

BMW BRAKES



BMW's history can be dated back to 1910 when Gustav Otto, the son of the inventor of the four-stroke internal combustion engine, started an aircraft factory and training school. He started producing airplanes, but had persistent quality problems with production. In 1916 a consortium purchased the company and it became known as Bayerische Flugzeugwerke AG (BFW) and started manufacturing aircraft under license from Albatros Werke. It quickly became the largest aircraft manufacturer in Bavaria, but at the end of the First World War aircraft demand collapsed. Private aviation was in its infancy and the price of an airplane was beyond the reach of most of the German and Bavarian citizens.

In 1913 an engine designer, Karl Rapp, had set up an aircraft engine manufacturing company, but vibration problems in his engine meant the company switched production to build Austro-Daimler V12 engines, under license. When that began, Franz Josef Popp was put in to supervise the manufacturing. He persuaded Karl Rapp to hire a talented engine designer, Max Friz who quickly designed a new engine and it made such an impact with the investors that Karl Rapp was discharged from the business in 1917. At that point the company name was changed from Rapp Motorenwerke GmbH to Bayerische Motorenwerke GmbH (BMW).

Aircraft and engine manufacturing was going strong during the war, but when it ended much of the business disappeared. In December 1918 BMW was forced to close down by the govern-

ment, but in less than three months BMW was allowed to reopen and the company began designing a new array of engines, excluding aircraft engines. At this point an Austrian financier, Camillo Castiglioni had become the majority shareholder in BMW.

In 1919 BMW began building railroad brake assemblies under license from Knorr-Bremse AG to keep the company going and Castiglioni decided to sell his shares of BMW to Knorr-Bremse. After selling his shares in BMW, Castiglioni purchased BFW the airplane manufacturing company. After he had the airplane company, Castiglioni wanted to purchase back the engine building division of Knorr-Bremse, along with the BMW name. He was successful and merged BFW with BMW under the BMW name. Along with the deal, he also got the design and management skills of Max Friz and Franz Josef Popp, plus valuable engine drawings and patents.

After BMW was in Castiglioni's hands, the company started producing replacement engines for aircraft. Castiglioni also made a lucrative deal with the Czechs to license the production of BMW aircraft engines for use by their military. During the 1920s, BMW supplied Russia with aircraft engines and Castiglioni, as well as being the major shareholder, siphoned off a brokerage fee on every transaction to add to his private funds, which was illegal.

Along with the aircraft engines, BMW was also active in manufacturing small agricultural engines and motorcycle engines. BMW decided to build a mo-

torcycle, the R 32 in 1923 and it became very successful due to its advanced design qualities.



1923 R 32 BMW Motorcycle

After producing a successful motorcycle division that was selling well, BMW wanted to build an automobile division. The designers and engineers started working on a car design in 1925 and a few prototype cars were made. In 1928 BMW expanded into full car production with the purchase of the Eisenach Car Factory that made the Dixi (or Austin Seven and it was manufactured under license). The original car was called the BMW 3/15 and offered several body styles. After the success with that car, it didn't take long for new advanced designs to emerge.



1929 BMW Dixi Roadster

Toward the end of 1930, BMW hired a new German Engineer, Josef Ganz, who designed a new BMW car. He wanted a rear engine design, but BMW wanted a front engine design. By 1933 BMW was producing the I6 sports coupes and sedans. The cars, which were introduced at the end of 1932, had a front mounted engine and independent suspension. This was the first use of the split grille and it has been used ever since. The rear engine design, which was popular in Germany with engineers and designers, was eventually used in the building of the Volkswagen and the

Porsche. After that I6 was successful, BMW released the 327 coupes and convertibles, the 328 roadsters, and the luxury 335 sedans. The cars were fast and very advanced for the time.



34 BMW Convertible

Castiglioni's illegal business dealings with the Russians got him into financial trouble. He sold the majority shareholding to Deutsche Bank in 1926 to raise personal funds after his irregular payments were revealed. He settled out of court with a large payment back to BMW and stepped down from the Board of Directors. In 1929 he sold the remainder of his shares to Deutsche Bank to prop up his finances.

The Castiglioni affair also hurt BMW. The Russian government became aware of the commission payments and demanded compensation from BMW. In payment, BMW gave Russia a license to produce the BMW VI engine for free and relations with the Russians came to an end in the early 1930s.



1935 BMW 335 Sedan

After successful expansion of the motorcycle and car business in the 1930s, BMW was forced to abandon civilian production by the National Socialist Party during the Second World War and focus on the production of aircraft engines. BMW started producing powerful airplane engines including the powerful BMW 801 and also jet engines and rocket

based weapons. BMW produced the 003 jet engines that were used in fighter planes just before the war ended.

Toward the final part of the War, BMW was hit hard by Allied bombing and when the war ended the Russians seized the manufacturing plants in the East. BMW survived in the West, but they were banned from manufacturing engines for three years and BMW car plans and their chief designer, Fritz Feidler were taken to England to begin Bristol Cars. In 1948 BMW started producing motorcycles again, and car production took longer and it started in 1952.



1952-1958 BMW Saloon



1955 BMW Isetta

BMW started producing the 503 and 507 models, but both were too expensive to build profitably and were low volume cars. BMW also built a small car, the Isetta and it saved the company after the war during the '50s. In 1959 BMW survived several takeover attempts from American Motors and the Rootes Group. The Quant group who was the major stockholder in the company increased their holdings in the company and by 1960 they had a 2/3 interest.

In 1961 BMW launched the 1500, a compact sedan with front disc brakes, four-wheel independent suspension and this car increased BMW's reputation for building sporty cars. This was the first car to feature the Hofmeister Kink,

the rear window line that has been a hallmark of all BMWs since then.



1962 BMW 1500 sedan

The new class 1500 was developed into the 1600 and 1800 models. In 1966 the new two-door version of the 1600 was launched and the following year the convertible was released. The models just mentioned became the 2-series cars. The 2-series continued until 1976 when they were replaced by the 3-series BMW.



1977 BMW 3-series 320i

In 1968 BMW launched the new six sedans, the 2.5CS and the 2.8CS. At that time period Eberhard Von Kuenheim came to BMW from Daimler-Benz and he presided over the company's transformation from a National firm to a global brand with international prestige.

In 1972 the 5-series was launched to replace the six-cylinder sedans and Bertone designed the body. The new class coupes were replaced by the 3-series in 1975. The new larger sedans became the 7-series in 1977. At this point the three-tier sports sedan range was formed and BMW followed this formula into the 1990s. Other cars such as the 6-series coupes were introduced and the M1 entered the mix.

In the mid '90s BMW purchased the English Rover group and that gave them the Rover, Land Rover, Mini, Morris, Riley, Triumph and Wolseley but the venture was not successful. BMW was successful

with the Mini and Land Rover brands, so in 2000 BMW disposed of Rover with the cars going to the Phoenix Venture Holdings and Land Rover going to Ford Motor Company.



1985 BMW M6 635 CSi



1989 BMW 8-Series

1995 BMW M3 and Z3 Brake Kits

There are several powerful Wilwood brake upgrade kits for the BMW starting with the Superlite 6R Big Brake Front Brake Kit, part number 140-8797. The kit features forged billet Superlite six-piston calipers in a black finish that work with 13.06-inch rotors in a slotted or drilled and slotted style.



Brake Kit 140-8797

Another powerful brake kit is the Superlite 6R Big Brake Front Brake Kit, part number 140-9300. The kit features forged billet Superlite six-piston calipers in a black finish that work with 14-inch slotted rotors.

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Brake Kit 140-9300

An easy upgrade kit for your BMW would be the Promatrix Front Replacement Rotor Kit, part number 140-8801 that features 12.40-inch rotors, aluminum hats, brake pads and braided steel hoses



Brake Kit 140-8801

Wilwood has the rear brakes handled with the Dynapro Rear Brake Kit for OE Parking Brake part number 140-8798. The kit features forged billet Dynalite calipers in a black finish and they work with 12.97 inch slotted or drilled and slotted rotors. Wilwood also features a Rear Replacement Rotor Kit part number 140-8802. The kit features 12.77-inch rotors, brake pads, and braided steel hoses.



Brake Kit 140-8798



Brake Kit 140-8802

In early 2000, BMW underwent the redesign of most of the BMW models under the auspices of the newly promoted design chief, Christopher Bangle. The new controversial designs featured complex concave and convex curved surfaces, combined with sharp panel creases and slashes. It was a design cue called "Flame surfacing". Enthusiasts and the automotive press received the new designs with mixed reactions but overall sales were good and the newly designed cars have become accepted by everyone.



2004 BMW 645CI Convertible

BMW has built plants across the world and they have a large plant in Spartanburg, South Carolina where they are building the BMW X3, X5 and X6 SUV-style vehicles. The plant has two assembly

lines.

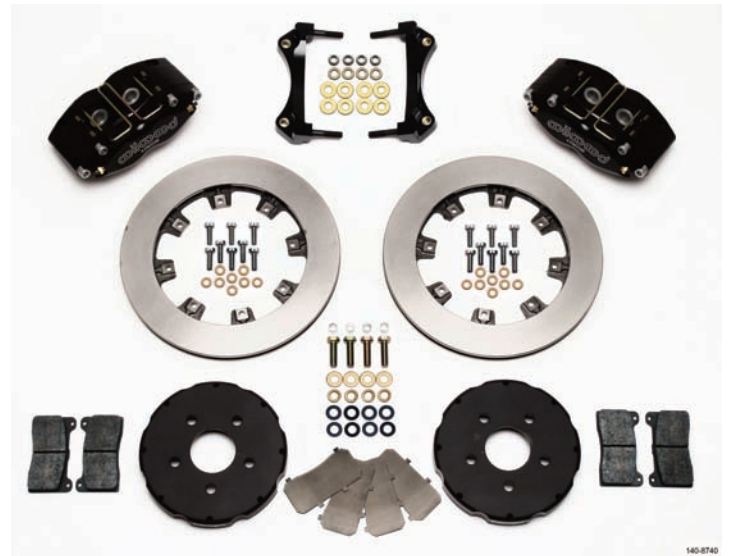


2002 BMW X5

BMW and Rolls-Royce also teamed up to produce some special models. The result of their efforts was the Rolls-Royce Silver Seraph and the Bentley Arnage. High performance BMW engines power both of the cars.

Mini 2002 to Present

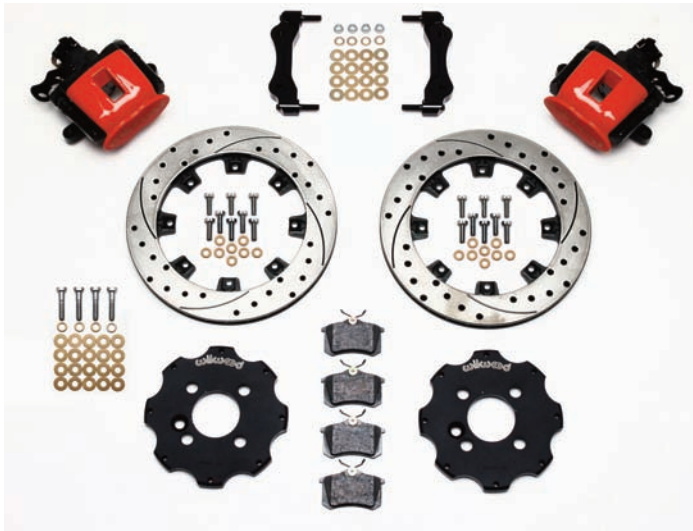
Wilwood recognized the fun and handling abilities of the new Mini, so they released a few brake kits that enable the car to stop and run better on the street and on the track. One kit that improves the stopping ability of the Mini is the Dynapro Radial Big Brake Kit, part number 140-8740. The kit features forged billet Dynapro calipers in red or black finish, and they work with 12.19-inch rotors in a standard or drilled and slotted style.



Brake Kit 140-8740

The rear brakes can be improved with a Combination Parking Brake Caliper Rear Brake Kit, part number 140-10885. The kit features combination hydro-mechanical parking brake calipers in a black or red finish working together with 11.75-inch rotors

in a standard or drilled and slotted style.



Brake Kit 140-10885

Wilwood Engineering

4700 Calle Bolero

Camarillo, CA 93012

(805) 388-1188

www.wilwood.com

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