

BREMBO BRAKING SYSTEMS' INNOVATIONS FOR THE 2022 MOTOGP WORLD CHAMPIONSHIP – CARBON DISCS, CALIPERS AND MASTER CYLINDERS

For the seventh season running, Brembo will be supplying all MotoGP riders with braking systems – and this year they will be individually customizable. Brembo has also reinforced its position as the leading brake manufacturer in Moto2 and Moto3

Stezzano (Italy), 28 February, 2022 – **Brembo has created customizable braking systems for all 24 riders taking part in the forthcoming 21st MotoGP Championship.** This follows a winning streak where Brembo brakes were used on bikes that won 33 World Rider Championships, 34 World Constructor Championships and triumphed in more than 500 GPs with leading teams.

This season, the 12 teams have decided once again to rely on the high performance, reliability and safety delivered by Brembo parts. These include brake calipers, carbon discs, brake master cylinders, clutch pumps and pads.

For the 2022 season, Brembo has developed technical solutions that allow each rider to customise the braking system to best suit their individual riding style, the track and their race strategy.

GP4 caliper

The majority of riders continue to opt for Brembo's **GP4 caliper, launched in 2020. This new monobloc aluminium caliper is machined from a solid piece of aluminium and features a radial attachment and four pistons.** Since its launch, it has become the caliper of choice for most MotoGP riders, although some still prefer to use the 2019 version.

The GP4 design includes external fins as well as other innovative features, which combine to create a caliper with an anti-drag system designed to increase torque during braking.

It works by generating a force which supplements that created by the hydraulic pressure of the brake fluid on the pistons. This means the rider gets greater benefit from applying the same pressure to the brake lever.

Meanwhile, a spring device on the anti-drag system reduces the residual torque and stops the pads and discs coming into contact with each other, which result in the bike slowing down.

Twelve carbon brake disc options

Brembo offers a choice of 12 brake discs: six different diameters with each available in High Mass or Standard Mass material specifications.

The majority of riders are expected to choose 340mm diameter discs, split between High and Standard Mass. However, some teams will continue to use both types of 320mm diameter disc.

The range also boasts a new **355mm diameter ventilated carbon disc**, which has been tested at Sepang and Mandalika and is available for the start of the season. Its main advantage is precision-controlled ventilation that keeps the disc cool by increasing heat

exchange. It was specially designed for bikes on circuits that are very tough on braking systems such as Spielberg, Motegi, Sepang or Buriram.

This carbon composition has three advantages: a reduction in unsprung mass, a constant friction coefficient from start to finish and an absence of the residual torque issues that can be associated with steel discs.

A ventilated version of the 340mm diameter disc is also available, introduced in 2021 in Austria, making this the only disc in the Brembo range that now comes in both standard and ventilated formats.

That braking feeling

Brembo can adapt the “reactivity” of brake control according to how each driver rides thanks to different master cylinders available for each wheelbase. Each bike also features a remote adjuster, controlled by the rider’s left hand, to vary the position of the brake lever even while the bike is moving.

Brembo finds that more than one-third of MotoGP riders regularly use the thumb master cylinder. This feature, introduced in the 1990s for Mick Doohan, allows the rider to apply the rear brake by pressing a lever located on the left semi-handlebar. For the 2022 season, there are two variants. The first and most commonly used is a closed circuit with a thumb master cylinder and pedal, using a rear two-piston caliper. The second has two discrete circuits, each acting on two or four pistons within the rear caliper. In the former, one system excludes the other; in the latter, they can operate simultaneously.

Another variant of the classic thumb pump is the push and pull pump, introduced in 2019 and now optimised for maximum efficiency. It has a dual function and can be operated by both the thumb or forefinger. When used with the forefinger it is mounted on the lever at a 180° angle compared to when operated by the thumb. This increases its modularity and the grip on the lever when the bike is slowing down.

Marchesini wheels

For the 2022 season, **eight out of 12 teams are using Marchesini-forged magnesium wheels.** Marchesini wheels have either Y 5 or 7 spokes for the front and 7 spokes for the rear. Wheels from Marchesini, part of the Brembo Group, are lighter which brings advantages when accelerating, changing direction and – most critically – when entering a bend and applying the brakes, taking corners at high roll angles (up to 60°) and when exiting a bend on full throttle, when the bike is tilted.

Brembo’s participation in Moto2 and Moto3 confirmed with its SBS Friction and J.Juan brands

Brembo is confirmed as the leading braking systems manufacturer for the Moto2 and Moto3 World Championships following tests at Jerez and Portimao.

All 15 teams in Moto2 as well as all 15 teams in Moto3 have opted for calipers from the Bergamo-based company. In terms of other components, about 50 per cent have opted for Brembo steel discs, 80 per cent for Brembo pads, 90 per cent for Brembo master cylinders and just under 50 per cent for Brembo’s Marchesini wheels.

SBS Friction and J.Juan, both recently acquired by the Brembo Group, are also supplying some of the Moto2 and Moto3 teams. SBS is a leader in developing, producing and distributing aftermarket brake pads and friction materials for motorbikes, scooters, ATV/UTVs, cars and industrial applications, while J.Juan is a leader in developing and producing metal-braided brake hose and brake system components for the motorcycle industry.

About Brembo SpA

Brembo SpA is the world leader and acknowledged innovator of brake technology for automotive vehicles. Brembo supplies high performance brake systems for the most important manufacturers of cars, commercial vehicles and motorbikes worldwide, as well as clutches and other components for racing. Brembo is also a leader in the racing sector and has won more than 500 championships. Today the company operates in 15 countries on three continents, with 29 production and business sites, and a pool of over 12,000 employees, about 10 per cent of whom are engineers and product specialists active in R&D. 2020 turnover was €2,208.6 million (31.12.2020). Brembo is the owner of the Brembo, AP, AP Racing, Breco, Bybre, J.Juan, Marchesini and SBS Friction brands.

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