

Box Offset Calculator

Estimate offset travel, second-bend location, multiplier, and shrink for a box offset using the entered depth, bend angle, and first mark. The result supports field layout and does not replace fitting or bender instructions.

Generated October 10, 2026

<https://www.elecatrrix.com/conduit-bending/box-offset-calculator/>

Inputs		
Input	Value	Unit
Box offset depth	4	in
Distance to box	30	in
Bend angle	30	deg
First mark	10	in
Results		
Result	Value	Unit
Box offset depth used	4	in
Distance to box used	30	in
First mark	10	in
Second mark	18	in
Travel between bends	8	in
Offset multiplier	2	x
Shrink estimate	1.0718	in
Calculation details		
Detail	Value	Unit
Calculation basis	Box offset travel uses box offset depth divided by sine of the selected bend angle.	
Layout boundary	Field-layout estimate only; confirm box geometry, reference marks, bend direction, springback, bender behavior, and available straight length before bending.	

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Formulas

D_offset=box offset depth,quad theta=bend angle,quad M_first=first bend mark

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

$T = D_offset \times M_offset$

$M_second = M_first + T$

$S_estimated = D_offset \times \tan((\theta/2))$

Warnings and limitations

This box-offset estimate is a field-layout aid. Confirm box dimensions, fitting requirements, bend direction, springback, bender markings, and job conditions before bending.