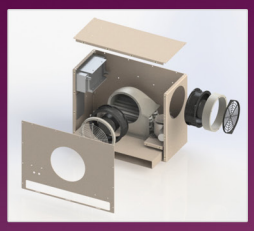
AMETEK®
ROTRON
MILITARY & AEROSPACE PRODUCTS

ACTIVE SYSTEMS



PRODUCTS AND SERVICES FOR
Military/Aerospace Applications

AMETEK Rotron Active Systems

AMETEK Rotron active systems utilize vapor cycle refrigeration technology to actively cool equipment, personnel, or systems below ambient temperature. Vapor cycle systems maximize cooling performance, while minimizing the space envelope.

An Active System is Best Suited For:

- *Environments where ambient air does not provide adequate cooling*
- *Applications requiring more than 500 watts of heat rejection*
- *Volumes requiring sealing from the outside environment*
- *Areas with space constraints requiring modular component placement*

Benefits to a Vapor Cycle System (VCS)

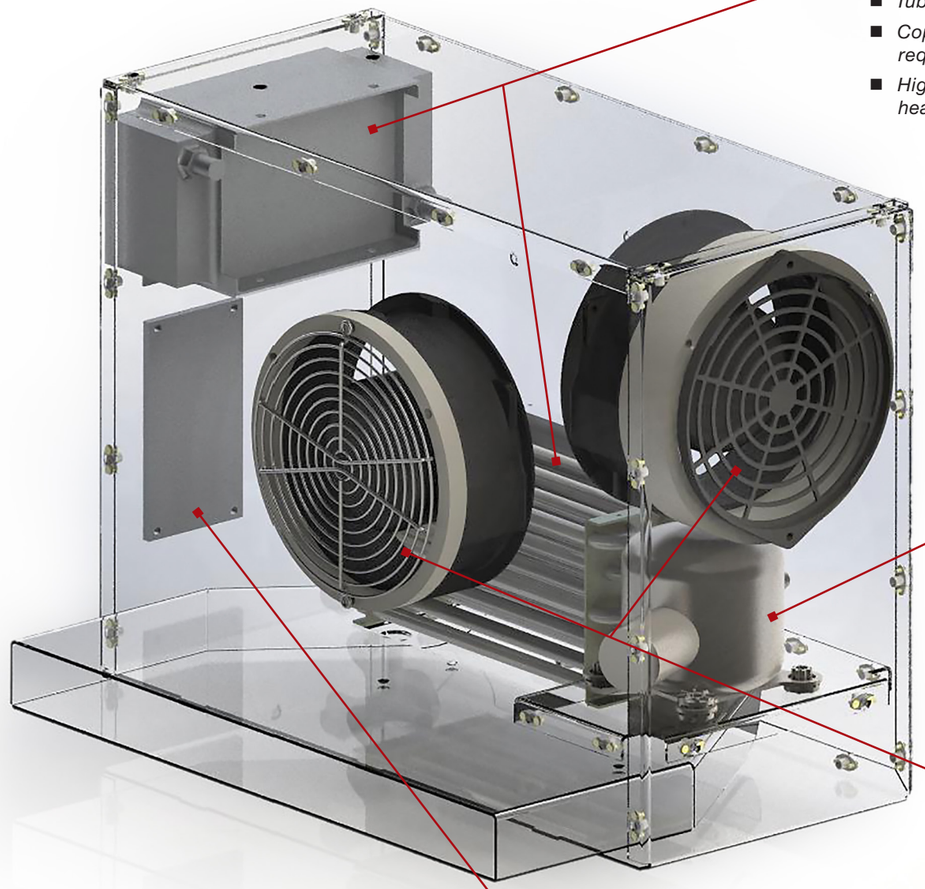
- *Highest heat rejection capacity of all cooling types*
- *Completely contained system or easily separated into zones*
- *Inherent level of humidity control*

Environmental Control Systems (ECS)

- *Heating and cooling provided to maintain environment temperature*
- *Utilizes sensing technologies to obtain feedback on the environment*
- *Controls system functions for efficient and precise temperature control*
- *Obtains rapid dehumidification with simultaneous heating and cooling of air*

Liquid Cooling VCS

- *Provides additional method for heat rejection through a fluid medium*
- *Flexibility in component placement and removal of heat in challenging envelopes*
- *Able to manage multiple unique heat loads with a single VCS*



Heat Exchangers

- *Tube-fin or plate-fin technology*
- *Copper and/or aluminum based on requirements*
- *High-efficiency designs for maximum heat transfer*

Compressor

- *Off-the-shelf or custom designed*
- *Able to withstand extreme temperatures*
- *Single speed or variable speed*

ROTRON Air Movers

- *High reliability*
- *Able to withstand harsh MIL-STD environments*
- *25 different product families*

Electronic Controller

- *Monitors temperatures, pressures, and customer supplied inputs*
- *Customizable set points and logic decisions*
- *Filters MIL-STD-704 power and meets MIL-STD-461 EMI*

Rotron El Cajon Campus

- *40 years experience with custom heat exchangers and subassembly products*
- *Design engineering*
- *Parametric CAD modeling*
- *Rapid prototyping*
- *Manufacturing*
- *Customer support*
- *Product test facilities*
- *Quality*
- *Procurement*
- *ISO 9001:2008 and AS9100:2009 certified facility**

Key Capabilities: *Air flow measurement • Spot cooling fan assemblies • Rack cooling subsystems*

* Certificate number: CERT-02252-2003-AQ-HOU-ANAB

AMETEK Rotron Active Systems Benefits

- **Qualified to Standards: MIL-810, MIL-461, MIL-704, DO-160**
- **Efficient packaging to minimize overall envelope and provide seamless integration into an existing platform**
- **Scalable designs providing a range of cooling capacities**
- **Customizable for various AC and DC power inputs**

About AMETEK Rotron

For more than 60 years, AMETEK Rotron has successfully supported some of the most stringent programs and installations. Our products are specifically designed to operate efficiently, effectively and reliably in harsh environments and demanding applications.

Rotron offers a full range of component and turnkey solutions. With more than 25 fan/blower families, we provide a high degree of vertical integration and have core competencies in the design and manufacture of aerodynamics, heat transfer and subsystems packaging.

Rotron specializes in working with our customers to create unique product configurations that address specific cooling requirements, not only for the cooling capability, but space claim, weight, noise, power draw and system controls.

Rotron helps our customers pick the right product for the job, minimizing design, program schedule and contract risk.

AMETEK, Inc.

AMETEK is a global leader in electronic instruments and electromechanical devices with colleagues at numerous manufacturing, sales and service locations in the United States and in many other countries around the world.

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