



# Double vi

*Not content with building the world's first turbocharged Boxster, German tuner Gemballa is now offering a twin-turbo engine that produces no less than 330bhp. Ian Kuah drives the Porsche that promises double the fun. Photographs by the author*

**O**ne of the few criticisms you hear of the original 2.5-litre Boxster is that it lacks punch. And while you could certainly argue that any two-seater sports car with 204bhp is hardly lacking in the horsepower department, equally there's no denying that the car is capable of handling significantly more – as Porsche has proved with its own Boxster 'S'.

One of the first after-market tuners to squeeze more from the Boxster's flat-six engine was Gemballa. Indeed, we featured its 310bhp turbo conversion in the October 1998 issue (*Boxster delight*, pages 39–43). This is no mere bolt-on go-faster kit, however, rather a comprehensive re-engineering job carried out for the company by German specialist TTP (and of which company you can read more in the September 1999 issue).

As good as the finished job was, however, Gemballa wanted more, and later asked TTP to raise the stakes still further with a twin-turbo conversion. This makes a lot of sense for any flat-six engine, because it allows mirror-imaging of the intake and exhaust components. This creates equal intake and exhaust flow from both cylinder banks, and is the configuration Porsche itself uses to good effect in the GT1, GT2 and, of course, the brand-new 911 Turbo (see pages 44–51 of this issue).

TTP rose easily to the challenge and started with a 2490cc Boxster engine that was stripped down and fitted with new pistons to lower the compression ratio to 9.3:1, before adding a brace of compact KKK turbos boosting at a modest 0.6 bar. A water-cooled intercooler and an oil-cooler (both front-mounted, and both fed with air from the big intakes in the new front-bumper section) help to dissipate the extra heat generated by the turbochargers.

The result is a remarkable 330bhp at 5500rpm, and 302.6lb/ft (410Nm) of torque at 4150rpm. As a result the car's 0–82mph time has tumbled to a very respectable 5.0 seconds, but the really telling statistic is the car's time to 100mph, which at just 11.3 seconds is supercar-quick. Even the 911 GT3 takes 10.1 seconds to reach this speed. Top speed of the twin-turbo Boxster is claimed to be a more than adequate 184mph.

The intermediate-gear acceleration figures are even more revealing: The standard Boxster with the original 2.5-litre engine takes 25.1 and 40.6 seconds to sprint from 50 to 112.5mph (80–180km/h) in fourth and fifth gears, respectively. The Biturbo literally slices these



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## What it costs

Shown below are the prices of Gemballa's twin-turbo Boxster conversion and its associated parts. Note that the UK prices are all approximate, and dependant upon the prevailing exchange rate. All prices are exclusive of VAT.

Biturbo engine conversion	Dm34,776 (£11,600)
Sport suspension	Dm3690 (£1190)
Wheels and tyres	Dm7230 (£2330)
Brake upgrade	Dm6960 (£2250)
Additional oil-cooler	Dm3760 (£1220)
Sport clutch	Dm1560 (£510)
Sport exhaust system	Dm2280 (£735)
Front spoiler lip	Dm1760 (£575)
Air channel in front skirt	Dm1960 (£640)
Adjustable anti-roll bars	Dm1960 (£640)
Additional leather trim	Dm4498 (£1450)
Sport steering wheel	Dm1960 (£640)
Alloy pedals and foot rest	Dm598 (£190)
Floormats	Dm398 (£128)



1424kg, to be precise), but with performance approaching that of the 911 GT3 the car obviously needs serious brakes. Thus Gemballa swaps the standard front discs for 330mm items with larger calipers, and modifies the rear calipers to take larger pads that increase the swept area on the standard discs.

Look under the car and you'll see a race-style, height-adjustable suspension system. But the spring and damper rates are set for road use and, as a result, deliver a surprisingly comfortable ride. Even so, the 30mm lower ride height and adjustable anti-roll bars appreciably reduce the amount of body roll, and give the modified Boxster almost kart-like abilities through even the most demanding of corners.

The big tyres provide a huge amount of grip. Gemballa favours Yokohama AVS Sport covers, which benefit from being both quiet and relatively supple. Front tyres are 225/40ZR18 items wrapped around 9.0J x 18-inch wheels, while those at the rear are 265/35ZR18 wrapped around 11.0J x 18-inch rims. All four wheels are Gemballa's own black-finished five-spoke light-alloys.

The changes are not all mechanical,

*Lower ride height – by 30mm – gives the car a more purposeful stance (above). Big tyres offer huge grip. Twin tailpipes (right) suitably different from standard car's. Badging (below right) isn't exactly subtle*

though. This particular car has been kitted out with Gemballa's all-leather interior in love-it-or-hate-it red and black. There's also a sport steering wheel with an airbag, an alloy pedal set and footrest, and custom floormats, which all combine to reinforce the fact that you're sitting in something rather special.

We tested this latest Boxster conversion in what started life as one of the first-generation 2.5-litre cars, but it can also be carried out to the later 2.7-litre engine, of course – as well as to the even more powerful Boxster 'S'. Power outputs in these cases are a claimed 340bhp and 450bhp, respectively. And no-one could call that underpowered! ■

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