

# How To Choose A Radiator For Your Car

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8/25/2021

## What's The Best Radiator For My Car or Truck?

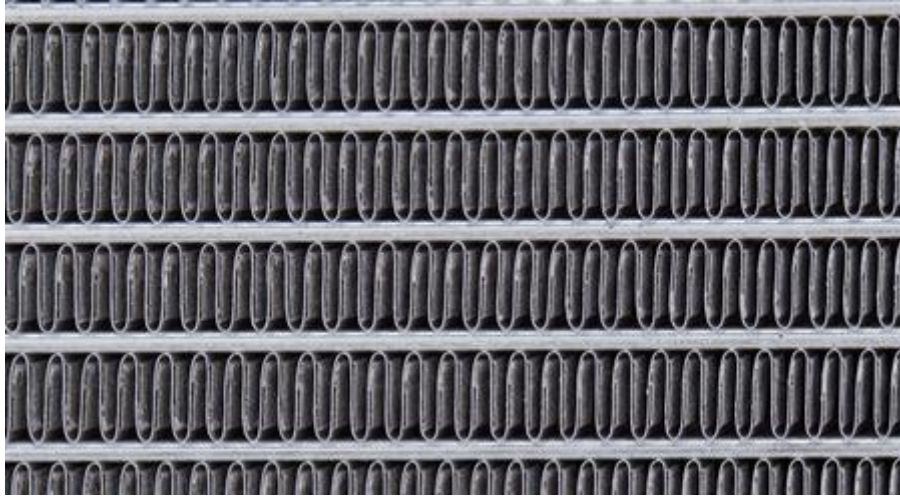
Our technicians are often asked a multitude of cooling system questions, including “Will this radiator cool my engine?” No matter if it's a factory engine with only 200 hp or an extreme high-performance engine making 600 or more wild ponies, this is a valid question. However, it can also be a tough one to answer. The fact is, every application is different. It is our primary objective to provide you with the best option for your **hot rod**, **muscle car**, **classic truck** or **race car**. Our techs are here to help, but ensuring they have the "whole picture" and all the details of your build will help ensure we provide the best product suggestions possible to get you on the road quickly.

There are a few things to consider before we single out the **radiator** as a cause of your cooling issue. The remainder of your cooling system and **engine** should be in proper working condition; meaning the appropriate **pulley** ratios, adequate airflow, proper **thermostat**, correct ignition timing, **air/fuel ratio**, vacuum and mechanical advance curves, etc. need to be addressed. This is mainly because we have found, time and time again, that many cooling issues are caused not by the cooling system components themselves, but other root mechanical engine issues creating excessive temperatures that the cooling system can't handle.



*An Aluminum Crossflow Radiator Is An Efficient Design If It Will Fit Your Application*

## How Does a Radiator Work To Cool An Engine?



*A Detailed View Of The Typical Radiator Cooling Tubes and Fins*

When we discuss **radiators** it is helpful to understand exactly how they work to cool an engine. A stock engine can produce around 42 BTU per horsepower, and it's the job of the radiator to remove an amount of heat proportional to that. If we take a look inside the radiator's core the main source of cooling comes from the tubes and fins. As the heat dissipates from the **coolant** through the tube wall, it is transferred through a joint to the fins. When air passes over the fins it carries the heat away from the radiator. Depending on the air temperature and speed moving across your radiator, it should remove about 25 to 50 degrees Fahrenheit from the coolant. You can check for proper function by using an infrared temperature gun on both the inlet and outlet ports of your radiator. Check out Longacre's handy **Infrared Thermometer** for your thermal testing needs.

## Is Using a Fan with a Shroud Important?

You can purchase the most expensive **radiator** money can buy, but if there isn't any airflow across it then it doesn't do you any good. Whether you're running an **electric** or **mechanical** fan, you should always install a **fan shroud** that will cover as much of the core as possible. A fan shroud will not only help shield the radiator from the engine heat, but it also increases and directs the airflow.



*Dual Electric Fans With A Shroud Offer The Best Cooling If You Have Room For Them*

## Are Electric Cooling Fans Better Than Mechanical Fans?



*A Typical Cooling Fan Relay With Thermostatic Switch*

There are many advantages of using an electric fan vs. a mechanical fan. Not only will an electric fan save horsepower, it can be mounted directly to a **fan shroud** and can be automatically controlled by a **thermostatic temperature switch**. This will reduce fan noise and current draw when the engine is running cool enough that it doesn't require additional airflow from the **electric fan**.

## How Are Speedway Aluminum Radiators Made?



*Speedway Motors Uses A Radiator Core With Two 1-Inch Wide Tubes For Better Cooling*

We offer a multitude of direct bolt-in and universal fit **radiators** that are 100% TIG-welded, which means there is no epoxy joints or seams to fail, causing leak points. All of our single and double pass radiators are extremely efficient, lightweight, and designed with two rows of large 1-inch wide aluminum tubes in the core.