

Colliding Steel Spheres

P6-6070



BACKGROUND:

Most students can tell you that mechanical systems convert some energy to heat. When objects collide, the kinetic energy transforms into sound, heat, and kinetic energy in the opposite direction. But it can be difficult to observe the heat produced.

CONTENTS:

Two 1-pound, 2-inch diameter chrome steel spheres

CAUTION:

Do not place fingers or important documents between the spheres!

EXPERIMENTS:

1. Hold the spheres on either side of a sheet of plain paper. Carefully (but firmly) crash the spheres together, with the paper in between. Look at the paper. There should be a hole. To confirm that the hole was actually burned in the paper, sniff the paper and smell the smoke.
2. Try thicker papers, or multiple layers. Avoid paper with wax coatings (such as manila folders), as the wax will prevent a hole from forming.

RELATED PRODUCTS:

Energy Discovery Pack (P6-6060). Demonstrate different types of energy transformation with this collection.

Ball and Ring (33-0630). A classic demonstration of thermodynamic expansion.

Portable Micro Burner (C5-1005). Need more heat? This convenient butane burner can be used anywhere.

