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ENGINEERING PROCESS DESIGN PHASE

There are three engineering stages that a new project goes through before moving onto manufacturing. Each of these stages covers a specific phase of the development of the enclosure as it evolves from a design concept to individual components and finally to point where the data can be sent to production for CNC cutting and assembly.

Assembly Design

The Assembly Design stage involves creating the model from which detail panels and tool paths will be developed. The goal at this stage is to replicate what the customer wants as a finished product and to present to them a drawing or CAD file for their review and approval. Until that approval is received in writing, the project cannot continue to the next stage.

Detail Design

At the Detail Design stage, the customer's approved model is further developed into detail panels and components. With each of these individual parts mated together to form the enclosure assembly, we verify that all fits, clearances, and tolerances are within our manufacturing capabilities prior to cutting the first panel. By manipulating the CAD design to show how the individual parts will form the final assembly, we eliminate the cost associated with producing a series of prototype parts. As a point of reference, it is not uncommon to find that this stage takes longer than creating the initial design model. However, when done correctly, this added engineering time is more than offset by the machine time, labor, and materials saved in manufacturing.

CAM Development

Finally, the last stage in our Design and Engineering process is when we develop the tool paths that our CNC machines will use to cut the panels. During this stage there may be some final design tweaking to accommodate the manufacturing process. This stage is completed when the engineer posts the job to our server from which the production floor can access the files and run the prototype part.

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