



## Custom Mechanical Parts

## On-line Design and Order Placing

The "Custom Mechanical Parts" on-line design and order placing is a new concept in the design of electronic products incorporating certain kinds of small mechanical parts. It specifically addresses the needs of the electrical designer, who can design and order these mechanical complements of his/her PCB in the same time as a off-the-shelf electrical components. The typical lead time for these custom parts is one week, so even in case of last minute changes the parts can be in time to assemble the prototypes or small production.

### **Product Descriptions & Target Applications**

It currently consists of the following types of parts:

- 1) Multi-foot vertical PCB stiffener: The basic design has from two to five feet bolted to the PCB. Depending on the custom dimensions and material these parts can perform as PCB stiffeners, high current bus bars or air deflectors. The available materials are aluminum, steel or copper, which can be ordered in a variety of thickness, plating and finishing choices.
- 2) Angle bracket: These are very versatile 90 degree angle brackets that can be designed in an almost infinite variation of arm lengths, height, thickness, material, hole locations, plating, etc.
- 3) Press-fit bus bars: These parts are intended for high current carrying application between different places in a PCB. They are preferentially built in copper with multiple press-fit contacts. Each contact has a current carrying capacity of 30 or 60 Amps.

### **On-line Design and Ordering Process**

The design process consists of the following steps:

- 1) Entering the design parameters in a form specific for each kind of parts. The form will guide the customer by pointing the possible inconsistencies in the design parameters.

- 2) Verify the design: Once the design is entered using the form described above there are two complementary tools to check the design. The first is a 'Summary Table' showing a summary of the parameter choices made. The second one is a 'Shape Viewer' that provides a conceptual view of the shape of the finished part.
- 3) Design Approval and Costing: After on-line approval of the design as shown by the Summary Table and the Shape Viewer, an exact cost calculation can be performed. The customer may prefer to use printouts of the Summary Table and Shape as his/her choice of final technical documentation. Optionally, professionally made drawings in pdf and dxf formats can be ordered by a very low nominal cost. The S&H cost can be estimated from a variety of carriers (USPS, UPS, FedEx, etc.) through the web links provided.

Order Placement: The preferred way of ordering is by credit card through our secure server. Customers with established credit might choose to contact us for alternate ways of payment.

### **Large Volume Production**

The overall cost is very reasonable for small and medium quantities (hundreds of units). Once the customer design is mature enough and ready for larger quantities additional design and process optimizations are advisable. *ComSysDes* can assist in adapting to the machinery and practices of the chosen manufacturing facilities to realize further cost reductions.

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