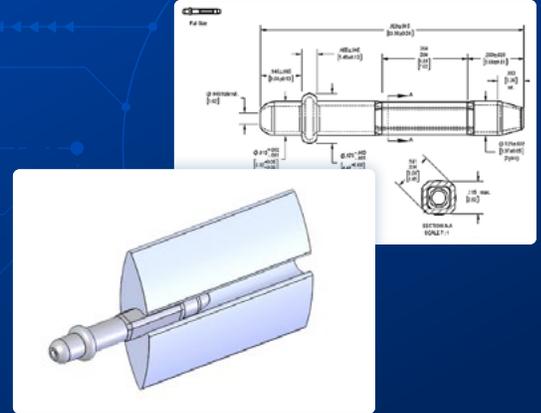


# Driving Efficiency Through Precision Engineering

## Accelerating HVAC Assembly with a Custom Hollow Pivot Pin



### CUSTOMER

Leading HVAC equipment manufacturer

### APPLICATION

Adjustable louver assembly in HVAC systems



### CHALLENGE

The customer's existing blind-rivet design required manual alignment and slow installation, creating a major production bottleneck. Each rivet took several minutes to secure, leading to costly delays and operator fatigue.



### SOLUTION

Bead Electronics engineered a custom square hollow pivot pin that press-fits directly into the extrusion's semi-circular hole.

- ▶ Square cross-section provides three points of contact for consistent retention.
- ▶ Press-fit assembly eliminates blind-pivot pin tools and reduces cycle time to seconds.
- ▶ Iterative testing optimized fit, geometry, and material for manufacturability and strength.



### OUTCOME

The new custom square hollow pivot pin reduced assembly time from minutes to seconds, boosting production efficiency and consistency. Its unique three-point contact ensured reliable retention across variable hole sizes, while the press-fit design eliminated tools and secondary fastening steps. The result was a faster, simpler, and more cost-effective assembly process that improved throughput and operator ease.

**Looking to boost assembly line efficiency with a custom-engineered solution?  
Talk to our engineering team today.**

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