

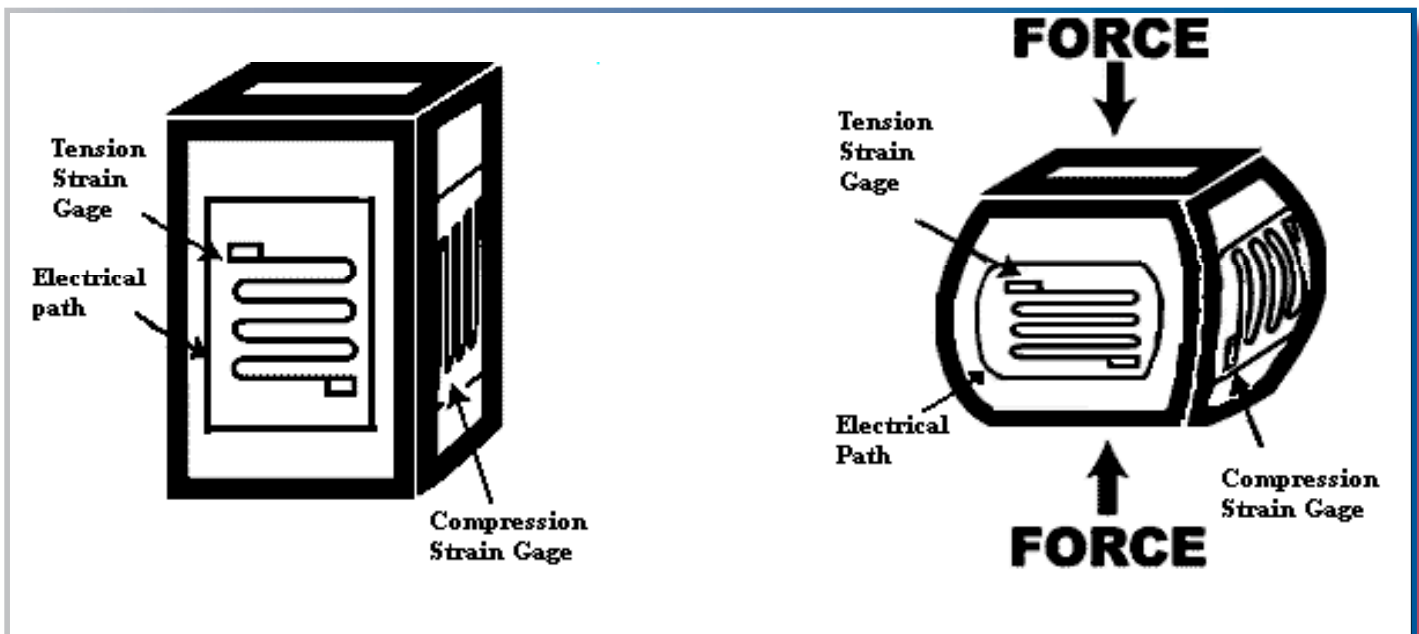
How It Works

Like most of the things in our lives, the electronic revolution has taken over many aspects of our lives. Today, modern scales incorporate miniaturized electrical technologies that offer many advantages over the older, bulkier mechanical scales. The main convenience modern scales offer is their ease of use. Modern scales are automatic in indication in that they allow for automatic weighing and computation of values without the user having to do much on the user end. The modern scale can be incorporated in to a variety a “price look-up” systems that can automatically charge a customer the correct price for the product they have scanned. They are used in production and packaging of mass quantities of products such as packaged food items where scales determine the net quantities of the packages at lightning speeds.

The majority of the new scales incorporate load cell

technology. A load cell is an electronic device that takes the force of the object being weighed and translates it to an electrical signal that is processed and displayed in the form of a value at the scale’s read-out.

At the heart of most load cells is the “strain gauge” technology. The strain gauge is a tiny flat coil of conductive wire that is an ultra-thin, heat-treated metallic foil that is chemically bonded to the load cell body. As a force is applied across this strain gauge the electrical resistance changes in the gage circuit as it bends or compresses. The electrical signal output is typically in the order of a few “milli-volts” and requires amplification before it is translated to a unit of weight. Load cells have allowed for commercial scales to become cheaper, smaller, faster and more sophisticated as they are incorporated in to a growing number of systems.



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