

Supporting soldiers with reliable combat communication

- *A partnership with TriStar gives you a competitive edge.*

Supporting our soldiers can mean different things to different people. For some, it's a bumper sticker. To others, it's waving a flag. But to those who build battlefield communication systems, supporting our troops is literally a mission-critical endeavor.

When a leading contractor of battlefield communication needed to ensure the flawless operation of their system, they came to us. Our mission? Provide the bearings for field radio towers that would operate in even the most adverse wartime environment.

The Challenge

Desert operations are one of the most demanding of all combat environments. Fine sand and extreme heat can wreak havoc on equipment, causing maintenance problems and breakdowns. Operations in Iraq and Afghanistan are no exception.

On the battlefield, radio towers are a crucial link in overall combat communication. They are mounted atop command vehicles, and keep troops in contact with headquarters. Without clear, two-way communication, troops can be placed at risk and casualties can mount quickly and needlessly. Before TriStar, the towers, and the bearings that support them, would jam when activated from a horizontal position to a vertical, transmission-ready position. And soldiers found that desert sand caused the bearings to erode prematurely, requiring excessive maintenance.

The Results

TriStar discovered the tower masts used bronze bushings, which has a low corrosion threshold and need for continual lubrication. The team recommended TriStar's Ultracomp® composite bearings, which have an extreme abrasion-resistance level.



Ultracomp bearings are self-lubricating, which means significantly less time lost to maintenance, and more time in the field. Ultracomp bearings also have a longer lifespan than standard bearings. And finally, Ultracomp bearings meet the military's need for low friction, minimal moisture absorption, and reliable operation.

From our production lines in the US, to the front lines of the battlefield, TriStar is honored to support our soldiers with superior field communication.

Need help determining the right bearing for your specific application?

Visit www.tstar.com/machinedesign and ask our experts!

Bearings For Every Application!

Let us be your engineering expert! Visit our web site to

- Review our material database
- Ask specific questions about your application

Hundreds of bearings to choose from! These are just three of our most popular lines.



Composite Bearings

- Non-lubricated, High-load
- Variety of climates and operating environments
- Long wear and extended operating life
- Replacement for steel and bronze



Ultracomp™

- High-load, low-speed applications
- Exceptional resistance to vibration and impact
- Compressive strength of up to 54,000 psi
- Fabricate to your specifications



TriSteel™

- Metal backed, self lubricating
- Good for the most rigorous requirements
- Withstands high loads, high speeds and adverse environments



Engineering | Custom Fabrication | Manufacturing

TriStar



Engineered Plastic Solutions™

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The Advantage is closer than you think. Call us today and give yourself a competitive edge.