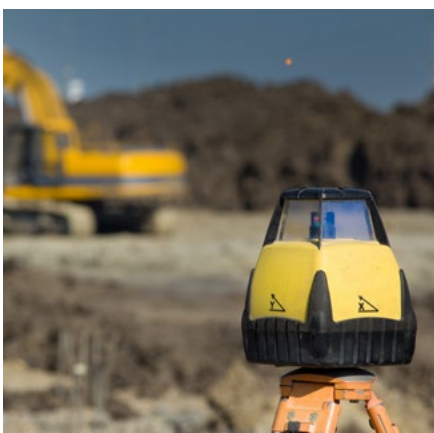


# ShockWatch Clip Impact Indicators



- Acts as a visual deterrent to improper handling
- Provides indisputable evidence of mishandling
- Promotes chain of accountability for all product handling
- Confirms effectiveness of packaging

ShockWatch Impact Indicators are highly visible, mechanically-activated devices that turn bright red when an impact occurs. The ShockWatch tube can be incorporated directly into a product's design. The ShockWatch Clips and Multi-G provide the tube in a convenient housing for adhering the impact sensor directly to a product, while the Flex gives you the ability to mount the indicator to products with a more complicated shape.

These solutions are ideal when you need to know if product mishandling may have resulted in misalignment, loss of product calibration, or warranty-related repair issues.

### Clip: Single and Double

The ShockWatch Clip is a highly visible impact indicator that alerts you if your product has been subjected to unacceptable handling. The single Clip

has one tube and will provide nearly 360 degrees of detection. The double Clip has two tubes and gives a full 360 degrees of detection. Clips may be embedded or attached to the exterior of products.

### Multi-G

An impact diagnostic tool for packaging engineers, distribution analysts, product designers, and manufacturing engineers, the Multi-G incorporates three sensitivity levels into a single unit to indicate a low, medium, and high impact. It can be used to determine package sensitivity during drop testing.

### Flex: Single and Double

The Flex, a flexible variation of the Clip, can be mounted easily to curved and irregular shapes, ensuring the indicator will remain in place.



## Selection Guide

Selection of a Clip, Flex, or Multi-G solution begins with understanding the product to be monitored. To select the proper activation levels, determine if shock specifications exist for the product to be monitored. Most complex electromechanical products have been through extensive testing to establish shock damage boundary data. When this information is available, simply

select the corresponding sensitivity. Activation graphs are available to best match the damage boundary of your product to the most suitable Clip, Flex, or Multi-G. If shock specifications do not exist for the product to be monitored, contact ShockWatch for assistance with selecting a solution.

The ShockWatch Clip and Flex are available in single or double

tube configurations. The following sensitivities are available: 10G, 15G, 25G, 37G, 50G, 75G, and 100G. The standard Multi-G Clip houses the following 3 tube sensitivities: 25G, 50G and 75G. Additionally, Clips are available in standard and mini form factors.

## Specifications

<b>Sensitivity Range</b>	10 – 100G
<b>Impact Duration</b>	0.5 – 50ms
<b>Tolerance</b>	±15% at 20°C / 68°F, 1 ATM
<b>Operating Temperature</b>	-25°C – 80°C / -13°F – 176°F
<b>Shelf Life</b>	2 years stored at 20°C / 68°F, 1 ATM
<b>Storage Recommendation</b>	20°C / 68°F, 1 ATM. 0-99% RH Non-condensing
<b>Adhesive</b>	Acrylic

## Dimensions / Weight

<b>Clip</b>	46.7mm x 28.95mm / ~1.02g
<b>Double Clip</b>	49.5mm x 28.1mm / ~1.83g
<b>Mini Clip</b>	35.8mm x 13mm / ~0.38g
<b>Double Mini Clip</b>	35.8mm x 13mm / ~0.36g
<b>Flex Single</b>	32.5mm x 22.9mm / ~0.19g
<b>Flex Double</b>	35.8mm x 26.4mm / ~0.28g
<b>Multi-G</b>	35mm x 48mm / ~6.09g

