



3,600 beers and Pedrosa on par with Valentino: welcome to Sachsenring

MotoGP's German Grand Prix according to Brembo

An x-ray view of the demand on the brakes
in the top class at Sachsenring

Sachsenring will host the 9th instalment of the 2016 MotoGP World Championship from 15 to 17 July. Inaugurated in 1927, its current name only dates back to 1937. It's been the permanent location for the German GP since 1998, but it hosted the East German GP from 1958 to 1972. It was here in Germany, on the Nurburgring racetrack in 1978, that Brembo brakes won their first victory in the top class.

At 3,671 metres, Sachsenring is the shortest circuit in the World Championship. The narrow winding track (10 curves on the left and 4 on the right) with 8 braking points demands excellent brake performance both due to the heavy braking required and to the mixed sections which make cooling the brakes difficult.

According to Brembo technicians, who work with all MotoGP drivers (Brembo supplies 100% of the drivers in the top class), Sachsenring is among the tracks to put brakes through medium-level stress. The difficulty index was ranked 3 on a scale from 1 to 5, the same as 8 other tracks.

Brake use during the GP

The home stretch, at 780 metres the only one worth noting, is the only point where the brakes are used for more than 4 seconds. This is one reason why each driver uses his brakes for less than 10 minutes throughout the race. Average deceleration is also very low compared to other tracks: 1 g. The total of all the forces the driver applies to the brake lever throughout the GP (about 40 minutes) is about 1 tonne, the equivalent of 6 MotoGP bikes with full tanks.

The most demanding brake sessions

Of the 8 braking sessions at Sachsenring none are considered highly demanding, while 4 put the brakes through average stress and another 4 are light braking sessions.

Braking for the first curve, a right turn, demands the most from the driver and the brakes: the bikes arrive at 293 km/h and drivers brake for 5.4 seconds, during which time they travel 259 metres, the length of 3,600 beer mugs placed in a row. The load on the brake lever is 6.4 kg, brake pressure is 11 bar and the speed upon entering the curve is 73 km/h. The same load (6 kg) is required for curves 12 and 13, but these stand out for the entry speed: 285 km/h for curve 12 and 221 km/h for curve 13. The least demanding curves are curve 2, which only requires a 1.1 kg load on the lever, and curve 9 - drivers only use the brakes for 1 second here.

Brembo Victories

Of the 41 editions of the German GP (counting the East German GP editions) that Brembo has participated in, bikes using Brembo brakes have won 29 editions, including all the races at Sachsenring. Mick Doohan, Valentino Rossi and Daniel Pedrosa are the top winners with 4 victories each. Honda, on the other hand, has won 6 times in a row on this track.