



## Mold Base Terminology - T

### Taper Locks

These guide the mold halves back together. They should be on the centerlines of the mold. Some locks do not have an angle and are straight. The designer should always take care to make sure that if the locks are on an angle they should be at least one degree less than any shut off between the core and cavity. Round taper locks are not as effective, but can be used if the plate temperatures between the two plates that are being aligned are the same. The only effective way of aligning plates that have different temperatures is with the straight locks.

### Thermocouple

A pair of wires of dissimilar metals or alloys, the two junctions of which produce a current when they are touching a surface that has heat energy. The net electromotive force, or current, is sufficient to drive a galvanometer or potentiometer and tell a correlation of how much heat is at the junction.

### Three-Plate Mold

A three-plate mold usually refers to molds that have a top gate. So, a simple two-plate mold with a top gate becomes referred to as a three-plate mold. The name three-plate is derived from the plate openings. There are two openings between the three plates: one to remove the runner and the other to remove the parts. Some novices get confused between the three plates and the stripper plate molds. This is because both of them use a stripping action. The three plate stripping action is only used to remove the runner while the stripper plate is used to eject the part. A drawing of the stripper plate is shown in the next section. A three-plate mold can be used for stripper plate or pin injection.

### Top Clamp Plate

This is the top plate of the mold when it is in the storage position out of the press. When it is in the press this plate will rest against the stationary plate. It has clamp slots milled into it or mounting bolt holes to retain the mold in the press during opening. The top clamp plate also retains the cavity blocks, locating ring, sprue bushing, and leader pins. It will typically also have water lines drilled into it and have the electrical box mounted to it if the mold has a hot runner system.

### Transducer

A force-measuring device. It has the characteristics of providing an output, usually electrical, which serves as the measurement of load, force, compression, pressure, and etcetera when placed along the sensitive axis of the force cell.

### Two-Plate Mold

The two-plate mold is the most common type of injection mold. But, why do we call it a two-plate mold when it is obviously more than two plates? The reason it is called a two plate mold is because when it is opened there are two halves. The plates on the cavity side are bolted together and the plates on the core side are bolted together. This is the simplest construction and functioning type of mold. In the drawing below you will see that it has an ejector housing. Although the ejector plates move inside the housing, they are considered part of the two-plate construction.

### Two-Plate Pin Ejection System

This is one of the most commonly used ejection systems known. This is the most versatile type of system is because it is used on the all shapes of parts. While the two-plate system can be used on both the round and non-round parts, it is used more on non-round parts. Round parts will lend themselves more to a less expensive type of stripper ejection. The goal of any ejector system is to eject the part automatically without distortion. The placement of pins becomes important in design to minimize the potential for distortion. In more sophisticated parts this ejector system can be used in conjunction with a stripper plate or plate sequencing to

enhance the ejection so no distortion will take place.

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