

Scott Industries of Kentucky

Plastic Injection Molding – Tooling & Part Specifications

Part Number, Drawing #, Description & Rev. Level - This will give both the customer and supplier the correct references for quotes and specifications.

EAU & Release Quantities – Having this information will allow for the proper determination of raw material costs, in-bound freight, & number of set-ups to be calculated.

Tooling Specifications – Tooling specifications include number of cavities, core and cavity material specs, ejection type, gating type & location, ejector pin locations & size. Note the mold # to be engraved on the mold. When new tooling needs to be quoted it is best to have 1) 3-D files, 2) .IGES files, 3) and .PDF files.

Quality Specifications – Note any quality specifications including required samplings, testing & CTQ dimensions that are required to be monitored on a regular basis

Drawings – Drawings can be transferred via e-mail in the following file types.(*.ZIP, *.JPG, *.PNG, *.GIF, *.DWG, *.IGS, *.DXF, *.STP, *.STL, *.SLDPRT, *.X_T, *.PDF)

Mold Cavitation - This will help determine the daily output of the parts and let the customer know that their parts are coming from different cavities. Each cavity of the mold may differ slightly but still be within the tolerances required. Each different cavity should be marked for quick identification for troubleshooting & quality purposes.

Mold Size - The mold size will determine what size press is required to run your parts. Parts quoted without a mold size could be higher because of this lack of information. Machine determination is also decided by shot size and a few other factors.

Actual Part Weight & Shot Size - Knowing the actual part weight can help save you on materials and quoting. The molder will have specific information to base their raw material costs on. Specific part weight information and shot size will allow your molder to quote a lower resin cost.

Cubic inch Volume – The cubic inch volume helps determine the part weight if a part weight is not available. It is good practice to put both cavitation and cubic inch volumes on the drawing for quick reference. 3-D based software programs can automatically give you the cubic inch volume.

Press Size – Having the press size will allow your molder to use a similar rate when quoting. Different press sizes are usually affect hourly machine rates and set-up charges. Each machine size has a different machine rate to be calculated. Press size is determined by the number of cavities in a mold, shot size, length x width of part, and type and melt flow of the plastic resin.

Cycle Times – Knowing your cycle time helps to determine how much machine time your production run will require.

Resin Specifications - Knowing the specification on your resin is vital to material selection. If possible, state the minimum mechanical, electrical, and chemical resistance properties. Although, quoting a generic resin is acceptable, it is best to state the minimum properties that are important to your application regarding tensile strength, melt flow, impact, and flexural modulus, and tensile break strength. It is always best to get a Material Safety Data Sheet from your supplier in order to see the specific grade of resin being used and who the manufacturer is. A properties data sheet is also available from each manufacturer upon request.

Color Specifications - Note your color preference as standard or custom color matching. For standard colors, reference a (PMS) Pantone Matching systems color numbers. For custom color specifications, send us a part that you want matched, preferably in plastic.

Packaging – Having your box size type, size, and quantity of parts per box is very helpful. Having this information will help determine the actual cost of your packaging per part. Sometimes parts can be put in different size “standard” boxes that we have in stock and are available in higher volumes.