

Metal to Plastic Value Engineering

1. Adreco are happy to be lead by your recommendations as to which products might be worth considering to be manufactured in plastic. Your knowledge of operating requirements and your customer's likely resistance or acceptance of an engineering change are the best starting point.
 - a. Critical to this is the targeted unit cost you would like to achieve and the annual volume of the part. Changing to plastic requires new tooling costing several thousand pounds so low cost, low volume parts are unlikely to be economically viable.
2. Once we have been presented with samples, we would work with your engineers to determine the "must-haves" (operating requirements) such as:
 - a. Purpose of the component
 - b. Critical Dimensions and tolerances
 - c. Does the component interact with other parts?
 - d. Operating temperature range
 - e. Whether it needs to maintain or resist certain pressure
 - f. Whether the part needs to be chemical, impact or air/gas resistant
3. We would then work through the "nice-to-haves". When changing material, there is an ideal opportunity to improve the component and 'design-out' aspects that were previously compromised.
 - a. Are there any design aspects that have been tolerated because of the current method of manufacturing (sharp edges, radii) that could be reconsidered?
 - b. Is the finish critical (sharp or blunt edges, gloss vs matt texture)
 - c. Is the colour as required?
 - d. Does any text need to be incorporated (part numbers etc) on the part
4. Then we can take all of the above factors into consideration and make a recommendation regarding tooling configuration and polymer selection and also the required design changes to make the component capable of being moulded efficiently.
5. From revised Component CAD, we are able to produce 3D Printed prototypes, low volume rapid tooling including representative components in the chosen polymer; before committing to full production tooling.

We look forward to working with you



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