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CASE STUDY: PEM® R'ANGLE® FASTENERS FOR SERVER FACEPLATE

While attending an industry trade show, a PennEngineering® customer was excited to share that he had designed in a PEM® R'ANGLE® fastener to attach a circuit board to a faceplate in a server application.

The server faceplate application is a great example of how PEM® catalog parts can provide many advantages over other hardware options.

CHALLENGE

With their previous server faceplate, the customer experienced challenges as a result of the angle bracket design assembly. The design consisted of 5 parts - 1 loose L-bracket, 2 loose screws, and 2 loose nuts.

The labor-intensive bracket design required the use of multiple hands for threading and fastening the circuit board to the faceplate. The customer was looking for a more efficient design that could reduce the amount of loose hardware and improve the cosmetic appearance of the part. The R'ANGLE® fastener was the ideal choice for the application.

SOLUTION

PEM® R'ANGLE® fasteners provide strong right-angle attachment points in sheet metal or PC boards. They are cost-effective replacements for a variety of parts:

- Bend edge tabs
- Bent center tabs
- Bent flanges
- Angle brackets
- Tack welds
- Loose hardware

R'ANGLE® fasteners also provide many advantages over bent tabs and flanges:

- More predictable designs
- Tighter design control
- Less loose hardware
- Smooth panel surfaces
- Material/cost savings
- Improved shielding characteristics
- Easier, faster assembly

RECOMMENDATIONS

By designing in a PEM® R'ANGLE® fastener to the server faceplate application (PEM® product RAS632-10-8ZI), the customer was able to reduce the amount of loose hardware and have fewer assembly steps.

The customer also noted their appreciation for the clean, flush appearance which was achieved by using the R'ANGLE® fastener. The front surface of the faceplate was smooth enough to place a printed label directly over the fastener area.

Approximately 25,000 parts were produced annually for this customer's application.



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