



EDDY CURRENT DEMONSTRATOR

EDYCR1

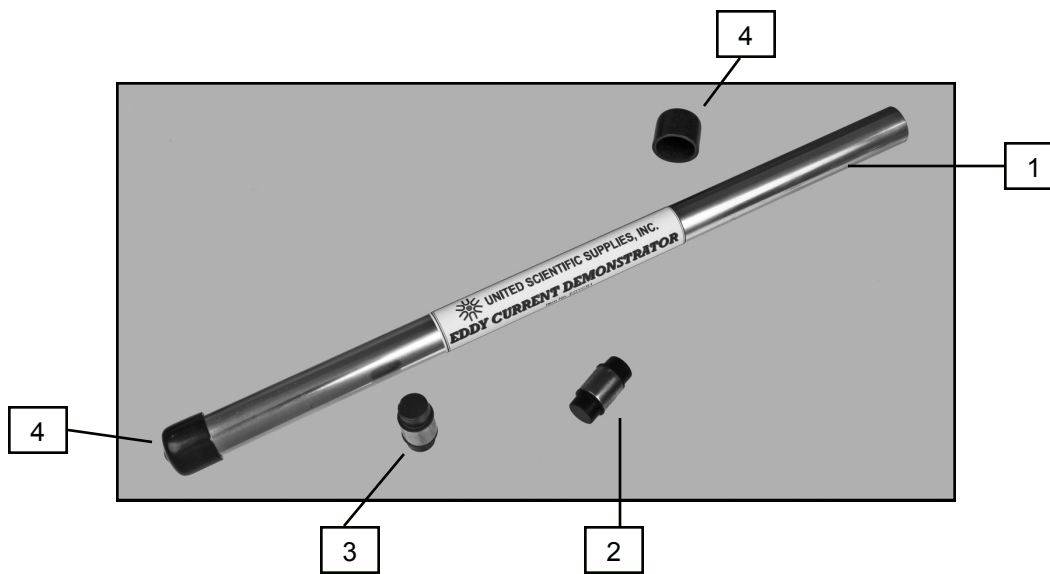


Figure 1

DESCRIPTION

The EDYCR1 Eddy Current Demonstrator is a simple device that offers a dramatic demonstration of the interaction of an electrical conductor with a magnetic field and exemplifies a practical consequence of Lenz's Law of Electromagnetism.

The device consists of an open-ended copper tube (1, *Figure 1*), a strong magnet (2), an un-magnetized steel slug (3) of identical appearance to the magnet, and a pair of plastic end caps (4) to enable the magnet and slug to be safely stored inside the copper tube when not in use.

The copper tube is 1/2" in diameter and 12" long. The magnet and slug fit inside the copper tube. Each is 1/2" long and is fitted with rubber bumpers on each end to prevent damage in case it falls onto a hard surface (strong magnets are brittle).

DEMONSTRATION

The viewers are first shown the parts of the Eddy Current Demonstrator, but without explaining that there is any difference between the two apparently identical metal slugs.

Next, the copper tube is held vertically with both of the end caps removed and the un-magnetized slug is allowed to fall through the tube from top to bottom. (Catch it!) The