

For performance-centric vehicles of any kind, cooling is always one of the major challenges faced by engineers. Getting cool air flowing into inlets and through radiators efficiently and effectively can be an incredibly demanding challenge. Nowhere is a dependence on temperature more critical to success than in motorsport; temperatures only a few degrees too high or too low could spell disaster for a race car's performance.

As a top level Formula Student team, Oxford Brookes Racing is always looking for ways to increase the performance and efficiency of our cars in any and all areas. This requirement for top level performance led to us selecting SPAL Automotive VA69A-A101-87A 12V 115mm fans for use in the active cooling system of our 2019 contender, OBR19, which would ultimately lead OBR to our seventh Top UK Team award.

The development of our first all-electric race car, set to compete later this year, has provided a completely new design and engineering challenge for the team, however the importance of effective cooling is just as prevalent as ever. Electric cars require completely different cooling layouts as heat is generated in different areas and by different components than in those of a standard internal combustion engine. The AMK motors we use require liquid cooling to maintain an optimum temperature range. To regulate the coolant's temperature, radiators are installed above the diffuser in the rear of the car. While these radiators provide passive cooling at high speed, fans are required to maintain effective airflow at lower speeds and while stationary - hence the requirement for reliable and efficient cooling fans.

For OBR, 2021 represents a massive leap forward in terms of car design and engineering, a step that would simply not have been possible without collaboration between key suppliers like SPAL Automotive. Thanks to their help, along with many others, we are able to take OBR into the future of EV racing in 2021 - growing our legacy in the process.

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