There are many kinds of stamping dies, all of which perform two basic operations—cutting, forming, or both. There are single-stage stamping dies, line dies, progressive dies and transfer dies. Manually or robotically loaded dies are referred to as line dies. Progressive dies and transfer dies are fully automated.

Cutting is perhaps the most common operation performed in a stamping die. The sheet metal is severed by placing it between two bypassing tool steel sections which have a small distance between them. This distance, or gap, is called the cutting clearance.

Cutting clearances change with respect to the type of cutting operation being performed, the metal's properties, and the desired edge condition of the piece part. The cutting clearance often is expressed as a percentage of the metal's thickness. (The most common cutting clearance used is about 10 percent of the metal's thickness.)

Very high force is needed to cut the sheet metal. The process often introduces substantial shock to the die and press. In most cutting operations, the sheet metal is stressed to the point of failure, which produces a cut edge with a shiny portion referred to as the cut band, or shear, and a portion called the fracture zone, or break line.

There are many different cutting operations, and each of them is with a special purpose. Some common operations are:
Trimming—The outer perimeter of the formed part or flat sheet metal is cut away to give the piece part the desired profile. The excess material usually is discarded as scrap

Notching— Usually associated with progressive dies, notching is a process in which a cutting operation is performed progressively on the outside of a sheet metal strip to create a given strip profile.