



# Circular Solutions

A case study from Algood Caster Innovations

## One successful caster project. Three important lessons.

Our recent successful development of a custom manufactured caster provides three important lessons for equipment manufacturers and fabricators.

### Lesson #1: Make casters a forethought and not an afterthought

So often casters are the forgotten component in equipment design. It could be because they are typically the last part to be assembled and therefore an easy way to delay expenses. But often times customers discover that their caster requirements can't be met by an off the shelf product and there is a significant development process involved. That can lead to production schedules that are nail-bitingly tight.

Our recent experience with a manufacturer of air cargo containers demonstrates this lesson. These containers are required to hold heavy loads. In fact, the specified caster capacity was 3500 lbs. In addition, the containers take a lot of abuse and are often dropped into place. The low profile heavy-duty caster needed an assembly made of material that was 30-40% heavier and could withstand the load and the shock. Yokes made of common steel would pit as the ball bearings sustained the pressure. For the same reason, the caster needed kingpins that required specialty C&C lathing. By the time specs were provided, there was little time left in the project schedule.

The situation allowed Algood's engineering and manufacturing prowess to shine. It also demonstrated the advantage to the customer that is offered by our internal tool and die and metal-stamping units. We went from specs to sample request to production quality prototype in seven business days. We tested many materials until we found an alloy that would meet the specs and the budget. The accompanying image demonstrates the results of impact testing and shows the way we were able to minimize the pitting caused by the ball bearings.



### Lesson #2: You can never do too much testing.

We tested the caster extensively using strict industry protocols and wouldn't provide a prototype until it had met our highest standards. But the reality is that in a global marketplace intensive testing will make a product shine. In this case the customer wisely did their own testing in environments that matched the ones in which the caster would be used. Our engineering and

manufacturing departments worked closely with the customer making the necessary refinements revealed by testing. We didn't regard the additional testing as a burden. Rather we respected the customer's unique expertise and knew that the result would be a quality caster that we would be proud to stand behind.

### **Lesson #3: Avoid being penny-wise and pound-foolish**

The value of a caster lies in its longevity and its ability to protect the integrity of the equipment on which it's used. The containers our customer was making were required to hold valuable cargo. Caster failure could result in astronomical financial repercussions. While we were able to keep costs reasonable, no corners were cut. We've been in this business for over 45 years and we know that it's not worth it to save money by compromising quality. The cost of a caster should be calculated over its lifetime and the ways in which it contributes to the integrity and value of the equipment it supports.

This case study provides lessons that we are proud to pass on and that we hope will create value for both current and prospective customers. It also provides insight into why Algood is the supplier of choice for customers who seek a partner with the craftsmanship to create high quality casters and the expertise to meet production schedules while holding the line on costs.

---

For more information on how Algood Caster Innovations can provide solutions for your wheel and caster needs, call 1-800-254-6633 or email [sales@algood.com](mailto:sales@algood.com). Visit our website at [www.algood.com](http://www.algood.com).