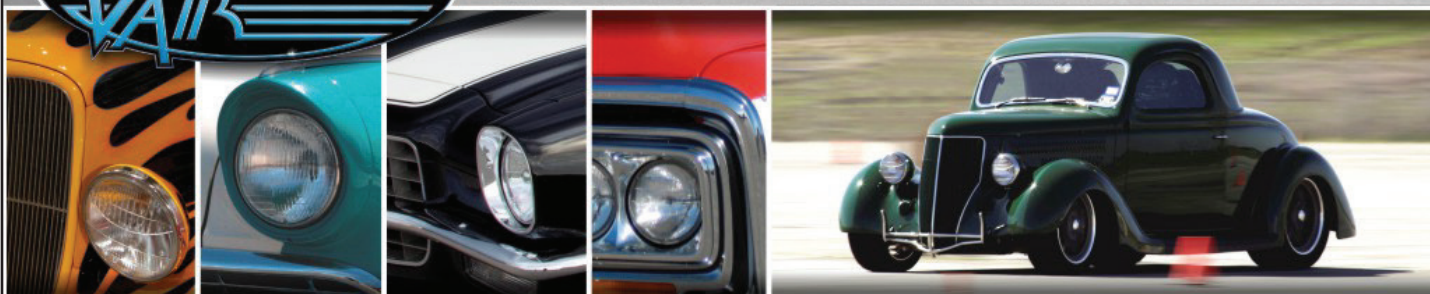




PROVEN ENGINEERING & PERFORMANCE YOU CAN TRUST



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## Tech Topic: Is an Electric Compressor a Good Option for My Hot Rod?

Over the years, we have received a number of questions regarding electric compressors, and whether or not they are available through Vintage Air. Since the 1990s, our engineers have tested numerous electric compressors as part of Vintage Air's comprehensive research and development program, and we have used them in several all-electric vehicle applications, including the 1990s-era Ford TH!NK.

With that being said, Vintage Air is committed to selling only the best-performing aftermarket air conditioning components. As a result, at this time we do not offer an electric compressor in our catalog because we do not recommend their use in your muscle car or hot rod.

### Here's why:

While there are many different electric compressors on the market, each with its own particular set of advantages and practical applications, our extensive research has turned up several shortcomings with electric compressors when compared with conventional engine-driven compressors for use in hot rods and muscle cars. These include, but are not limited to, inadequate performance, excessive electrical demand, a lack of net aesthetic advantage, and cost.

Performance-wise, electric compressors fall into two categories: Those designed for primary use (15,000 to 25,000 BTU) and those designed for supplemental use (5,000 to 7,000 BTU). **NOTE: Vintage Air system capacities range from 14,000 to 20,000 BTU, depending on the model.**

Electric compressors designed for supplemental use **will not provide adequate performance** because they are not designed to handle the heavy cooling load required to remove the heat from your hot rod. This means that while these compressors might do a great job of maintaining an already cooled vehicle's temperature,

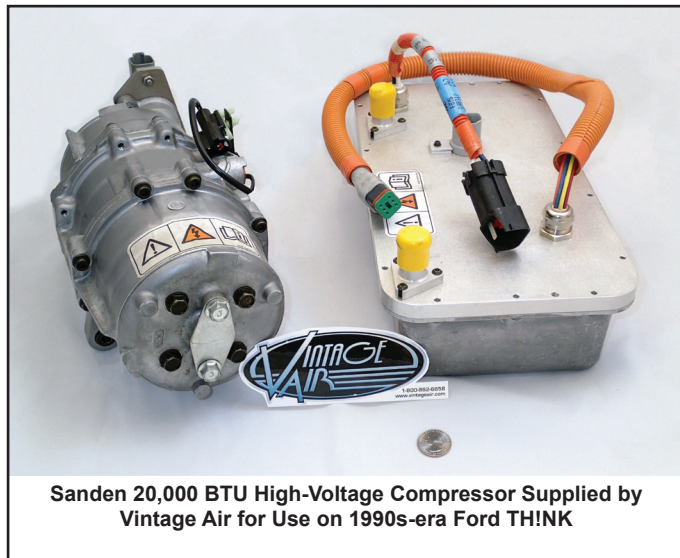


they simply don't have the capacity to rapidly cool a hot vehicle in the way a conventional engine-driven compressor does. On a 100°F day, this is the difference between comfort and misery.

Electric compressors designed for primary use, on the other hand, are capable of providing plenty of cooling capacity, but they come with another major disadvantage: **excessive electrical demand**. A major selling point for electric compressors is that they are not engine-driven, "thereby freeing up extra horsepower and package space." However, primary-use electric compressors require a high output from the vehicle's electrical system, with some compressors drawing as many as 180 amps at 14 volts (more than 2,500 watts). Most standard-duty alternators produce a maximum of around 140 amps, which means either an extreme-capacity alternator or an additional alternator will be necessary in order to handle the load. This requirement alone will negate any potential horsepower or package-space gain derived from eliminating the engine-driven compressor.

In addition to inadequate performance and/or excessive electrical demand, aesthetics are another concern when using an electric compressor in your vehicle. One of the main attractions to electric compressors is the prospect of improved aesthetics and a cleaner appearance within the engine bay. However, when considering aesthetics, things are not always as they appear. For starters, as mentioned above, it's likely that either an extreme-duty alternator or 2nd alternator will be needed to provide enough power to run an electric compressor in your hot rod. This being the case, the **aesthetic benefit gained by removing the engine-driven compressor is immediately cancelled out**. Moreover, the compressor will still need to be mounted somewhere in the vehicle and, as conveyed in the photos below, electric compressors and (in many cases) their control modules are not small.

Finally, **cost** is a significant factor when considering



Sanden 20,000 BTU High-Voltage Compressor Supplied by Vintage Air for Use on 1990s-era Ford TH!NK

the possibility of an electric compressor for your hot rod. From a consumer standpoint, it is worth bearing in mind that a quality Sanden compressor supplied with a Vintage Air system retails for about \$200, whereas primary-use electric compressors can run anywhere from \$1,700 to \$2,500 or higher, not to mention the additional costs associated with vehicle and electrical system modifications that may be needed in order to use the electric compressor. When it comes to dollars and cents, an engine-driven compressor is clearly the economical choice.

In the end, after decades of research and practical experience, we have found that electric compressors are without a doubt an innovative concept with an ever-growing number of useful applications. With that in mind, our engineers will continue to test new models and other emerging technologies as they become available. However, at this time, when it comes to performance,

compatibility, aesthetics and cost, we have concluded that the conventional engine-driven compressor is still the best choice for hot rods and muscle cars.

As the pioneers in performance aftermarket air conditioning, we at Vintage Air are committed to supplying only the highest-quality, most technologically advanced systems and components available anywhere.

**Performance First.** It's who we are and what we do.



MasterFlux 14,000 BTU High-Voltage Compressor Supplied by Vintage Air for Use on 2008 Aptera EV (Similar to 5,000 BTU Low-Voltage Supplemental-Use Compressors Currently on the Market)