



The Austrian MotoGP according to Brembo

An in-depth look at how brakes are used in the premium class in Spielberg

The Red Bull Ring in Spielberg will host the 10th race of the 2016 MotoGP World Championship from 12 to 14 August. Previously known as Österreichring, the energy drink company had the name changed with the new millennium. The new circuit, designed by Hermann Tilke, is known for its short straight segments (the longest being only 626 metres), sharp turns and many slopes: the steepest uphill slope is 12 degrees. Unlike Formula 1, which has already raced on this track three times, this is MotoGP's debut.

According to Brembo technicians, who deal with all the MotoGP riders (Brembo supplies 100% of the riders in the premium class), the Red Bull Ring is among the circuits considered demanding for the brakes. On a scale of 1 to 5, the difficulty index was ranked as a 4 - the same ranking as the Brno track and the Spanish circuits: Jerez and Aragon.

Brake use during the GP

Of the 9 curves, a full 7 (5 right turns) require braking, which is why riders use their brakes for over 12 minutes from start to finish. The highest speeds are achieved over the first part of the track (over 290 km/h in three sections), while the second part is significantly more tortuous: average deceleration, which was 1.5 g in the first part of the track, drops to 1.17 g in the second part; the average for a full lap is 1.31 g.

The most challenging stops

Of the 7 braking sections, none are considered particularly demanding on the brakes. However, 6 are rated medium and the remaining 1 is light.

The most demanding curve is Remus (curve 2), because riders must slow down by 240 km/h, going from 304 km/h to 64 km/h in 5.2 seconds and in just 250 metres, which is less than half the length of Reichsbrücke, the bridge in Vienna that crosses the Danube.

In this part of the circuit the pressure on the braking system is 9.7 bar and the disc temperature is over 600°C.

In the next curve (Rauch) the temperature of the discs is higher, even though the braking session isn't as violent (from 295 km/h to 84 km/h in 5 seconds); the reason being that the brakes haven't cooled off yet from the previous braking session.

The first curve after the finish line (Castrol Edge) stands out for requiring the highest brake pressure: 11.4 bar are needed to brake from 302 km/h to 97 km/h in 210 metres.

On the other hand, the final curve (Red Bull Mobile) requires the use of brakes for less than 2 seconds, the time necessary to go from 174 km/h to 115 km/h.

Brembo Victories

The last victory for a bike with Brembo brakes in Austria was in 1997, but that's only due to the fact that over the past 18 years the World Championship hasn't been held at the A1-Ring. In all Brembo has had 8 victories in Austria, 3 of which were by Mick Doohan with Honda.