Calculate shrink arithmetic for an offset or saddle layout without selecting a field sequence.

Generated October 10, 2026

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

Inputs

Input	Value	Unit
Offset depth	4	in
Bend angle	30	deg
Bend-set count	2	sets

Results

Result	Value	Unit
Shrink per set	1.0718	in
Total shrink	2.1436	in
Travel between bends	8	in
Offset multiplier	2	x
Shrink per inch of offset	0.2679	x
Angle used	30	deg

Calculation details

Detail	Value	Unit
Calculation basis	The mode calculates shrink for one entered bend set and multiplies it by the entered number of bend sets.	
Layout boundary	Mode arithmetic only; actual bend sequence, shoe markings, springback, and field convention remain separate.	

Formulas

$\text{shrink per set} = \text{offset depth} \times \tan(\text{bend angle} / 2)$

$\text{total shrink} = \text{shrink per set} \times \text{bend-set count}$

$\text{travel between bends} = \text{offset depth} / \sin(\text{bend angle})$

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Warnings and limitations

Mode arithmetic only; actual bend sequence, shoe markings, springback, and field convention remain separate.