

Porsche 804: The Formula One winner

18/11/2026 Motorsport Magazine looks back at some of the most significant single-seaters in Porsche history. This time: the Porsche 804, the car that delivered Porsche's first and, to date, only Formula One victory as a constructor in 1962.

December 1960: a gloomy silence descends on a test cell in Stuttgart-Zuffenhausen. A still relatively small – approximately 1250 staff – but realistically effective car company renowned for competitive performance is ruing the underwhelming result of overreaching expense and complication: a meagre 120bhp. The joint Formula 2 world champions will not be storming Formula 1 anytime soon.

In fact, Dr. Ing. h.c. F. Porsche AG over-delivered in that inaugural season of 1.5-litre F1. Its frumpy, fussy car finished third in the International Cup for Manufacturers, thanks in great measure to the efforts, both in and out of the cockpit, of Dan Gurney. Fleeing BRM unreliability, he revelled in the consistency of Porsche's proven 718/2 four-cylinder – whereas the bespoke 787 underperformed – to score three second places and finish fourth in the drivers' standings. He did so with a long-in-the-tooth flat-four and old-hat drum brakes. The new car he should have been driving would not make its debut

until May 1962.

Hans Mezger and Hans Hönich eventually coaxed 180bhp at 9200rpm from that air-cooled boxer flat-eight: Type 753. Separate finned cylinder barrels sprouting from a cast magnesiumalloy crankcase carried twin-spark heads containing pairs of valves operated by twin-overhead camshafts driven by bevel gears from a nine-bearing, single-piece crankshaft. Very over-square dimensions – a 54.6mm stroke narrowing overall width – resulted in poor torque (113lb ft at 7200rpm) from a mixture breathing through four 38mm twin-choke downdraught Webers, and compressed at 10:1.

Power was fed to an in-house six-speed – "To keep things buzzing," according to Gurney – synchromesh transaxle, and then parcelled out by a ZF limited-slip differential. A mechanically driven plastic fan – neatly repackaged horizontally above the engine – churned 1400 litres of cooling air at a theoretical 10,000rpm.

Helmut Bott's extruded-steel tubular spaceframe wore aluminium bodywork styled by 'Butzi' Porsche, and carried unequal-length double wishbones controlled by longitudinal torsion bars twisted by the pivoting of upper wishbones extended to also operate inboard dampers. The latter were Koni twin-tube affairs, which proved harsher but faster than Bilstein's monotube. Steering was by ZF rack-andpinion: a Porsche first. And braking was by disc at last, albeit an annulus bolted at its periphery to the wheel carrier and clamped from within by a dual-piston caliper. Gurney was never convinced by this method.

Type 804 arrived at Zandvoort for the Dutch Grand Prix under strict instruction from Ferry Porsche: return home immediately if uncompetitive in qualifying. Despite "sticking out of it like a giraffe" – and its being made to look like a London bus by the monocoque Lotus 25 – Gurney qualified it 2.2sec from pole. Starting from the outside of a 3-2-3 grid's third row, he was running third on lap 11 when the gearlever came adrift: "You can't baby a shift!" Six laps were lost putting it back in its socket.

Although unimpressed by the car's eventual retirement – due to another gear-linkage snafu – Ferry was persuaded by Gurney to enter him for Monaco. There, he qualified fifth – 1sec slower than Jim Clark's pole – only to be biffed into retirement at the opening hairpin by Richie Ginther's BRM, its throttle stuck open. Ferry now got his way: Porsche skipped the Belgian GP in favour of development.

A much-revised car arrived at Rouen for July's Grand Prix de l'ACF: upper front radius rods; rear anti-roll bar; revised gear linkage; and repositioned fuel tanks and a detachable steering wheel enabling a lower, more reclined seating position. Having started from the inside of the third row, Gurney benefited from others' misfortunes to hold third place after 14 (of 54) laps. Albeit no match for Graham Hill's BRM and Clark's Lotus, he assumed the lead once both had struck trouble.

Stoked by this surprising but worthy victory – plus Gurney's besting of weak opposition at the following weekend's nonchampionship Solitude GP – an expectant 250,000 lined the Nürburgring in August. Gurney's pole by 3sec had been guaranteed by a rain-hit final practice, but it was no fluke. He led the first two laps, only to lose 12sec to new leader Hill – and second place to Lola's John Surtees – when the battery broke free on the fifth lap. Although he recovered this quite quickly, while steadying the

battery with his clutch foot, he was unable to overtake mistake-free rivals with more low-speed traction in rain.

The 804's development continued apace: glassfibre nose and cockpit surround; wheel discs and shrouded wishbones for Monza; and an electronic clutch disengaging the fan for a 9bhp gain. Gurney's fifth – no thanks to that newfangled fan – at the US GP lifted him to the corresponding position in the standings. There he stayed. Although there was no official pronouncement, Porsche's absence from December's South African finale foreshadowed withdrawal. It has yet to return as an F1 constructor.

At least those mechanics had got to shave their itching beards in celebration at Rouen. Though it would be an exaggeration to say that Type 804 over-delivered, it forever lifted that gloomy silence.

Technical specs

Engine: 1.5 litres, eight-cylinder boxer
Chassis: Tubular steel frame, aluminium body
Power: 180bhp
Transmission: Six-speed manual
Suspension (front & rear): Double wishbone suspension with torsion bar springs and inboard shock absorbers
Weight: 461kg

Info

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