

BMW produced its first motorcycle in 1923: the BMW R32. Operational BMW R32 motorcycles are rare these days. I doubt that anyone alive can honestly say they have ridden a *new* R32 (1923-1926). With that in mind, I thought I would share with you the intimate details of the R32: the history, design and what it is like to start, control and ride this antique motorcycle.

A Brief History (So, who was Max Friz?)

The roots of the R32 began with Martin Stroller's M2B15 engine design, the *Bayer Kleinmotor* (the Bavarian small engine). The M2B15 was developed as a stationary 6.5 horsepower engine for pumps. Motorcycle manufacturers, in particular Helios and Victoria (1921-22), utilized this engine in their early belt-driven motorcycles.

Max Friz began his career at BMW as an aircraft engineer and BMW asked him to design the R32. Friz used an upgraded flathead version of the M2B15 engine in the BMW R32. The upgraded engine was designated M2B33: 494cc and a whopping 8.5 horsepower at the rear wheel. Friz installed the engine transversely in a double-tube frame so that the flow of air would cool the cylinders. The enclosed gears are coupled directly behind the engine and utilize a dry plate clutch, as in an automobile. Power is transmitted to the rear wheel by a rubber hardy joint to absorb driveline shock, with a drive shaft to the enclosed final drive. Friz's advanced design astonished the motorcycle industry when it was first shown at the Paris Motorcycle show in 1923. A layout similar to Friz's survives in BMW motorcycle design to this day.



seals had not yet been invented.) There is a second, smaller brake rim directly bolted to the spokes on the right side of the rear wheel, with a single V-shaped brake shoe.

The 26 x 3-inch tires are mounted on clincher rims, not on drop-center safety rims as modern bikes have. If you have a flat while riding with clincher rims, the tire will come off the rim with exciting results!

The R32 has a "coffin" gas tank (called this because of its shape). Just to prove that there is nothing new under the sun, the R32 gas tank has a combination gas filter/gas gauge. The gauge is a tube formed from brass screen. Inside the tube is a spiral of staggered brass tabs. The tabs have numbers stamped on them that correspond to the number of liters of fuel in the tank. Open the gas cap, and a quick visual inspection of the gas level, in relation to the numbered tabs, tells you how much gas is in the tank.

While the optional speedometer instrument is of a conventional nature, it is driven by the front brake drum. The drum has a large external groove, in which a round leather belt runs, to drive a small gearbox

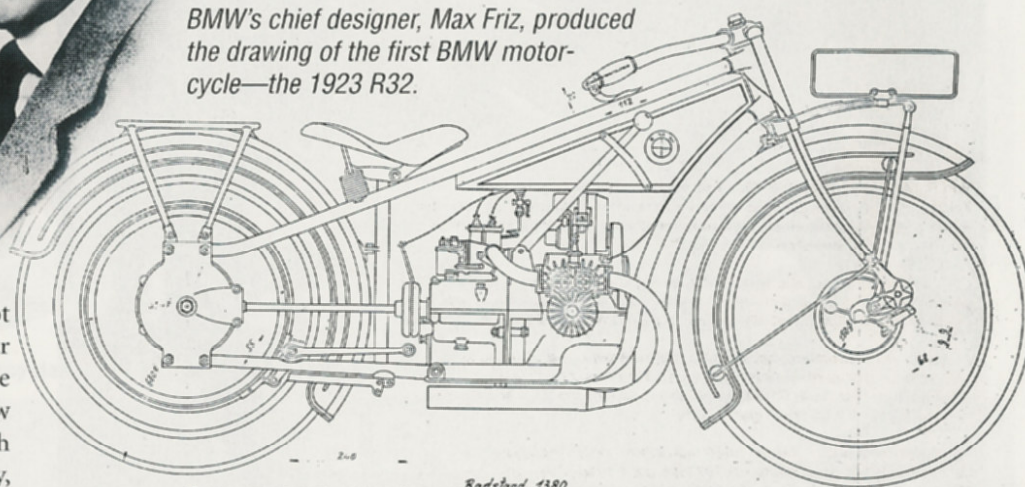


The R32 has a hand-shift with two neutrals (one between first and second gear and another between second and third gear).

mounted on the front fork. This gearbox drives a conventional speedometer cable. It is interesting to note that when you apply the brake (or hit a bump), the suspension moves up, which loosens the drive belt and temporarily disconnects the speedometer.

The mechanical design of the drive train is pure Max Friz. It is definitely an airhead BMW. Consider what other brands of motorcycles in the era had: miserable (messy) chain drives, external oil lines, external oil tanks, primary chains, and exposed valve trains. In the BMW, the monolithic beauty of the drive train, devoid of leaky banjo fittings and high-maintenance valve and oiling sys-

BMW's chief designer, Max Friz, produced the drawing of the first BMW motorcycle—the 1923 R32.



The Design (Visual Inspection)

In the first year, the R32 was not equipped with a front brake. The rear brake is an interesting design since BMW had not quite figured out how to incorporate a reliable rear brake with an oil-filled final drive that had leaky, felt rings for seals. (Modern, lipped oil

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POS.NR.	TEILBEZEICHNUNG	STÜCKZ.	GRUPPE	KODIERUNG	PROZESS-NR.	BEMERKUNG
Typenbescheinigung						
Bayerische Motoren-Werke AG						
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