



## What is Poka Yoke

On this page we will answer the Question “What is Poka Yoke”, for you. Poka Yoke is a Japanese term used for error proofing, failsafe, or mistake proofing, devices.

### Definition

A poka-yoke is any mechanism in a lean manufacturing process that helps an equipment operator avoid (yokeru) mistakes (poka).

### Common Description

Highly reliable devices or innovations (usually low-cost) that either detect abnormal situations, before or immediately after, they occur allowing production to be stop, thus preventing the production of defective products.

### So What is a Poka Yoke

If we look at the above information, we would answer the question as follows:

A Poka Yoke is and device or innovation that can be created to prevent a problem from either occurring or being passed on in a process. There, are a large number of different types of poka yoke devices, also often called error proofing devices. The single purpose of all of them is to ensure that defective products never reach the customer.

Some common examples are jigs designed to hold a part in only the proper direction to prevent it from being misprocessed. Specialized shapes such as the ends of certain computer cables to ensure they are connect only to the right port on the computer or other device. Post operation gauges used to check that the part was properly made. A sensor to, detect an items presence, and position. Counters that track the number of spot welds perform during a single operation. Sequence monitors that ensure a defined process was followed.

Almost all Poka Yokes used today still are created using one of the three methods which were defined by Dr. Shigeo Shingo of Japan. Shingo defined three main methods used to design Poka Yokes:

1. The contact method identifies product defects by testing the product's shape, size, color, or other physical attributes.
2. The fixed-value (or constant number) method alerts the operator if a certain number of movements are not made.
3. The motion-step (or sequence) method determines whether the prescribed steps of the process have been followed.

It is understood that most of the best performing Poka Yokes are actually designed by the workers using them. This is often the case because no one else can better understand the mistakes that can be made



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better than those who actually make them. And since good worker do not want to make needless mistakes, they also want to be able and allowed to prevent them. If some of you have been around small job shops, you will have seen dozens of these created, by craftsmen and referred to as jigs. In fact to these craftspeople the use of jigs was vital for two reasons, it prevented costly mistakes, and it speeded repetitive jobs up saving them a great deal of time.

To learn more about Poka Yokes check out these other resources.