



The U.K's Premier BMW Tuning Company.



## B1-3.5 430hp Engine Conversion



The BMW 135i is recognised as a superior sporting coupe. Capable of showing the M3 a clean set of heels, this car now takes pride of place in the 3 Series model range, second only to the 1M Coupe.

The twin turbo six has huge performance potential, but given that BMW cannot allow this car to steal the thunder of the M3, the engine performance has been capped to a deliberately modest level.

Birds are proud, therefore, to announce the first fully developed engine package for this car. Development of this engine was started before BMW released the car into the public domain, and the all-important engineering and durability testing has been completed in record time.

Moreover, there is little doubt that whilst BMW have endowed the car with superb dynamics, there remain significant margins where performance can be improved. We have also co-ordinated all of the necessary equipment and expertise to transform the braking, handling, traction and ride quality, so that the driver is able to fully communicate with the chassis, and truly elevating the dynamics to provide the ultimate driving experience.

All technical work is undertaken at Birds facility near Heathrow, with new engine management maps individually programmed and transmitted from the factory. All conversions are properly guaranteed for both performance and longevity. Only the best will do, and only available from Birds- Ultimate BMW Performance.

Underlining our place at the cutting edge of tuning technology, all conversions carry comprehensive warranties of 24 months without mileage limitation, and our work will not void the manufacturers' warranty.

### Kevin Bird Garages Limited

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Quaife BMW

Tuning BMW

Service BMW

The **B1-3.5s Engine Conversion** consists of the following items. We will be pleased to revise specifications and pricing to your individual requirements.



**B1-3.5s Turboset-** The exclusive heart of our B3-3.5s Turbocharged 335i- Considerable time and effort has been expended to find the most reliable, lag-free and efficient modification. There are many who propose to elevate the performance of the BMW turbochargers, but there is only one Ultimate BMW Performance tuning solution. Each set comes complete with seals and gaskets, and is set up to perfection. No wonder that many European tuners choose our turbosets for their own conversions. Available from stock in both right and left hand drive configurations.



**No Intercooler ???-** Theoretical gains in power can be achieved with a larger, high performance intercooler. However, after extensive testing, using road, racetrack, and yes, even the Nurburgring circuit, we have found that none of the intercoolers we have tested actually reduce backpressure. Most increase backpressure, and even if there are potential cooling gains, this is horribly detrimental to performance. Regarding the cooling, most intercooler manufacturers make bold claims about the size of their offerings. With increased size comes increased mass, and whilst that will help reduce the speed of boost temperature increases, it also reduces the speed at which heat is dissipated. So unless you believe you will be able to stay on full power for more than 20 seconds or so, for example during endurance racing or top speed attempts, we do not recommend these devices. The standard BMW unit, as you would expect is very efficient, lightweight, and has properly designed airflow and ductwork.



**B1-3.5s Sport Catalysts-** It is an engineering fact that backpressure through the entire thermodynamic system of the engine suppresses the engine output. With turbocharged engines, it is of course possible to overcome these power robbing pressure drops by simply turning the boost up. The consequence is more heat generated, which the cooling systems may struggle to eject. To preserve both engine efficiency and longevity, every attempt must be made to improve gas flow through the system, and the standard catalysts are the major culprit.

**B1-3.5s Engine Management ECU-** The standard BMW ECU has limits as to its capabilities to accommodate fuel demand and boost control, and the high power levels of this engine conversion exceed that demand. Therefore the standard ECU is complimented by an additional ECU. This takes over control of the boost and fueling requirements, and is adaptable for almost any environment. It automatically reduces boost levels should the correct fuel grade not be available, and is undetectable by BMW Service. An added advantage is that Dealers cannot overwrite the software, so there is no longer any reason to avoid BMW software updates.

As with all Birds Conversions, expert advice comes as standard. We treat all customers as individuals, and recognise that every individual has their own set of desires and criteria. We have more than 25 years experience in the BMW tuning arena, more than any other organisation in the UK, and know how to get the best performance from BMW cars. We are enthusiasts and are happy to discuss in detail every aspect of the performance of your car. Options are many, but please let us guide you toward Ultimate BMW Performance.

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