



JET Rubber, Inc.

WC-72-02-01	Mold Design Assistance and Factors		
Process Owner: Engineering / Quality	Effective Date: 7/13/2015	Rev. A	Pg. 1 of 2
Approved: 7/13/2015 1:51 PM - Jim Tarsinos			

JET Rubber, Inc. provides customers with Mold **Design- Assistance** to determine factors that include:

Appropriate Mold-Type

Finished part dimensions for molded components depend upon:

- The design type of the mold; and
- The type of equipment used in the molding process.

Appropriate Mold Cavity-Shrinkage

Mold Cavity Shrinkage is defined as the difference between the corresponding linear dimensions of the mold cavity and of the molded part it produces when measured at room temperature.

Mold design considerations include:

- The type of rubber compound molded;
- The length of cure time;
- The cure temperature;
- The cure pressure;
- Post cure time;
- Post cure temperature;
- Complex part geometry; or
- The presence of metal or cloth inserts that restrict linear shrinkage in one direction and increase it in another

Mold Plate Register

Mold Plate-Register is defined as the accurate matching and orientation of the plates that form the mold cavity.

Mold design considerations include:

- Dowel pins and bushings type; or
- Self-registering cavities.



Mold Parting Line Locations

Mold plates intersections known as “parting-line locations” form rubber flashings or flash-line extensions that are not a part of the finished molded part.

Mold design considerations include:

- Flash extension width and thickness dimension; and
- The secondary trimming or finishing operations necessary to remove them.

Mold must produce parts with “thin” flash lip and extensions which allow for flash removal procedures that:

- Do not affect the molded part in a critical area;
- Do not change the part’s finished dimensions; and
- Do not add to the cost of processing

Insert Over-Molding

Many molded rubber components are inserted or over molded with a metal, plastic or fabric insert.

Mold design considerations include:

- Fit of inserts;
- Location of inserts;
- Insert clearances;
- How the insert will affect cavity shrinkage; and
- Insert shrinkage – must be calculated along with the standard tolerance of the insert (Inserts at room temperature must fit into a heated mold).

Mold Cavity Surface-Finish

Mold design consideration must include the function of the molded rubber component.