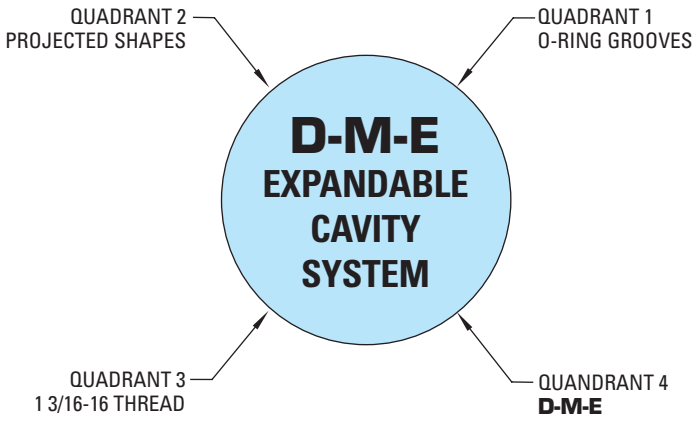
Plastic Part Design

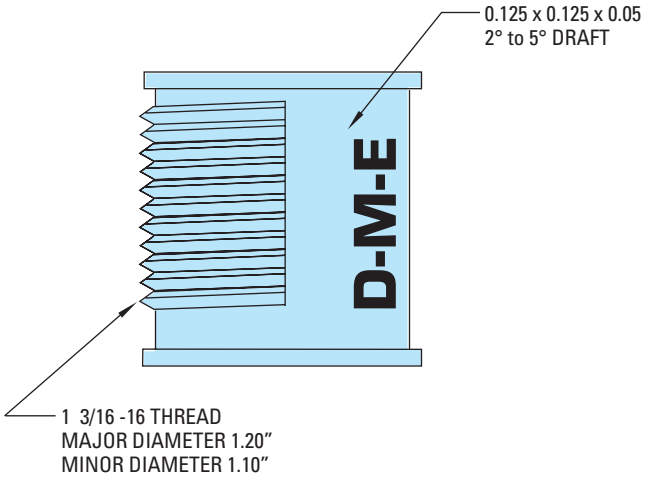
The Expandable Cavity was designed to produce external details. All commonly used thermoplastic molding polymers, including filled materials and engineering polymers, have been successfully molded with the Expandable Cavity. When using a corrosive polymer such as PVC, the Expandable Cavity must be surface treated with a protective coating. To prevent loss of expansion properties in the Expandable Cavity, the surface treatment process should not exceed a temperature of 600° F.

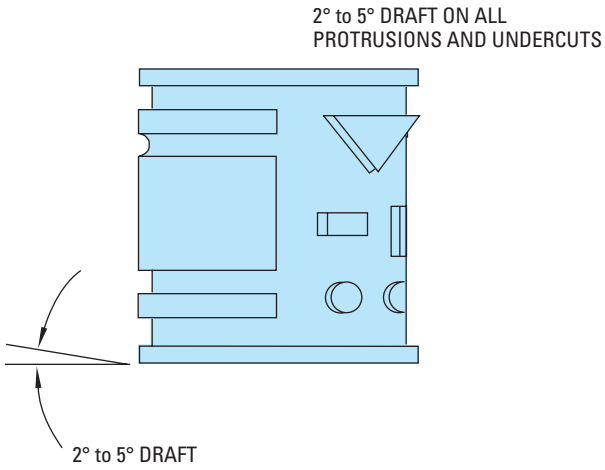
Good plastic design practice should be observed to avoid such conditions as distortion, sink marks, etc. These problems and their solutions are identical to those found in conventional moldings.

All undercuts, protrusions, windows, etc. will typically include two to five degrees of draft. The bottom edge of the part must also have approximately two to five degrees of draft. Also, if molding is required on the top of the Expandable Cavity, two to five degrees of draft needs to be included. This is necessary because the segments flex radially away from the molding position in an arc. The draft allows the segments to expand freely.

NOTE: The amount of draft varies with tool design. Changes in tool design (length, body diameter, etc.) can minimize draft requirements.







NOTE: Demo part has four (4) different quadrants of detail (call D-M-E for a sample).