

Conduit Saddle Shrink Calculator

Calculate entered-geometry saddle spacing and shrink before checking the actual bender and field conditions.

Generated October 10, 2026

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

Inputs

Input	Value	Unit
Obstruction height	4	in
Outside bend angle	22.5 deg	deg
Saddle count	1	saddles

Results

Result	Value	Unit
Outside-to-center mark spacing	10.4525	in
Shrink per saddle	0.7956	in
Total shrink	0.7956	in
Center bend angle	45	deg
Total saddle bend degrees	90	deg

Calculation details

Detail	Value	Unit
Geometry boundary	Estimate uses entered rise, outside angle, and count; bender take-up, shoe multipliers, springback, and obstruction width are not inferred.	

Formulas

mark spacing = obstruction height / sin(outside bend angle)

shrink per saddle = obstruction height x tan(outside bend angle / 2)

total estimated shrink = shrink per saddle x saddle count

center bend angle = 2 x outside bend angle

total saddle bend degrees = 4 x outside bend angle

Warnings and limitations

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This is a transparent geometry calculation, not a bender-specific shrink chart or installation approval. Verify shoe marks, conduit size and material, springback, obstruction width, and available straight length before bending.