

Cable Bend Radius Calculator

Estimate cable bend geometry from a verified outside diameter, manufacturer or project bend-radius multiplier, and bend angle. Confirm the resulting radius against the cable's published requirements.

Generated October 10, 2026

<https://www.elecatrix.com/wire-raceway-ampacity/cable-bend-radius-calculator/>

Inputs

Input	Value	Unit
Cable outside diameter	1.25	in
Bend radius multiplier	12	x OD
Bend angle	90	deg

Results

Result	Value	Unit
Minimum bend radius	15	in
Minimum bend diameter	30	in
Bend arc length	23.5619	in
Multiplier used	12	x

Calculation details

Detail	Value	Unit
Calculation basis	Minimum bend radius is the entered cable outside diameter multiplied by the entered manufacturer or project multiplier.	
Selection boundary	Cable bend radius estimate only; verify manufacturer data, cable construction, pulling method, raceway route, listing instructions, and local requirements.	

Formulas

D_{cable} =cable outside diameter, M_{bend} =bend-radius multiplier, θ =bend angle

$R_{\text{min}} = D_{\text{cable}} \times M_{\text{bend}}$

$D_{\text{bend}} = 2 \times R_{\text{min}}$

$L_{\text{arc}} = R_{\text{min}} \times (\theta/360) \times 2\pi$

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Warnings and limitations

This cable bend radius estimate uses a user-entered multiplier. It does not replace manufacturer instructions, listing limits, pulling setup, raceway routing, or code compliance.