

ROTRON[®]
Brushless DC
Fans and
Blowers
for Military
Vehicles



AMETEK[®]

ROTRON
MILITARY & AEROSPACE PRODUCTS

ROTRON[®] Brushless DC Products . . .

Bringing Reliability and Long Life to Military

Rotron has a wide variety of Electronically Commutated Direct Current (ECDC[™]) brushless air moving devices in service in demanding military vehicle applications internationally. Typical applications include:

◆ NBC Protective Equipment

Individual
Collective
Hybrid

◆ Scavenge Fans

Engine Air Filtration Systems
NBC Filtration Systems

◆ Environmental Control Units

Evaporator Fan
Condenser Fan

◆ Ventilation

Crew Compartment
Engine Compartment

◆ Electronics Cooling

◆ Smoke Extraction and Gun Tube Cooling

Individual NBC Protection

28 VDC ECDC 3 inch (76 mm) diameter radial wheel blower replaces short-lived brush motor unit, providing 5 CFM (8.5 M³/Hr) at 10 inches H₂O (2500 Pa).



Our wide range of standard products coupled with our broad custom design and manufacturing capability allows us to meet the performance requirements of any application. We also provide many special features, such as speed control to enhance performance. Our products are designed for ingestion of sand and dust, EMI suppression and protection, water jet, immersion, chemical decontamination, and high shock and vibration environments.

For these applications, Rotron combines more than fifty years of experience in the development of air moving devices for military programs with its proven ECDC motor technology to design highly efficient and reliable, long life products. These products meet the most stringent environmental, quality, and cost requirements of military vehicles.

Scavenging

ECDC upgrade of scavenge blower for engine inlet air filters eliminates down time for replacement of worn-out brushes. 28 VDC ECDC 3.5 inch (89 mm) diameter radial wheel blower provides 15 CFM (25.5 M³/Hr) at 13 inches H₂O (3200 Pa).



Smoke Extraction

28 VDC ECDC 4.5 inch (114 mm) diameter vaneaxial fan rated at 200 CFM (340 M³/Hr) at 4 inches H₂O (1000 Pa) exhausts gunsmoke.



Vehicle Applications

Advantages of ECDC Air Movers

- Lower Life Cycle Cost
- Higher Reliability: 20,000 Hrs MTBF
- Zero Maintenance
- Lower EMI Signature
- Lower Weight
- System Performance Enhancement

Rotron ECDC Products Offer Speed Control to Increase System Advantages

- Reduced Power and Noise in Most Operating Modes
- Constant Airflow Over a Wide Input Voltage Range
- Compensation for Leakage in Overpressure Systems
- Improved Crew Comfort
- Manual or Automatic, Open or Closed Loop Operation
- Low Voltage, Milliampere Signals are Easily Interfaced

We are the experts and the leaders in the field of brushless DC fans and blowers. For your new application or for drop-in replacements of existing brush units, **CONTACT US** with your requirements.



Collective NBC Protection

28 VDC ECDC "100 CFM Blower" delivers 100 CFM (170 M³/Hr) at 14 inches H₂O (3500 Pa) for NBC filter system mounted on a HMMWV vehicle.



Collective NBC Protection

28 VDC ECDC blower delivers 106 CFM (180 M³/Hr) at 16 inches H₂O (4000 Pa). Zero to 10 VDC 25mA signal controls unit speed.



Ventilation and APU Cooling

28 VDC ECDC 8 inch (203 mm) vaneaxial fan with integral EMI filter provides 1000 CFM (1700 M³/Hr) at 1.5 inches H₂O (370 Pa).



NBC Protection and Scavenging

Duplex 28 VDC ECDC unit combines 106 CFM (180 M³/Hr) main NBC blower with scavenge fan. Unique magnetic coupling provides sealing between clean and scavenge air systems.

Profile

AMETEK, Inc.

AMETEK is a leading global manufacturer of electrical and electro-mechanical products for niche markets. Listed on the New York Stock Exchange (AME) since 1930, AMETEK's annual sales are approaching \$1 billion. Operations are in North America, Europe, and Asia, with about one-third of sales to markets outside the United States. AMETEK is serving its customers with investments in new products, global and market expansion, strategic acquisitions, and operational excellence. The Company's operating groups are Electronic Instruments and Electromechanical.

Rotron

The Electromechanical Group (EMG) is one of the world's largest producers of high-speed electric motor products for original equipment manufacturers (OEMs). In business since 1915, EMG is using its core competencies to enhance its worldwide presence. A business unit of AMETEK EMG, Rotron has facilities in California, New York, North Carolina, and Ohio. Rotron serves the military, aerospace, medical, transportation, office equipment, industrial, and environmental markets worldwide. Rotron supports its customers with more than 650 employees that are organized in three business segments:

- **Military & Aerospace Products**
- **Technical Products**
- **Industrial Products**

Our Military and Aerospace Business Segment

Founded in 1947 as Rotron, Inc., the Military & Aerospace Products business unit provides highly reliable AC and brushless DC motors, fans, blowers, heat exchangers, and power conversion devices to military and aerospace customers around the world.

Rotron can provide cost-effective solutions that meet the specific needs of YOUR application by combining:

- **Experienced in-house technical support staff and field sales force**
- **Broadest product line on the market**
- **Custom design capability**
- **Existing designs**

Please contact your local AMETEK field sales representative or the factory at:



ROTRON MILITARY & AEROSPACE PRODUCTS

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