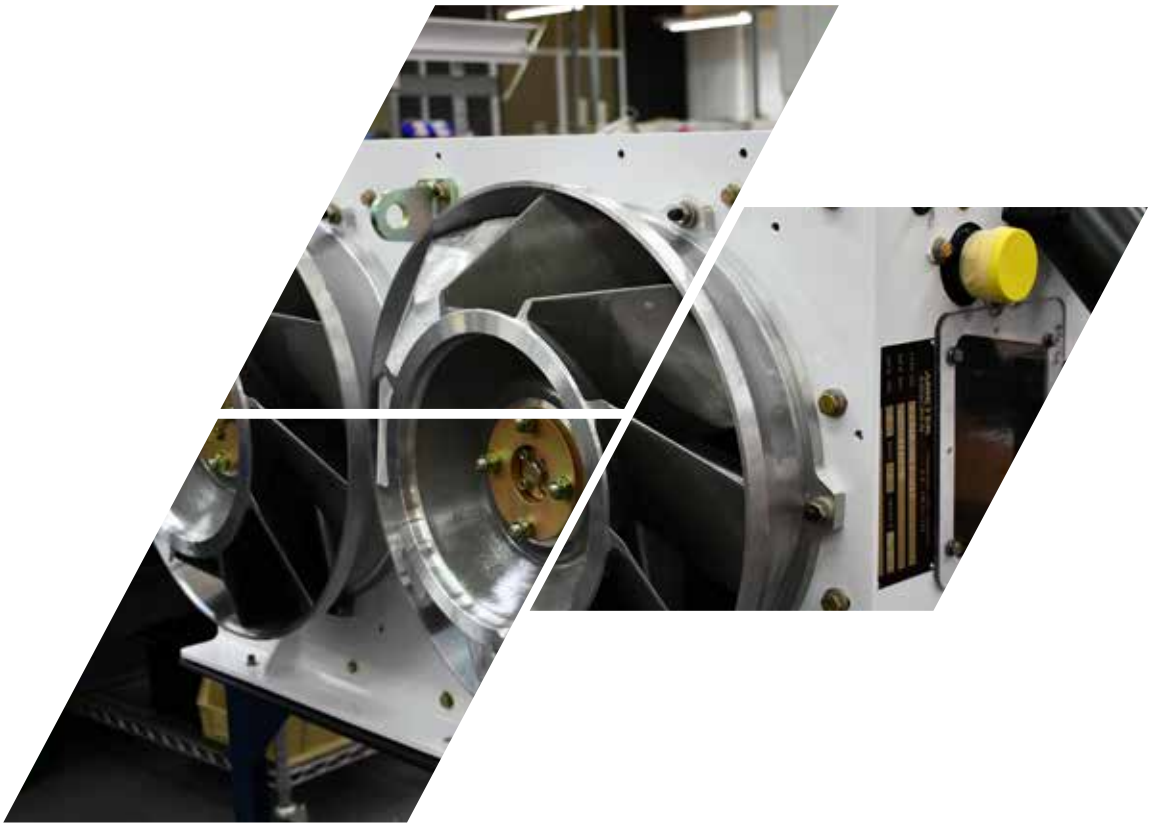
AIRTECHNOLOGY / AMETEK®

MILITARY VEHICLE ENGINE COOLING SYSTEMS



WHEN
EXCEPTIONAL PERFORMANCE
MATTERS

ENGINE COOLING SYSTEMS

Description

The Airtechnology Group's high-performance, mixed-flow engine cooling fans, coupled with rugged and efficient aluminium heat exchanger packages, service military vehicle engines from 150 kW to 1,125 kW (200 hp to 1500 hp) along with all the additional heat loads typically included within the remit of the engine cooling system.
Those may include transmission, transfer case and hydraulic oil, fuel cooling and pneumatic air cooling.

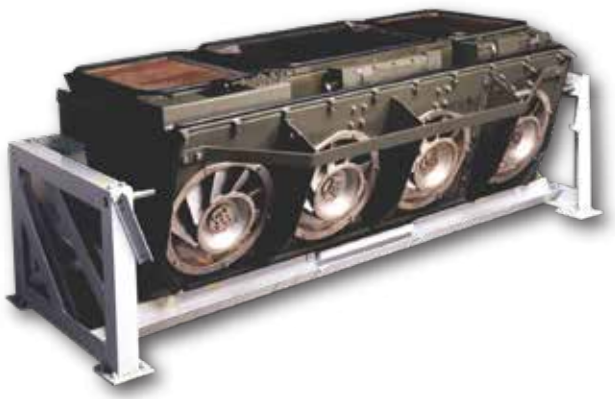
Extensive testing and development have shown the advantage of an engineered systems approach to engine cooling. That approach incorporates techniques to maximize the advantages available.
For example, it is possible to arrange bulky components on the discharge side of the cooling fans, without obstructing the airflow, a capability that is not generally achievable with other fan types. Considerable advantage may be gained, especially in the more extreme conditions of high heat load and limited space, by carefully engineered and optimised systems as opposed to the individual and sometimes irrelevant selection of components.

Moreover, the use of air movers that offer additional flexibility with regards to air intake and discharge orientations has proved valuable in designing effective engine cooling packages, in which conventional approaches would result in inadequate solutions. This holds true not only for new vehicle types, but also for vehicle re-engining and upgrade projects, in which flexibility and the optimization of interrelated of key component are crucial, within what is often an inflexible design envelope.

Technical Data

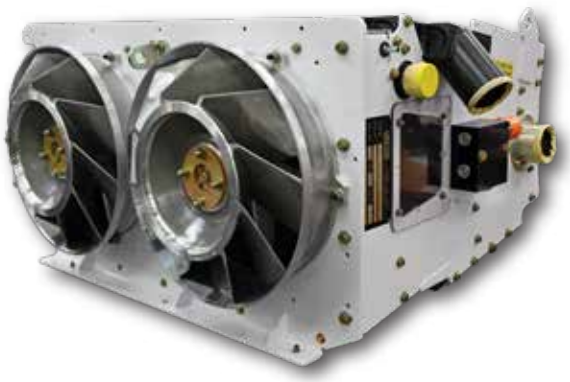
Part Number 100-106007/1

- **Engine Output:** 750 kW
- **Cooler 1:** Water/Glycol
- **Cooler 2:** Charge Air
- **Cooler 3:** Transmission Oil
- **Cooler 4:** Hydraulic Oil
- **Max.Ambient Temp. :** 40°C
- **Min. Ambient Temp. :** -40°C
- **Dimensions:** 1982mm x 1007mm x 730mm
- **Dry Weight:** Circa 500 kg



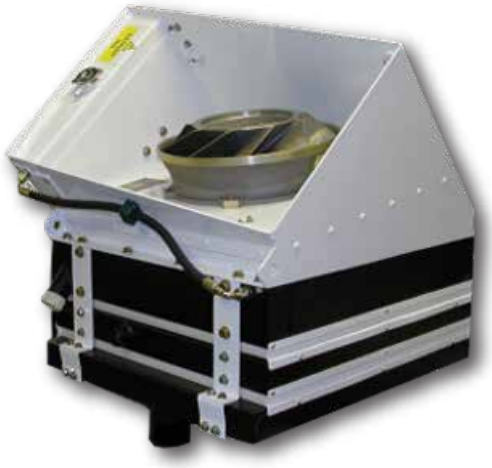
Part Number 100-113776

- **Engine Output:** 450 kW
- **Cooler 1:** A/C Refrigerant
- **Cooler 2:** Charge Air
- **Cooler 3:** Water/Glycol
- **Cooler 4:** Hydraulic Oil
- **Cooler 5:** Water/Glycol
- **Max.Ambient Temp. :** 50°C
- **Min. Ambient Temp. :** -40°C
- **Dimensions:** 1350mm x 940mm x 660mm
- **Dry Weight:** Circa 245 kg



Part Number 100-109172

- **Engine Output:** 165 kW
- **Cooler 1:** A/C Refrigerant
- **Cooler 2:** Charge Air
- **Cooler 3:** Hydraulic Oil
- **Cooler 4:** Water/Glycol
- **Max.Ambient Temp. :** 50°C
- **Min. Ambient Temp. :** -40°C
- **Dimensions:** 950mm x 950mm x 750mm
- **Dry Weight:** Circa 137 kg



Complete System Capability

The AMETEK Airtechnology Group designs and manufactures engine cooling systems for both wheeled (**typically 4x4, 6x6 and 8x8**) and tracked armoured vehicles that operating worldwide under the most extreme conditions. With the experience gained through its involvement in many, varied cooling system projects, the Airtechnology Group holds a unique position with its design of vehicle power packs. That experience has resulted in incremental improvements in airside and heat exchange performance over time.

By having internal fan and heat exchanger design capabilities affords Airtechnology the opportunity to offer its customers solutions that maximise cooling pack performance for a given volume or minimize volume for a given performance. In addition, the airflow characteristics of its mixed flow fans offer a level of versatility not always available from other fan types.

Contact Us

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