Thermal Management Systems

Higher heat removal and better survivability in aerospace and defense environments
Parker thermal management systems offer higher heat removal, greater design flexibility and survivability for rugged environments.

The Parker Aerospace thermal management systems (TMS) team offers the broadest range of thermal management solutions available, whether it is at the component, board, module, enclosure, or system levels.

Decades of engineering and operational experience have led to a proven track record of reliable, robust, and cost-effective solutions in a wide range of aerospace and defense applications – leadership that is a result of integrating Parker’s advanced cooling systems capability with its acquisition of SprayCool™ in 2010.

Proven solutions
Aerospace and defense electronics are driving significant increases in power densities, resulting in thermal management challenges across a wide range of applications. Our TMS team delivers advanced solutions with tremendous size, weight, and power (SWaP) advantages for mission-critical applications such as:

- Radar and electronic warfare
- Signals processing
- Power electronics
- Command and control
- Mission processing
- Communications
- Video and image processing

Defense and intelligence applications
From ground combat vehicles to high-altitude unmanned aircraft, our cooling solutions enable electronics survivability in the harshest environments, examples of which include:

- RQ-4 Global Hawk (ASIP)
- MQ-4C Broad Area Maritime Surveillance (BAMS)
- MQ-1 Sky Warrior (TRACER)
- MQ-9 Reaper
- U-2 Dragon Lady (ASIP)
- MQ-1 Predator
- EA-6B Prowler
- UH-60 Black Hawk (HALS)
- Expeditionary Fighting Vehicle (EFV)
- Medium Extended Air Defense System (MEADS)
- Command Post Platform-Light (CPP-L)
- Future Combat Systems (FCS)
- Multifunction Utility/Logistics and Equipment (MULE) vehicle
As a part of Parker Hannifin Corporation, the TMS team is able to package a broad range of products into comprehensive systems. Applying our engineering expertise, we can solve your thermal management challenges, delivering complete systems solutions that are reliable, robust, and cost-effective.

In addition to our thermal management products, Parker’s systems can include:

- Pumps, motors, and controllers
- Power and control electronics
- Valves
- Hose and tubing
- Quick disconnects and fluid connectors
- Seals and advanced polymers
- Filtration
- Thermal interface materials
- EMI isolation products and systems

Parker’s TMS team provides customers with products and solutions for both heat collection and heat rejection. These products are designed to be either stand-alone solutions or can be integrated into larger environmental control systems. Scalability is also an important consideration, and Parker’s products provide growth capability to leverage a customer’s initial investment.

Parker TMS products are compatible with a variety of liquid cooling fluids including:

- Polyalphaolefin (PAO)
- Ethylene glycol/water (EGW)
- Propylene glycol/water (PGW)
- Fluorinert™
- Galden®

Fluorinert™ is a trademark of 3M. Galden® is a registered trademark of Solvay Plastics.
Worldwide customer support

Parker Aerospace’s Customer Support Operations provide spares, repairs, and aftermarket support services for all Parker Aerospace systems and components. Working in partnership with our customers to develop comprehensive programs tailored to fit their special needs, we offer a full spectrum of service and support from one central organization. Our 24/7 industry-leading support services include:

- Online inventory
- Overhaul and repair services
- Engineering support
- Technical data
- Training
- Field service support
- Customized spares programs
- Warranty administration
- Ground-support equipment
- Technical data
- Reliability management, engineering assistance, and in-region support