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Custom Hollow Pin Solution for Adjustable Louvers in Air Handlers

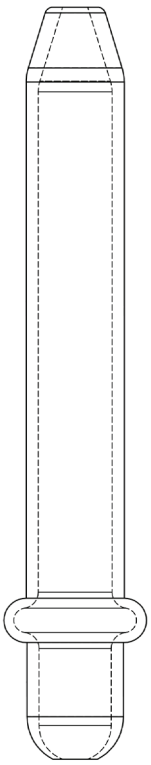
Challenge:

A well-known manufacturer of air handling systems needed a cost-effective solution for attaching adjustable louvers to their units. The louvers required a reliable, mechanical attachment that could allow for smooth adjustments while maintaining durability over time. Traditionally, larger and more expensive components were used, leading to higher material costs and potential issues with the longevity of the mechanism in harsh environments.

Solution:

By switching to a custom .0121"Ø hollow pin, the manufacturer achieved several key advantages:

- **Material Efficiency:** Bead's pins use less material, reducing the overall cost without compromising performance
- **Mechanical Durability:** Used like rivets, the pins were mechanically attached to the sheet metal, creating a robust hinge mechanism that allowed the louvers to function smoothly
- **Functionality:** The pins acted as hinge pins, enabling the louvers to be adjusted as needed, providing both flexibility and operational efficiency



Results:

The use of .0121"Ø hollow pins resulted in significant cost savings for the air handler manufacturer. Since the pins were hollow and not machined, they weighed 80% less, and the improved material efficiency **lowered production costs by 70-80%**. Despite their lighter weight, the pins maintained the mechanical strength necessary for the durability and adjustability of the louvers. This allowed the company to enhance product quality while staying competitive on pricing.

This case demonstrates the value of customized pin solutions in industrial applications where cost-effectiveness, efficiency, and functionality are critical.

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