

Conduit Multibend Layout Calculator

Calculate grouped multibend arc length and mark spacing when repeated bend angles follow a known centerline radius.

Generated October 10, 2026

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

Inputs		
Input	Value	Unit
Bend groups	Rows: 1	
Row 1 - Bend group label	Main shots	
Row 1 - Bend angle	15	deg
Row 1 - Bend mark count	6	marks
Bend centerline radius	24	in
First mark from conduit end	24	in
Results		
Result	Value	Unit
Total bend mark count	6	marks
Spacing intervals	5	
Total bend angle	90	deg
Average bend angle	15	deg
Developed arc length	37.6991	in
Average mark spacing	7.5398	in
Last mark from conduit end	61.6991	in
Calculation details		
Detail	Value	Unit
Calculation basis	Each bend group contributes angle multiplied by count. The total angle is converted to an arc length at the entered centerline radius, then divided across the intervals between the first and last marks.	

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Layout boundary

Multi-bend geometry screen only; verify bender limits, mark spacing, conduit springback, segment sequence, and job-site clearance separately.

Formulas

$\text{group angle contribution} = \text{bend angle} \times \text{bend mark count}$

$\text{total bend angle} = \text{sum of group angle contributions}$

$\text{developed length} = \text{bend radius} \times \text{total bend angle in radians}$

$\text{spacing interval count} = \text{total bend mark count} - 1$

$\text{average mark spacing} = \text{developed length} / \text{spacing interval count}$

$\text{last mark} = \text{first mark} + \text{average mark spacing} \times \text{spacing interval count}$

Warnings and limitations

This is a grouped arc-length layout calculation. It treats the first and last marks as the ends of the developed span. It does not determine whether the bend sequence is practical for a specific bender, conduit, shoe, springback condition, or installation.