Understanding 3 Plate Molds *(Commonly called Stripper Plate Molds)*

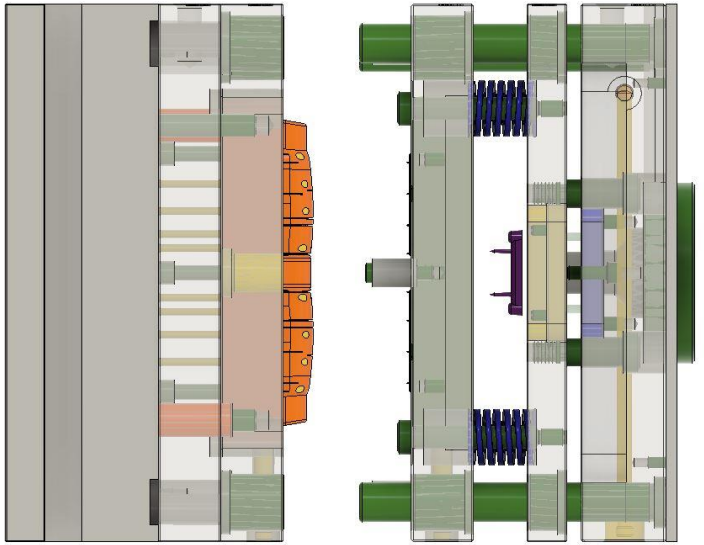
Why and When We Use 3-Plate Molds in Injection Molding
When part geometry requires multiple gates, especially center gating or gating on multiple edges 3-plate molds become the tool of choice. Unlike standard single plate split molds where all gates terminate at parting line, 3-plate systems allow for more flexible gating locations directly into the part surface.

Why choose a 3-plate mold?
Allows for direct gating into the part and the gate is trimmed/stripped in the molding operation.
Cleaner cosmetic surfaces.
Ideal for multiple cavity layouts where runner layout gets complex.
Excellent for multi-gated flat panels, lenses, or shallow parts with tight cosmetics.

A properly engineered 3-plate tool requires more than just adding a plate. The correct latch, alignment, and runner pull systems are critical.

Friction Pullers (HASCO Z80 / Misumi equivalents)
Used to keep the A and B plates together during stripper plate movement.
Some people love them, some people hate them. These are used in Asia 8/10 times for 3 plate molds. If adjusted properly they can do their job quite nicely.

Latch Locks (HASCO Z171 Series or equivalent)
Controls the plate separation sequence. Ensures the stripper plate opens ahead of the A-plate. The A and B plates are positively locked together until release arm pushes on cam to release the plates
Simple, robust, highly repeatable. ***At True Position Plastics we prefer Latch Locks (HASCO specifically) over friction pullers.***



TRUE POSITION PLASTICS
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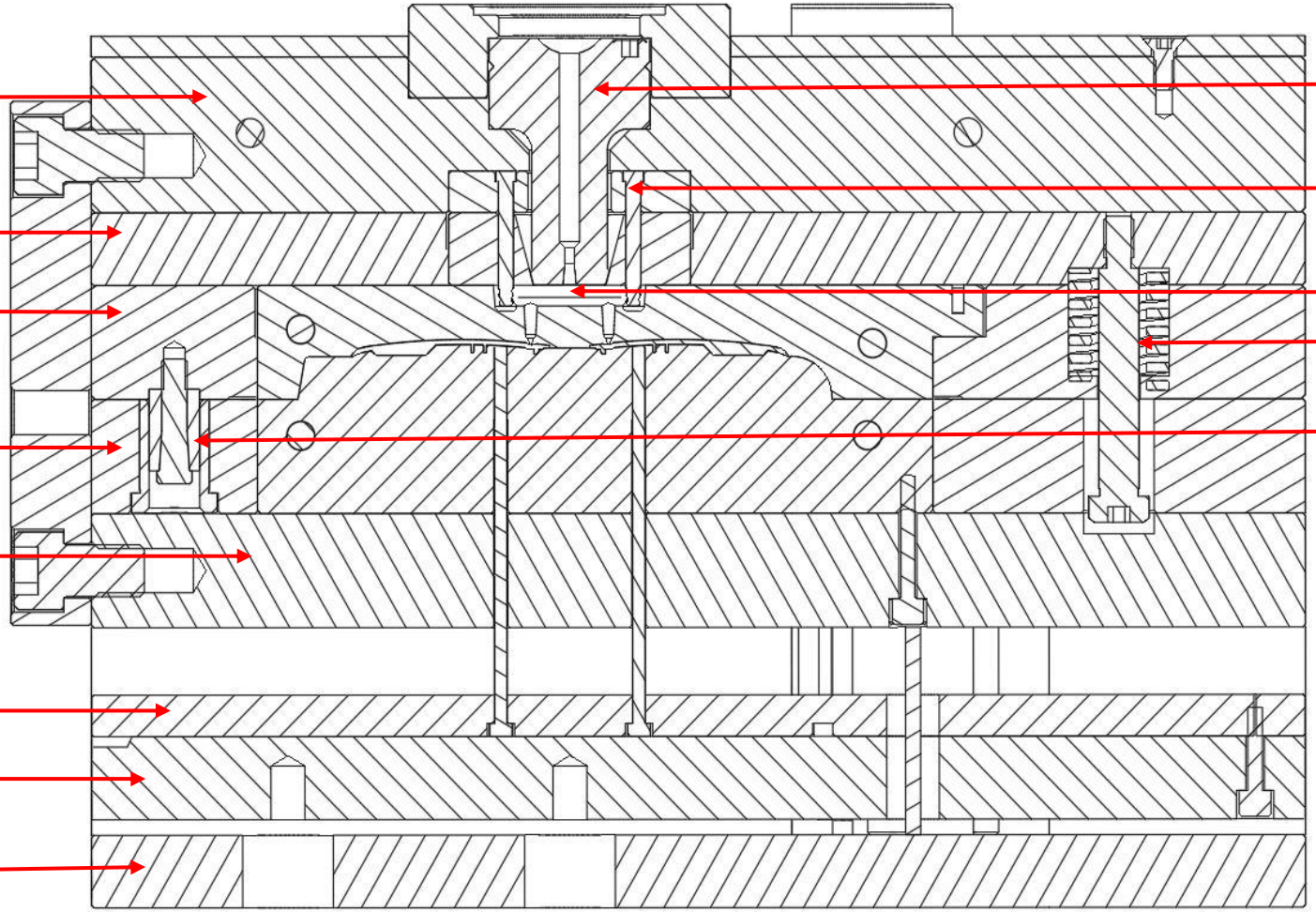
3 Plate Mold / Stripper Plate Mold utilizing friction pullers
Common component nomenclature



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3 Plate Mold / Stripper Plate Mold Opening Sequence

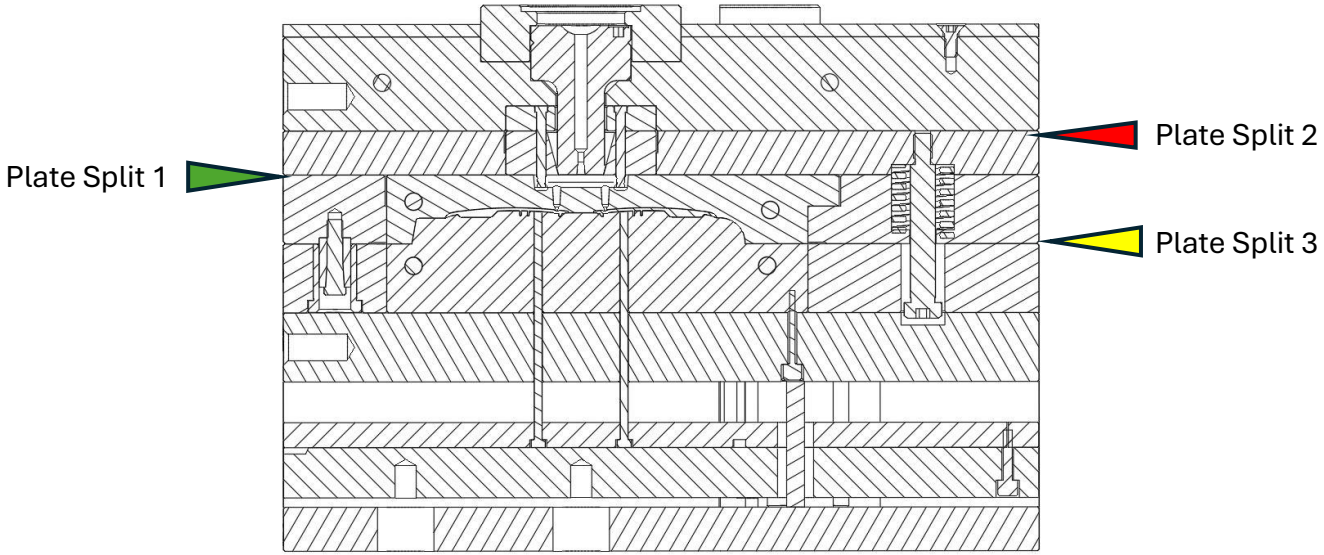
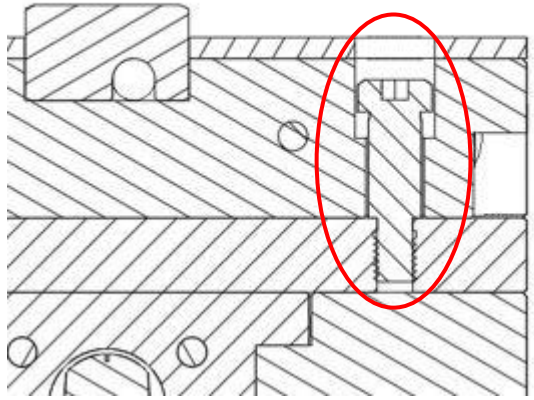


Plate Split 1: Breaking the gates; Die springs force this first opening. Sucker pins break runner/drop from molded part.

Plate Split 2: Stripping the gates; Since friction pullers are holding plate split 3 closed, this is the second opening. During this action, the runner/drop is stripped from the sucker pins; allows runner to drop out of mold freely.

Plate Split 3: Opening parting line; Finally, plate split 3 can overcome friction pullers and open main parting line of mold allowing the part to be ejected from mold.



Note: This is the second set of shoulder bolts (not shown in section views). During plate split 2, shoulder bolts bottom out on counterbore shown here; forcing plate split 3 to happen.

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3 Plate Mold / Stripper Plate Mold
Components Up Close

Sucker pins & runner/drop up close

Misumi Friction Pullers up close

HASCO Latch Lock system up close

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We hope this helps you understand 3 Plate Molds.

About True Position Plastics

At **True Position Plastics**, we specialize in complete tooling and process solutions from DFM and mold design reviews to complex multi-cavity mold builds, including 3-plate systems, hot runner designs, and insert molding.

We work directly with trusted global mold vendors, providing full project management from initial quotation to first shots and press-side support during validation.

If you have an injection molding project, mold design question, or need a second set of experienced eyes on your tooling we're here to help.

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