

Cross-Section Properties			
Y - Y Properties			
Elastic Modulus	E	29,000.0000	ksi
From left to centroid	Z left	0.5000	inch
From centroid to right	Z right	0.5000	inch
Area of shape	A	2.0000	inch ²
Moment of Inertia	I _y	0.1667	inch ⁴
Section Modulus	S _y	0.3333	inch ³
Section Modulus (left)	S left	0.3333	inch ³
Section Modulus (right)	S right	0.3333	inch ³
Radius of Gyration	r _y	0.2887	inch
Plastic Modulus	Z _y	0.5000	inch ³
Shape Factor		1.5000	
From left to plastic n.a.	Z _p left	0.5000	inch
From plastic n.a. to right	Z _p right	0.5000	inch
Polar Moment of Inertia	J	0.8333	inch ⁴
Product of Inertia	I _{yz}	0.0000	inch ⁴
Maximum Moment of Inertia	I _{max}	0.6667	inch ⁴
Minimum Moment of Inertia	I _{min}	0.1667	inch ⁴
Angle from y axis to I _{max} axis	β	90.0000	degrees
			Counterclockwise

Cross-Section Properties			
Z - Z Properties			
Elastic Modulus	E	29,000.0000	ksi
From bottom to centroid	Y bot	1.0000	inch
From centroid to top	Y top	1.0000	inch
Area of shape	A	2.0000	inch ²
Moment of Inertia	I _z	0.6667	inch ⁴
Section Modulus	S _z	0.6667	inch ³
Section Modulus (bottom)	S bot	0.6667	inch ³
Section Modulus (top)	S top	0.6667	inch ³
Radius of Gyration	r _z	0.5774	inch
Plastic Modulus	Z _z	1.0000	inch ³
Shape Factor		1.5000	
From bottom to plastic n.a.	Y _p bot	1.0000	inch
From plastic n.a. to top	Y _p top	1.0000	inch
Polar Moment of Inertia	J	0.8333	inch ⁴
Product of Inertia	I _{yz}	0.0000	inch ⁴
Maximum Moment of Inertia	I _{max}	0.6667	inch ⁴
Minimum Moment of Inertia	I _{min}	0.1667	inch ⁴
Angle from z axis to I _{max} axis	β	0.0000	degrees
			Clockwise

Euler Column Buckling Module

Back Cross-Section Help

Total Column Length

10

- in mm
 ft m

Fixity at Top

- Pinned
 Fixed
 Free
 Guided

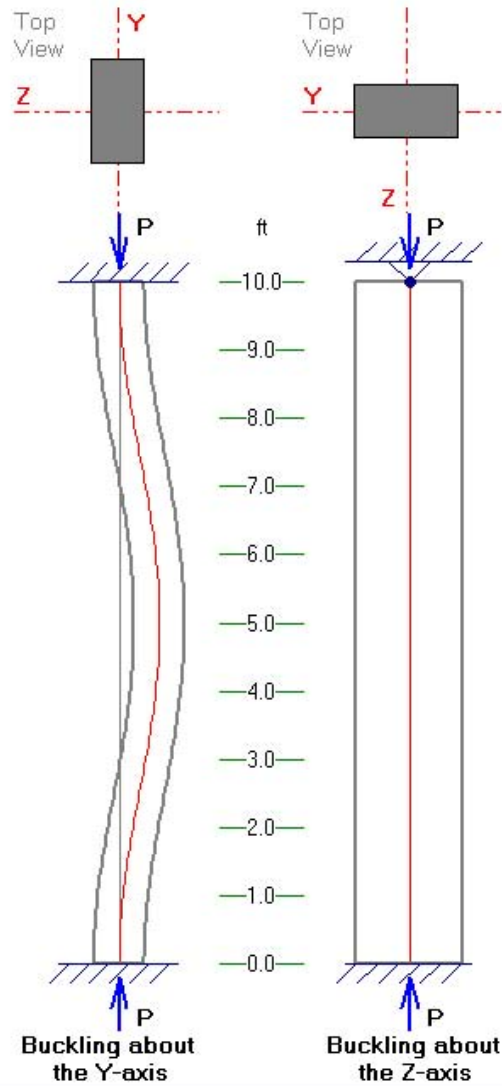
Slenderness Ratio
 $KL/r = 207.846$

Intermediate Support

Effective Length Factor
 $K = 0.500$

Fixity at Bottom

- Pinned
 Fixed



Compute

End

Fixity at Top

- Pinned
 Fixed
 Free
 Guided

Slenderness Ratio
 $KL/r = 145.317$

Intermediate Support

Fixity at Bottom

- Pinned
 Fixed

Critical Euler Buckling Load

13,250.86 lbs

- lbs N
 kips kN

Critical Euler Buckling Stress

6,625.43 psi

- psi kPa
 ksi MPa

Critical Stress vs. Slenderness Ratio

