Braun-Cobas K100 Endurance Racer

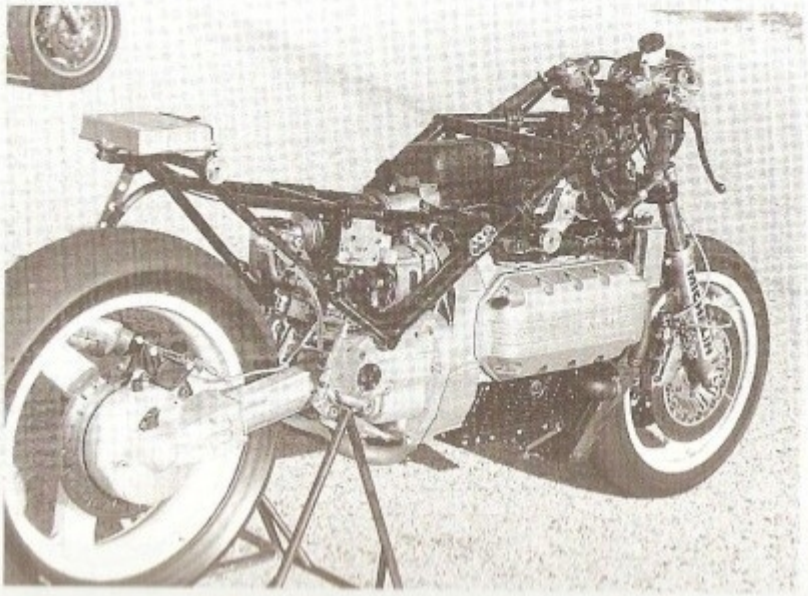
After several years of development which had begun during the late 1970s, BMW finally introduced the first of its new K-series 4-cylinder models to the public in October 1983, in the shape of the unfaired K100.

Designer Josef Fritzenwenger was assisted in the K589 (as the 4-cylinder project was designed in the factory) by a development team headed by Stefan Pachernegg. The result of their efforts was to be a power unit, comprising the engine/gearbox/shaft drive unit patented as the BMW Compact Drive System. The CDS was extremely light for a 1ltr road-going engine and drive system. The cylinders were chill cast, a sophisticated form of die-casting in an aluminium alloy containing magnesium and silicon, which meant that there were no cast-iron liners in the cylinders (a feature shared with the later flat twins). This kept the dry weight of the standard unit down to 76kg (168lb). Instead, the bearing surfaces of the alloy cylinders were treated with a nickel-silicon carbide abrasion-proof coating, called Scanimet, which reduces friction, improves heat transfer and allows smaller piston clearances for quieter running and better lubrication. These blocks cannot be rebored, but from actual usage have proved exceptionally long-lasting – in excess of 150,000 miles (240,000km) in some cases.

The 987cc displacement was achieved by the slightly long-stroke bore and stroke dimensions of 67 × 70mm, and in standard form the power output was 90bhp at 8,000rpm for the 5-speed dohc in-line four.

One of the first to exploit the newcomer's racing potential was Antonio Cobas, the internationally renowned Spanish chassis expert. In late 1983 Cobas designed a space frame using BMW's K100 Compact Drive System as a stressed

ABOVE: The Spanish Braun-backed, Cobas-BMW K100 racer. Second from the left is the American journalist-racer Dennis Noyes, a friend of the author for many years.



The Antonio Cobas designed space-frame, in which the BMW K100 Compact Drive System (engine, gearbox and final drive) was used as a stressed member. Forks were Kayaba's, with an almost horizontal rear monoshock.

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member, with 40mm Japanese Kayaba teledraulic front forks and an almost horizontal monoshock, but retaining the standard BMW Monolever. Racing-specification twin floating 300mm Brembo discs with four-piston calipers took care of the front-end stopping power, whilst at the rear a single Brembo disc (a standard K100 unit) and twin-piston caliper was to be found. Magnesium three-spoke wheels by Marvic, both using Michelin race rubber – a 16in at the front and an 18in at the rear – completed the rolling chassis.

Two machines were actually constructed. The engines were tuned by Eduardo Giro who was Ossa's chief designer at the height of that company's success. Power output was upped to 122bhp at 9,400rpm. And the complete Cobas-BMW K100 weighed (dry) 179kg (394lb); maximum speed was a very respectable 174mph (278km/h).

Originally campaigned as the JJ Cobas BMW K100RS, the bikes made their debut in the 1984 Barcelona 24 Hours, that most classic of all long-distance endurance events. Dogged by problems with the one-off computerized electronic ignition system, it was a debut to forget, but this public humiliation led directly to official assistance from BMW, who had previously shown no interest. This, in turn, led to sponsorship by Braun, the giant German electrical company, through their Spanish subsidiary, Braun Española.

From then on the bikes were raced as Braun-BMWs, and this vital backing enabled Carlos Cardus to win the 1984 Spanish Super Bike title. In a country where motorcycle racing ranked second only to soccer, this meant massive publicity at home, although it was largely unreported abroad.