

Mass

Mass values are calculated for structural elements according to volume and material density. Mass is then automatically concentrated at [joint](#) locations. During dynamic analysis, mass translation along each of the three joint displacement degrees-of-freedom (DOF) correlates with [Acceleration](#) to create [inertial forces](#). Additional concentrated mass may be assigned to joint locations. Further, mass moment of inertia may be applied to each of the three joint rotational DOF to account for rotational inertia. Mass is uncoupled between different joints, and between DOF at a joint location. Mass units are given as W/g , and mass moment-of-inertia units are given as WL^2/g , where W is weight, L is length, and g is gravity.

Mass Tips

- After analysis is run, check [joint](#) mass by selecting Display > Show Tables > Analysis Results > Joint Output.

Articles

Tutorials

Title	Description	Program
Tuned-mass damper	An overview of the tuned-mass damper and guidelines for modeling the device.	SAP2000