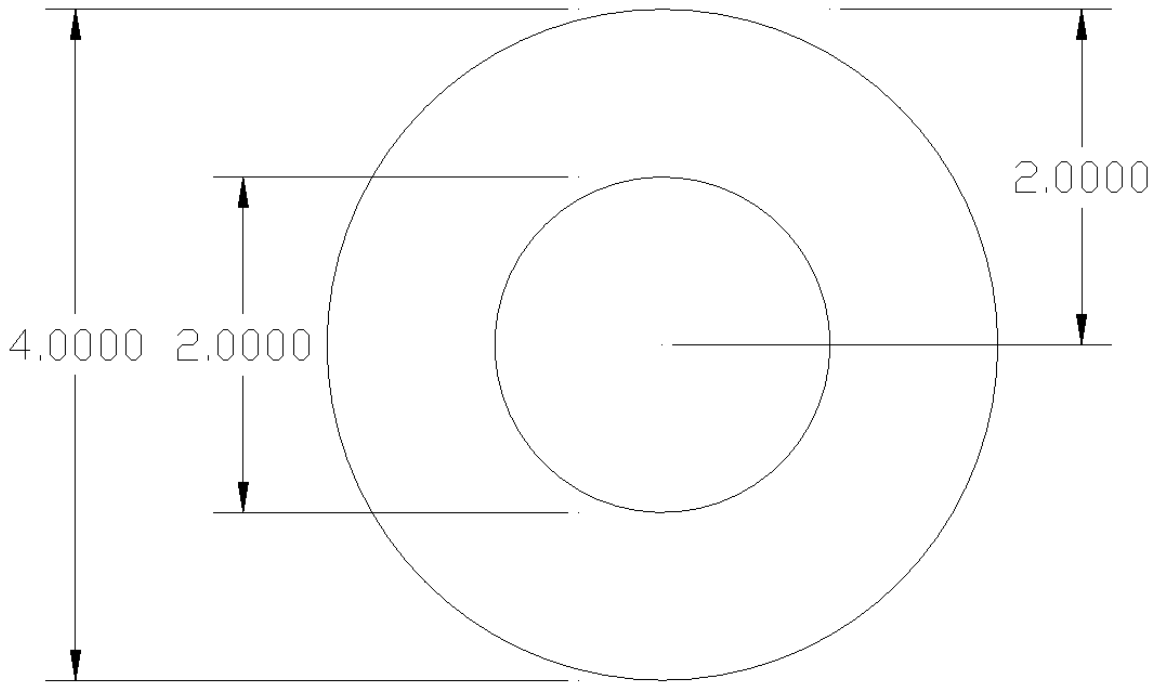


Hollow Circle Sample



MassPlus Results

Section Property	Value	Conv. Value
Drawing: hollow circle.dwg		
Number of entities processed:	2	
Component Areas used in calculations:	100000	
Area	9.425 in ²	6080.490 mm ²
X-Centroid relative to drawing origin	2.000 in	50.800 mm
Y-Centroid relative to drawing origin	2.000 in	50.800 mm
X-Centroid relative to section origin	2.000 in	50.800 mm
Y-Centroid relative to section origin	2.000 in	50.800 mm
Section Width (Maximum)	4.000 in	101.600 mm
Section Height (Maximum)	4.000 in	101.600 mm
Ixx Centroidal Moment of Inertia about the X axis	11.781 in ⁴	4903610.958 mm ⁴
Iyy Centroidal Moment of Inertia about the Y axis	11.781 in ⁴	4903610.958 mm ⁴
Jz Polar moment of Inertia about the centroid	23.562 in ⁴	9807221.916 mm ⁴
Pxy Product of Inertia about the centroidal axes	0.000 in ⁴	0.000 mm ⁴
rx Radius of gyration about X axis of the centroid	1.118 in	28.398 mm
ry Radius of gyration about Y axis of the centroid	1.118 in	28.398 mm
Sxx Section Modulus thru y-value of the centroid	5.890 in ³	96527.775 mm ³
Syy Section Modulus thru x-value of the centroid	5.890 in ³	96527.775 mm ³
Sxx max thru the y-value of centroid	5.890 in ³	96527.775 mm ³
Sxx min thru the y-value of centroid	5.890 in ³	96527.775 mm ³
Syy max thru the x-value of centroid	5.890 in ³	96527.775 mm ³
Syy min thru the x-value of centroid	5.890 in ³	96527.775 mm ³
Zx - Plastic Section Modulus	9.333 in ³	152945.933 mm ³
Plastic Neutral Axis distance from section bottom	2.000 in	50.799 mm
Plastic Neutral Axis distance from section top	2.000 in	50.801 mm
Ix'x' Moment of Inertia about drawing X axis	49.480 in ⁴	20595166.085 m...
Iy'y' Moment of Inertia about drawing Y axis	49.480 in ⁴	20595166.085 m...
Jz' Polar moment of Inertia about drawing's origin	98.960 in ⁴	41190332.169 m...
Px'y' Product of Inertia about drawing axes thru origin	37.699 in ⁴	15691555.126 m...
rx'x' Radius of gyration about X axis of drawing's origin	2.291 in	58.199 mm
ry'y' Radius of gyration about Y axis of drawing's origin	2.291 in	58.199 mm
Principal Moments Rotated Axes U-V calculations		
Principal axes angle of rotation	0.000 °	
Iuc Moment of Inertia about rotated U-axis thru centroid	11.781 in ⁴	4903610.958 mm ⁴
Ivc Moment of Inertia about rotated V-axis thru centroid	11.781 in ⁴	4903610.958 mm ⁴
Puv Product of Inertia about the rotated UV centroidal axes	0.000 in ⁴	0.000 mm ⁴
Imax	11.781 in ⁴	4903610.958 mm ⁴
Imin	11.781 in ⁴	4903610.958 mm ⁴
Iu Moment of Inertia about rotated U-axis thru drawing origin	49.480 in ⁴	20595166.085 m...
Iv Moment of Inertia about rotated V-axis thru drawing origin	49.480 in ⁴	20595166.085 m...
Pu'v' Product of Inertia about rotated axes thru drawing origin	37.699 in ⁴	15691555.126 m...