

Cooling Experts Around the Globe



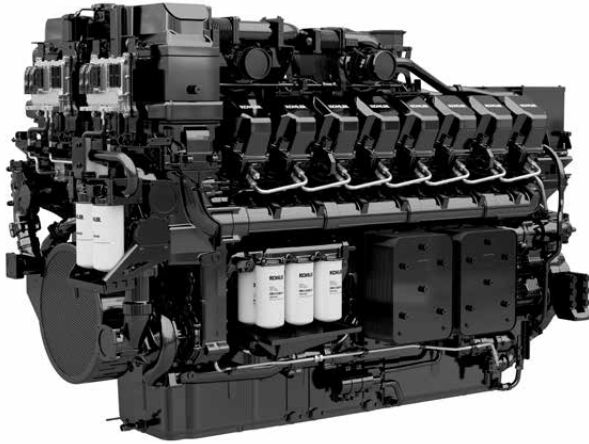
On- and Off-Highway Cooling Systems



AT THE HEART OF THE DRIVE

AKG has been a competent system partner for decades in engine cooling for construction and agricultural machinery, as well as mining equipment, portable compressors and generators.

For this task, AKG cooling experts work with the equipment manufacturers to design and manufacture compact high-performance cooling systems with up to six cooling circuits.



In addition, modules with radiators and charge air coolers are available both in standard design and as individually designed solutions for engine cooling in power packs and in gensets.

With increasing requirements due to ever-stricter emissions regulations, there is now also a need for inner-engine solutions inside the drive center of these machines, the diesel engine, to optimize all of the factors that influence combustion. Here the focus is more and more on water-cooled charge-air cooling.

AKG collaborates with leading engine manufacturers for customized solutions that integrate directly into the infrastructure of the particular engine. Reducing the charge-air temperature helps to increase the oxygen quantity in the cylinder and thus to optimize combustion.

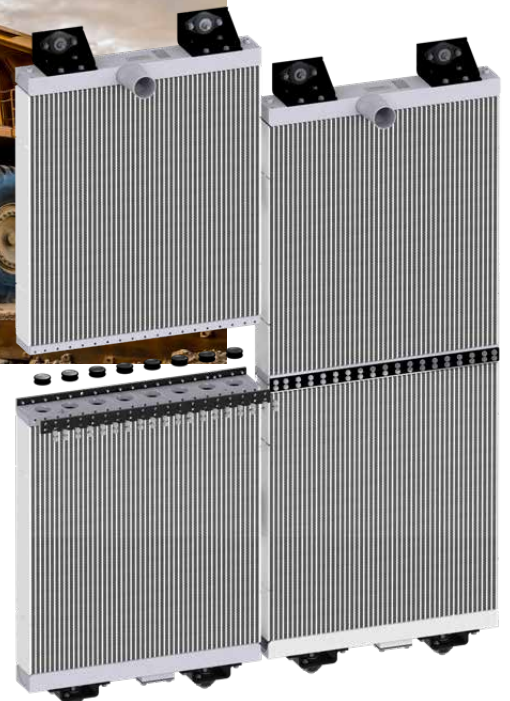
IN THE MINING INDUSTRY

Modular cooling systems for heavy duty applications



Worldwide, AKG designs and manufactures customized heat exchanger solutions for a wide range of applications and usage conditions, from wheel loaders to hydraulic excavators and dump trucks.

The advantage of this modular solution is that the individual modules can be replaced in the machine in minimal time, allowing for shorter machine shutdown times.



OFF-ROAD AND AT THE WORK SITE

Cooling systems for wheeled / hydraulic excavators, wheel loaders and other machines



AKG complete cooling system with

- radiator
- hydraulic oil cooler
- fan
- rotation direction reversing valve
- charge-air cooler
- shroud with protective grid
- hydraulic motor
- hoses

Speed-variable and reversible fan drive for

- free blowing the radiator block in dirty environments
- reducing fuel consumption
- compliance with current emission limits
- minimizing noise

Compact, high-performance cooling systems for the harsh conditions for construction equipment are particular strengths of AKG.

Decades of experience, cutting-edge design software and the latest measuring and testing technology allow perfectly adapted specialized solutions with optimal customer benefits.



Cooling packages with direct current fans:

- 12/24/48 V Variants
- Individually controllable
- Optimized cooling capacity control

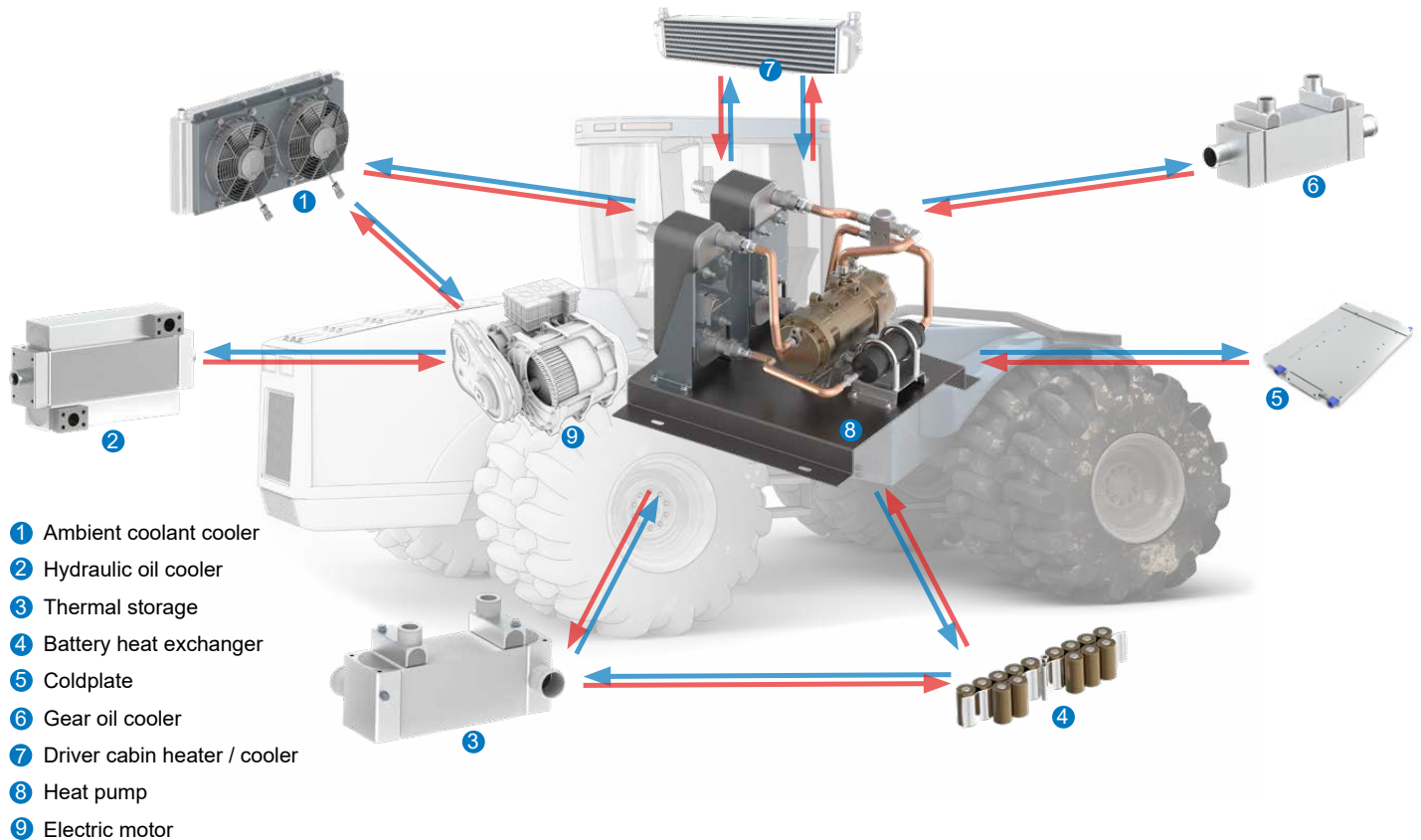
Benefits:

- Fuel savings
- Low noise emissions
- More flexible placement in the machine possible



AKG THERMAL SOLUTIONS

Development of new innovative cooling solutions for use in hybrid and electric vehicles.

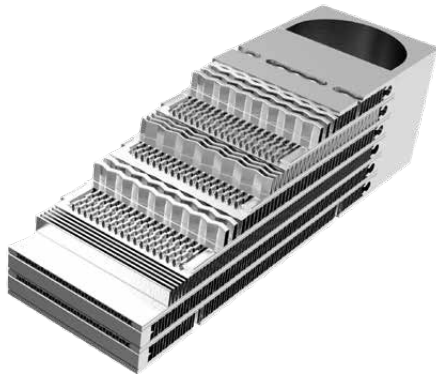


We help you to achieve your goals:

- System supplier for innovative high-performance cooling systems
- Global presence with local production and regional engineering support
 - Family-run, reliable and durable
- Integration of components into ready-made Plug&Play solutions
- New ways to simplify assembly and logistics for our customers
 - Complete responsibility for modules and systems
- Extensive testing equipment and cutting-edge measurement technology
 - Advanced project management (APQP)

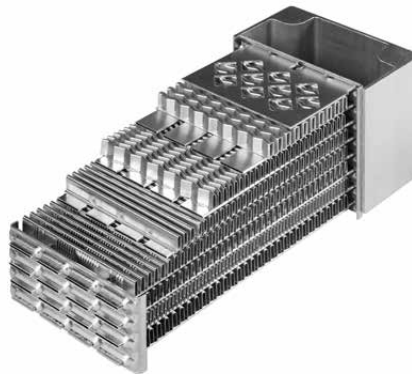
AKG PRODUCT RANGE

Aluminium Plate



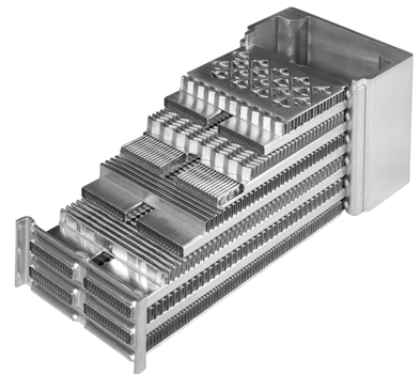
- Versatile applications
- High pressure resistance

TubeFin Radiator



- Robust construction
- Deep cores
- Weight optimized

TubeFin Charge Air Cooler



- Robust construction
- Deep cores
- Weight optimized

- Customer specific design
- Optimized costs and space claim
- Global availability
- Aluminum header tanks
- Clogging resistant

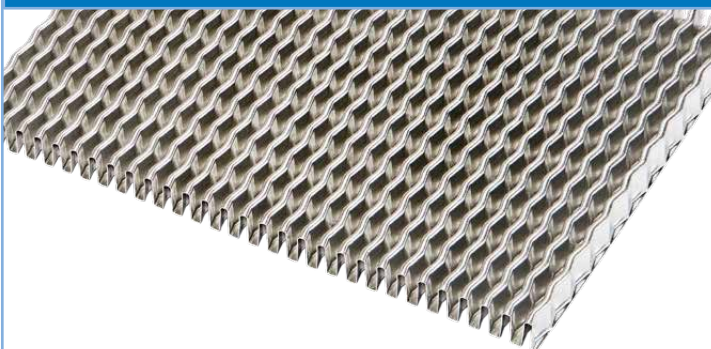
- Low tooling costs
- Side-by-Side arrangement
- Cost effective
- Highly flexible dimension

- Short time to market with proven component options
- High cooling capacity
- Long lifetime

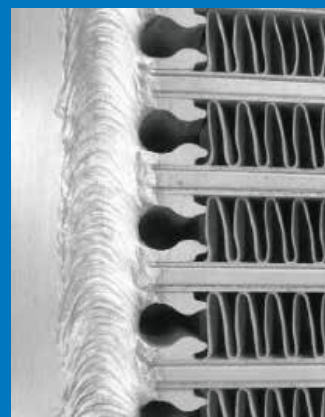
COOLING AIR FINS & AKG HOLLOW PROFILE



- Strong
- Resistant to clogging
- Easy to clean / maintain
- High efficiency
- Durable



Flexible AKG Hollow Profile



In many coolers AKG uses hollow profiles to reduce local peak strains. This way the strength of heat exchangers is significantly increased and their service life time considerably prolonged.

AKG Hollow Profile Features

- **Reduced Strain:**
Strength calculations show that when using AKG hollow profiles maximum strain is reduced by a factor of 2
- **Prolonged Service Life Time:**
Extensive rig tests have shown that the service life time increases by a factor ranging from 3 to 5



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AKG GROUP – A STRONG GLOBALLY REPRESENTED COMPANY

AKG is a leading global supplier of high-performance coolers and heat exchangers, providing custom system solutions with the highest quality standards.

Around the world 3,000 employees work at 11 manufacturing facilities located in Germany, France, Latvia, Turkey, the USA, Mexico, Brazil, China and India. Together with a number of sales offices in additional countries and regions, AKG's cooling experts are on duty around the clock.

Longstanding partnerships with global OEM customers from 24 lines of business - including construction machinery, compressed air systems, agricultural and forestry machines, and many others - give fresh and innovative inspiration for AKG's line of pre-engineered cooling systems as well.

AKG operates one of the world's largest research, development, measurement and validation centres for cooling solutions and customized applications.

For over 100 years, AKG's heat exchangers have stood for innovative solutions as well as the highest standard of engineering and manufacturing expertise.