## **S brembo**.

## BREMBO STARS AT AUTOPROMOTEC 2015 WITH PVT PLUS – PROVIDING BRAKE SYSTEMS WITH IMPROVED COOLING

## Lightweight construction, more resistance to thermal cracks and less wear on brake pads are benefits of the new ventilation chamber for brake discs.

Brembo presents its new **PVT Plus** system at the 26th Autopromotec trade show – the latest addition to its family of pillar venting technologies. Although they do not reach the 1200° Celsius of a Formula One car, braking systems of road cars can also overheat – a drawback potentially generating thermal cracks and breakage at the disc surface. Vane venting technology has been used to overcome this problem historically.

With Brembo's new **PVT Plus** venting system, the pillars (there are 30 to 40 of them arranged on three bands, depending on the disc diameter) have a more elongated form compared to previous models. This increases thermal cracking resistance by up to 30 percent and ensures longer disk life.

Similarly, the improved air flow in the system reduces operating temperature by up to 30 percent, giving brake pads a longer life too.

A further advantage is the reduction of the disc's mass by up to 10 percent, lowering both fuel consumption and emissions of pollutants. Besides less weight of the "unsprung masses", this also increases performance, driving comfort and handling.

The new **PVT Plus** ventilation is the result of two years of dedicated research by Brembo at its Kilometro Rosso site where it has been tailored to the specific needs of individual braking systems.

Produced at the Mapello plant near Bergamo (Italy), **PVT Plus** is initially aimed at premium sedans like the Audi A6, models of the BMW 5-Series and the Mercedes E-Class. The brake systems of all three cars are generously sized and ideal for maximising the benefits of **PVT Plus**. However this does not preclude its use at a later date on other cars.

For a quarter of a century, Brembo has focused its research on the shape of the ventilation chamber. An early result, in the mid-1980s, was the **PVT ventilation** (Pillar Venting Technology), used initially on the Lancia Thema model. The technology replaced traditional vanes by a series of pillars, offering more safety of the system and a longer disc life.

To meet growing market demands, Brembo eventually designed and patented the T Pillar ventilation in 2004, used mainly on the lveco range of heavy vehicles. As the name suggests, the outer pillars are characterised by their T-shape proving particularly effective for use on heavy commercial and industrial vehicles.

In 2010, Brembo innovated further by introducing Star Pillar ventilation where star-shaped pillars dissipate heat better, reducing the risk of a thermal disc shock and extending pad life.

With **PVT Plus**, Brembo now presents a new stage in the evolution of ventilation of brake discs – all in the interest of safety.

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