



## Alcon AE Brake Systems

Fast road cars need powerful brakes. Durability and safety and at all speeds and conditions is the top priority for drivers of the Ultimate Driving Machine.

For every “man in the pub” who brags about the engine power of his car, there is always a quiet, confident man who knows that power is nothing without control. Apart from the fact that the most important component of the car is the nut behind the steering wheel, it's amazing to realise that MITP has never considered the total dynamic package under his rear.

Moreover, if the car is used enthusiastically, it is most likely that the standard brakes will be the first thing to stop your continued fun. Even M-Power cars only last a few laps of a circuit when driven properly. Of course, if you have never experienced brake fade before, then you are probably not driving to the limit of the car. Best value for money would probably be some circuit training....

We don't understand why BMW make their brakes prone to fade under heavy use. Maybe it's because the brakes act like a safety valve. Rather like inherent chassis under-steer, the car tells you that it's at the limit, and is proposing you don't try harder? More likely, it is down to cost. It is definitely the case that most BMW owners will never get close to the limits of the standard brakes, so BMW don't see fit to over-engineer that element of the car for the few who will notice the difference.

Sadly, they don't offer any solution, even for the M-Power cars.

Is there a cheap solution? Unfortunately not. No matter which pads, discs, brake fluid or how many braided brake lines you throw at the car, all you can do is move the edges of the performance envelope. For example, if you install pads with a higher temperature rating, you merely delay the onset of fade, maybe for a couple of corners.

Yes, braided lines may make the pedal a little firmer, but they can't generate more power. The only option is to install a complete brake kit of callipers, discs and pads. This is the only way you can significantly improve the performance.

With brakes, the enemies are heat generation, heat dissipation, pedal pressure, pedal hysteresis, physical dimensional constraints, and of course ultimately, cost. Alcon brakes are in the “no expense spared” category. Yes, it is possible to spend more, but not, in our experience, alongside an appreciable gain. Below you will find a list of features and benefits that you will not be able to find on any competitive braking solution.

Trust us. We have been in the BMW tuning market for nearly 30 years, and you will not find a more durable solution

### Models Covered

1 Series (E81-E87)	Front, Ø365x32	Rear, Ø343x28
3 Series (E46 M3)	Front, Ø365x32	Rear, Ø343x28
3 Series (E90-E93)	Front, Ø365x32	Rear, Ø343x28
Z4 Series (E89)	Front, Ø365x32	Not Available
Z4 Series (E85-E86)	Front, Ø365x32	Rear, Ø343x28

### Kevin Bird Garages Limited

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Large diameter internally ventilated discs with curved internal cooling vanes. Massive heat capacity and dissipation is catered for by the composite design of the brake rotors. Steel for strength on the disc, with pin drive location into steel bobbins inserted into aluminium hubs. This yields light weight in the vital un-sprung area of the chassis. The vents in the disc are handed, utilising the rotational motion of the disc to induce cooling air through the disc. Moreover, the bobbin arrangement prevents thermal stressing of the rotor components, and generated a thermal barrier between the disc and the wheel hubs.



Aluminium alloy six opposed piston callipers transmit both the braking force and torque reaction to the chassis. Derived from sports car racing brakes, these have been redeveloped to take into account the harsher environments that road cars have to endure, through salt laden winter roads, and extended service intervals of modern cars. Unlike many competing products, Alcon only use single piece forged callipers, which are stronger, lighter, and occupy less space inside the wheel rim. This is the reason why you will find that Alcon brakes are larger in diameter, and have far greater pad area available. This allows higher braking power and lower temperatures, thereby significantly improving durability and longevity.



Expert set-up and compatibility is an integral feature of all of our braking systems. Driver confidence coming not only from outstanding power and immediacy of response, but equally from the rich feedback and progressive nature of the system in operation. Optimisation of the calliper cylinder volume ensures that the front to rear braking bias yields evenly distributed tyre grip, without disturbing the operation of the ABS and ASC systems. Also, we provide pads allowing the use of original equipment pad wear sensors, thus keeping all of the BMW safety and convenience factors that owners are entitled to rely on.

Alcon AE brake kits can be installed on the front and rear axles, or the front axle only. Minimum wheel diameter of 18". Not every 18" wheel can accommodate Alcon brakes. Some wheel versions may require adjustment to the wheel offset.

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