



Our Design Process

So what is involved in Sheetmetal design, "it is just sheet metal" - right?

Manufacturing Documentation Package

We provide a highly detailed set of drawings and other information required to fabricate manufactured parts, purchase components, and assemble a high quality product. There are no short cuts; all these steps are required. Depending on many criteria including design complexity, prior art, and lead time, a design may be approached in several ways. All having advantages and disadvantages. The end result, however, is a highly documented design that is easy to manufacture and is highly sustainable.

The Client Proposal Drawing

The first step is to communicate with the client what we think they want. The client drawing is a quick but detailed representation as to what the design will look like and how everything goes together. This assures both the client and us that all the parts will fit and the product appearance is what is desired.

The Complete Design

We will construct a completely detailed 3D design or layout of the chosen design. Each part of the design is analysed so that any fit and interference problems can be determined. Once the design is finalised and perfect, each of the component parts is extracted to its own manufacturing drawing.

Sheet Metal Detail Drawings

These are accurately scaled CAD drawings providing all detail and manufacturing information for each fabricated sheet metal part in a design. The drawings are provided as PDF files and flat Developments to your preferred sheetmetal vendor to produce prototypes thru to production. Any change to the drawing once released for production requires a new revision to both the drawing and the BOM.

Flat Developments

Every sheet metal part starts as a flat sheet. There are many challenges in developing a flat blank for a part and considerable engineering time can be given to this task. When CAD data is shared, both the manufacturer and the designer can benefit greatly. Since a flat blank development must be created for any part to be made, some level of engineering must be done by the manufacturer. To reduce the time needed for this process, having a model and even a flat blank supplied gives a distinct advantage.

Assembly Drawings

An isometric pictorial of each of the part, sub-assembly or completed assembly shows the relationship of each of the parts including required hardware. Multiple views are provided for clarity as required.

Bill of Material (BOM)

A complete listing of each of the fabricated and purchased parts giving an item number related to the assembly drawing, description, unique part number, and required quantity. Special notes are included as required. All items, both manufactured and purchased, are controlled by revision.

Send us an e-mail: inquires@smds.co.nz



Give us a Call: 0064 (3) 388 3187 or Fax 0064 (3) 388 3183