

SOLIDWORKS > Model > Motion Study 1

SOLIDWORKS Student Edition - Academic Use Only

Part1

wrap

Basic Modeling Tools Sketch Surfaces Simulation Analysis Preparation

Mass Properties

Part1

Options...

Override Mass Properties... Recalculate

Include hidden bodies/components

Create Center of Mass feature

Show weld bead mass

Report coordinate values relative to: -- default --

Mass properties of Part1
Configuration: Default
Coordinate system: -- default --

Density = 0.04 pounds per cubic inch

Mass = 0.21 pounds

Volume = 5.75 cubic inches

Surface area = 18.28 square inches

Center of mass: (inches)
X = 0.00
Y = 0.00
Z = 0.63

Principal axes of inertia and principal moments of inertia: (pounds * square inches)
Taken at the center of mass.

I _x = (0.00, 1.00, 0.00)	P _x = 0.07
I _y = (-1.00, 0.00, 0.00)	P _y = 0.17
I _z = (0.00, 0.00, 1.00)	P _z = 0.20

Moments of inertia: (pounds * square inches)
Taken at the center of mass and aligned with the output coordinate system. (Using positive tensor notation.)

L _{xx} = 0.17	L _{xy} = 0.00	L _{xz} = 0.00
L _{yx} = 0.00	L _{yy} = 0.07	L _{yz} = 0.00
L _{zx} = 0.00	L _{zy} = 0.00	L _{zz} = 0.20

Moments of inertia: (pounds * square inches)
Taken at the output coordinate system. (Using positive tensor notation.)

I _{xx} = 0.25	I _{xy} = 0.00	I _{xz} = 0.00
I _{yx} = 0.00	I _{yy} = 0.15	I _{yz} = 0.00
I _{zx} = 0.00	I _{zy} = 0.00	I _{zz} = 0.20

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3D Components - Part



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Basic Modeling Tools Sketch Surfaces Simulation Analysis Preparation

Mass Properties

Part2

Part2

Override Mass Properties... Recalculate

Include hidden bodies/components

Create Center of Mass feature

Show weld bead mass

Report coordinate values relative to: -- default --

Mass properties of Part2
 Configuration: Default
 Coordinate system: -- default --

Density = 0.04 pounds per cubic inch

Mass = 0.50 pounds

Volume = 13.81 cubic inches

Surface area = 554.62 square inches

Center of mass: (inches)
 X = 5.25
 Y = -3.50
 Z = -0.77

Principal axes of inertia and principal moments of inertia: (pounds * square inches)
 Taken at the center of mass.

$I_x = (1.00, 0.00, 0.00)$	$P_x = 4.68$
$I_y = (0.00, 1.00, 0.00)$	$P_y = 8.18$
$I_z = (0.00, 0.00, 1.00)$	$P_z = 12.51$

Moments of inertia: (pounds * square inches)
 Taken at the center of mass and aligned with the output coordinate system. (Using positive tensor notation.)

$L_{xx} = 4.68$	$L_{xy} = 0.00$	$L_{xz} = 0.00$
$L_{yx} = 0.00$	$L_{yy} = 8.18$	$L_{yz} = 0.00$
$L_{zx} = 0.00$	$L_{zy} = 0.00$	$L_{zz} = 12.51$

Moments of inertia: (pounds * square inches)
 Taken at the output coordinate system. (Using positive tensor notation.)

$I_{xx} = 11.08$	$I_{xy} = -9.17$	$I_{xz} = -2.01$
$I_{yx} = -9.17$	$I_{yy} = 22.22$	$I_{yz} = 1.34$
$I_{zx} = -2.01$	$I_{zy} = 1.34$	$I_{zz} = 32.37$

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3D Components - Part

Model Motion Study 1

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Editing Part Simplified Interface IPS

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Mass Properties

Part3

Basic Modeling Tools Sketch Surfaces Simulation Analysis Preparation

Sketch Line Center Circle Polygon 3 Point Spline Smart Dimension Relation Extruded Boss/Base Extruded Cut Fillet Linear Pattern Entities Offset Entities Convert Mirror Entities Reference Geometry Measure Mass Properties

Part3

Mass Properties

Part3

Options...

Override Mass Properties... Recalculate

Include hidden bodies/components

Create Center of Mass feature

Show weld bead mass

Report coordinate values relative to: -- default --

Mass properties of Part3
Configuration: Default
Coordinate system: -- default --

Density = 0.04 pounds per cubic inch

Mass = 0.40 pounds

Volume = 11.02 cubic inches

Surface area = 42.10 square inches

Center of mass: (inches)
X = -2.54
Y = 0.00
Z = 0.00

Principal axes of inertia and principal moments of inertia: (pounds * square inches)
Taken at the center of mass.
Ix = (1.00, 0.00, 0.00) Px = 0.09
Iy = (0.00, 0.00, -1.00) Py = 3.30
Iz = (0.00, 1.00, 0.00) Pz = 3.30

Moments of inertia: (pounds * square inches)
Taken at the center of mass and aligned with the output coordinate system. (Using posit
Lxx = 0.09 Lxy = 0.00 Lxz = 0.00
Lyx = 0.00 Lyy = 3.30 Lyz = 0.00
Lzx = 0.00 Lzy = 0.00 Lzz = 3.30

Moments of inertia: (pounds * square inches)
Taken at the output coordinate system. (Using positive tensor notation.)
Ix = 0.09 Ixy = 0.00 Ixz = 0.00
Iyx = 0.00 Iyy = 5.87 Iyz = 0.00
Izx = 0.00 Izx = 0.00 Izz = 5.87

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Appearances, Scenes, and Decals

Scenes

Basic Scenes Studio Scenes

Presentation Scenes Backgrounds

Decals

color texture

Default Appearance: color Drag and drop appearances onto ...