

Mass properties of shaft\_pando\_ball

Configuration: Default

Coordinate system: first\_pendulum\_axis

Density = 0.01 grams per cubic millimeter

Mass (user-overridden) = 80.00 grams

Volume = 9332.13 cubic millimeters

Surface area = 4697.00 square millimeters

Center of mass: ( millimeters )

X = 0.00

Y = -87.83

Z = 0.14

Principal axes of inertia and principal moments of inertia: ( grams \* square millimeters )

Taken at the center of mass.

I<sub>x</sub> = ( 0.00, 1.00, 0.00 )      P<sub>x</sub> = 1116.21

I<sub>y</sub> = ( 1.00, 0.00, 0.00 )      P<sub>y</sub> = 184029.76

I<sub>z</sub> = ( 0.00, 0.00, -1.00 )      P<sub>z</sub> = 184082.00

Moments of inertia: ( grams \* square millimeters )

Taken at the center of mass and aligned with the output coordinate system. (Using positive tensor notation.)

L<sub>xx</sub> = 184029.76      L<sub>xy</sub> = 0.32L<sub>xz</sub> = -0.02

L<sub>yx</sub> = 0.32 L<sub>yy</sub> = 1118.17      L<sub>yz</sub> = -598.45

L<sub>zx</sub> = -0.02      L<sub>zy</sub> = -598.45      L<sub>zz</sub> = 184080.04

Moments of inertia: ( grams \* square millimeters )

Taken at the output coordinate system. (Using positive tensor notation.)

I<sub>xx</sub> = 801188.30      I<sub>xy</sub> = 1.29 I<sub>xz</sub> = -0.03

I<sub>yx</sub> = 1.29 I<sub>yy</sub> = 1119.63      I<sub>yz</sub> = -1547.86

I<sub>zx</sub> = -0.03      I<sub>zy</sub> = -1547.86      I<sub>zz</sub> = 801237.12