

Vista-Pro™ Radiators

OE technology makes a difference



Customer Service: 888-250-2676

www.vistaproauto.com

It all starts with systems experience and resources

Bring up the subject of automotive parts technology, and most people think you're going to talk about electronics. But there's more to vehicle design than just sensors and circuitry. The complex science involved in building radiators might just surprise you.



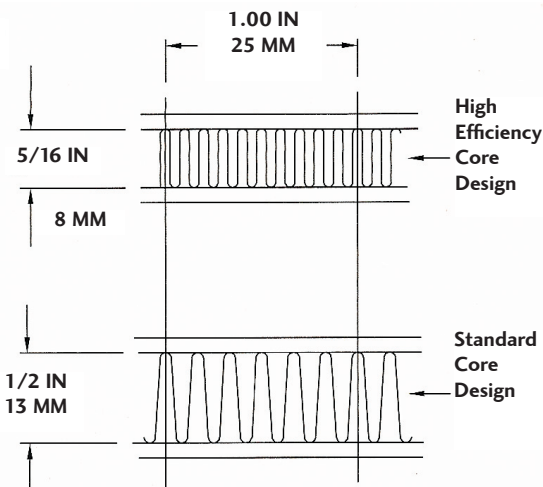
Vista-Pro technicians monitor data during durability tests

Our engineers use their OE heat transfer systems experience and resources to produce more efficient radiators that are perfectly matched to their application. It's a level of technology that's rare in replacement

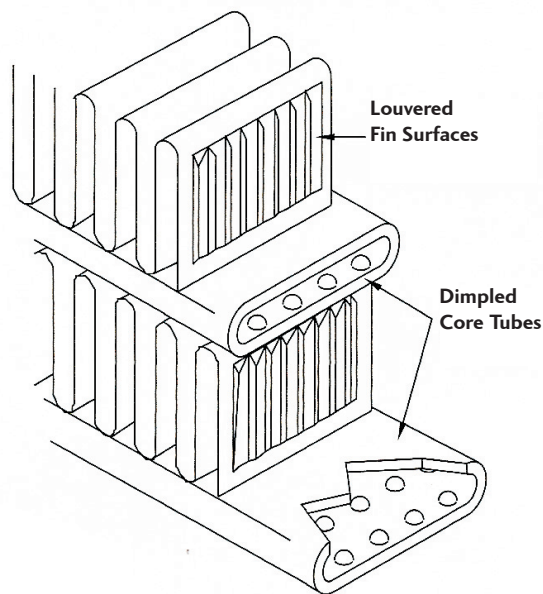
radiators for the aftermarket, but it's our quality commitment to you.

Super-efficient core design increases heat transfer

The Vista-Pro™ radiator core is an example of superior design technology. Because the hood-lines of today's front-wheel-drive cars are lower, a radiator has less space and airflow to use in dissipating heat. To keep engines and transmissions cool, radiators have to become more efficient, and they may even have to be smaller.



The typical copper/brass radiator core design has tubes spaced farther apart and fewer fins. The new Vista-Pro™ high-efficiency aluminum core is designed to be thinner, with more fins per inch. This innovative design enables us to build greater cooling capacity into a smaller space, requiring less airflow to transfer the same amount of heat as a standard design. But there's more to this technology than simply concentrating the fins.



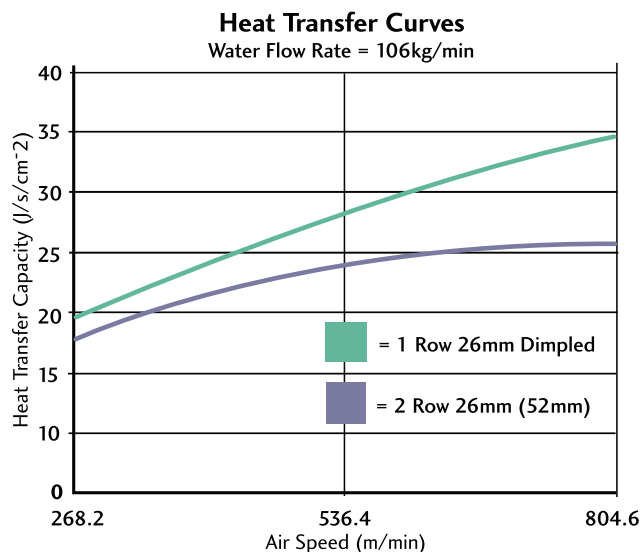
Dimples, louvers and other racy engineering stuff

For even more efficiency, our product design engineers created dimples inside the core tubes. As coolant flows through the tubes, these dimples increase the turbulence or swirling action, resulting in enhanced heat transfer. They also added louvers to the fin surfaces to increase the size of the radiating area.

These and other innovations are why Vista-Pro™ radiator cores are used in almost 100% of the cars in America's most popular motorsports series. No vehicle needs better cooling performance from less airflow than a closed-body racecar traveling at more than 190 mph for three hours. Advanced design Vista-Pro™ 36mm two-row cores get the job done every race weekend!

See how Vista-Pro™ one-row core performance compares

A Vista-Pro™ high-efficiency one-row radiator provides greater efficiency than a comparably sized standard two-row core. The water flow rate and airspeed reflect typical radiator operation. Note the efficiency of the one-row, even at lower airspeeds.



Is this level of OE technology available in other aftermarket radiators? Maybe, or maybe not. But you can be certain that almost every Vista-Pro™ late-model radiator has it.

Vista-Pro™ plastic/aluminum radiators

They may be one-row or two-row, depending on their application, but our plastic/aluminum radiators are designed and manufactured to meet Original Equipment specifications. They also include the newest Vista-Pro™ Automotive technology enhancements and quality features, including:

- Dimpled core tubes and louvered fins that increase heat transfer
- OE-specified aluminum and plastic materials to reduce weight and increase durability
- Stringent OE-quality standards for fit and performance
- Each radiator is designed to meet the OE heat-rejection specifications for its individual application
- Only premium-grade tubes, fins, headers, tanks and other components are used to make Vista-Pro™ radiators.

Radiator service tips

Danger signs of radiator failure

When replacing a malfunctioning radiator, check first to see if any of these conditions might have contributed to its failure. This could help correct a more serious problem, and will help ensure a successful replacement. Evidence of any of these conditions in a Vista-Pro™ radiator returned for warranty may void the warranty.

Leaking oil cooler: coolant shows a trace of oil contamination. Engine oil, normally amber in color, will turn a milky brown. Transmission fluid, normally red, will look milky pink. Severe engine or transmission damage will result if coolant and either of these fluids are mixed.

Over-pressurization: excessive pressure in the cooling system caused by a failed pressure cap or engine combustion leaking into the cooling system. Look for bloated tanks, bowed side rails or warped tank-to-header seams.

Blown tank-to-header seam: an indication that the radiator may have been subjected to extreme pressure resulting from a broken thermostat or combustion gas leaking into the cooling system. One way to check this potential problem is to inspect the hoses. Any hose that's expanded more than its normal size is a strong indication of a bad head gasket. NOTE: ALWAYS USE CAUTION AROUND A HOT ENGINE—COOLANT TEMPERATURES CAN REACH 240°F UNDER PRESSURE, AND WILL CAUSE SEVERE BURNS!

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Steam erosion can cause tank failure

Steam will break down a plastic tank radiator internally, creating thinning of the tank wall that can result in the formation of holes. Look for soft or melted places and white deposits at the filler neck and internal hose connections.

A thermostat stuck in the closed position is the chief cause of steam erosion in a cooling system. Also look for melted plastic tank residue, which can plug the radiator tubes and lead to overheating.

Fan damage and radiator failure

A failing water pump and a minor front-end collision are the two major causes of fan damage to the radiator fins and tubes. Weak or broken engine mounts can also cause this damage. A semi-circular mark in the center of the radiator, opposite the fan, is the indicator of fan damage.

Electrolysis can cause failure

Caused by stray electrical currents in the vehicle chassis that are carried by the coolant, if electrolysis is allowed to continue unchecked, rapid deterioration and failure of the radiator soon follows. Evidence of electrolysis includes discoloration of the oil cooler and/or recurring pinhole leaks in the radiator or heater core.

The pH must be in balance

The pH factor is the balance of acidity and alkalinity within the cooling system, which is determined by the coolant and water mix. If a proper pH level is not maintained, accelerated corrosion can occur in the radiator and heater core.

Inspection checklist

- Check the coolant and water mix; 50/50 or OE recommendation for optimum temperature control and corrosion resistance.
- Inspect belts for cracks and wear; check tension.
- Inspect hoses for cracks and deterioration. Remember, hoses break down from the inside out. Follow the manufacturer's replacement guidelines.
- Check radiator cap and gasket; use a tester to check cap pressure.



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