

Hot Desert Locations Required Innovation for Weapons Cooling

According to its published reports, the U.S. Missile Defense Agency has deployed several of its transportable radar surveillance systems overseas and plans to build more of them. As part of its role in the production of the weapons cooling system for this unit, Sorensen Systems worked with other defense contractors to design and build a system that the agency describes as its most capable and reliable radar currently deployed to defend against ballistic missile threats.

Hydraulic Power Supply

Some of the specific details about how the system works are not for publication, but Sorensen Systems was involved in the design and build of a hydraulic power supply designed to provide 1.3 gpm of MIL-PRF-87257 hydraulic fluid controlled by a pushbutton controller at the end of a 30-foot cable. There are sixteen heat exchanges, including the shroud and finger guard. Published reports indicated the system has been deployed in the Middle East and other sometimes inhospitable climates.

The AN/TPY-2 (Army-Navy-Transportable-Radar-Surveillance-and-Control) is a transportable X-band, high resolution, phased-array radar designed

specifically for ballistic missile defense. It's capable of tracking all classes of ballistic missiles and identifying small objects at long distances. The same radar provides surveillance, track, discrimination and fire control support for the Terminal High Altitude Area Defense weapon system.

Detecting Ballistic Missiles

It plays a vital role in the Ballistic Missile Defense System by acting as advanced "eyes" for the system, detecting ballistic missiles early in their flight and providing precise tracking information for use by the system. Use of multiple sensors provides overlapping sensor coverage, expands the BMDS battle space, and complicates an enemy's ability to penetrate the defense system, according to information approved for public release.



Weapon cooling systems are an important part of the overall design to ensure reliable performance regardless of the harsh operating environment.



Hydraulic power units were custom designed and built by Sorensen Systems to provide load leveling to assist in loading vehicles on aircraft.



The antiballistic missile system has been deployed around the world and according to published reports, seven systems have been produced with three currently in production.

