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TRADITION MEETS TECHNOLOGY

By blending state-of-the-art equipment with time-honoured engineering techniques, GEMA Motorsport is keeping modern-classic Opel and Porsche sports cars one step ahead of the pack...

Words **Dan Sherwood** Photography **Adrian Brannan**

There's something magical about the fusion of tradition and technology. It's where the tactile, analogue beauty of a classic car collides with the silent sophistication of modern engineering. In a quiet (but deeply respected) corner of the automotive world, one company has perfectly mastered this balancing act, blending the spirit of historic motorsport with the sharp edge of contemporary design and engineering. The result is nothing short of remarkable, taking the form of complete, ground-up restorations of iconic sporty Opels, as well as precision-built, bespoke wheels tailored to air-cooled 911s.

To truly understand what makes this company exceptional, you first need to know what drives it. This is a team living and breathing historic motorsport. It's a

group of not just engineers, but racers, enthusiasts and craftsmen who have spent years on both sides of the pit wall. Their expertise comes from late nights in the garage, problem-solving under pressure, and from the obsessive pursuit of performance. Motorsport is in their DNA and underpins everything they do.

Irmeler GmbH (originally known as Irmeler Motorsport & Tuning GmbH) was founded in 1995 by Steffan Irmeler and became a hallmark of precision and engineering excellence. The company's legacy, however, stretches further back. The story of Irmeler GmbH is one rooted in racing heritage, driven by the enthusiasm of Steffan's father, Eberhard Irmeler, who was actively involved in motorsport during the late 1960s and early 1970s. "Dad was an avid racer and competed in a wide range of motorsport events, from circuit racing to rallycross,"

remembers fifty-six-year-old Steffan. "Most of his exploits behind the wheel were before I was born. Even so, despite being very young in the early 1970s, I vividly remember his passion for motorsport during this period. He would compete in a BMW 1880 Ti four-door saloon, which would double up as our family car for trips to the shops and weekends away."

Exposure to racing from an early age sowed the seed for Steffan's own need for speed. Indeed, as soon as he passed his driving test in 1987, he followed in his father's racing-boot-clad footsteps by hitting the track. "My first car was an Opel Kadett D, known as the Mk1 Vauxhall Astra in the UK. As soon as I was competent enough behind the wheel, I started competing in long-distance endurance events at the Nürburgring, as well as in autotest competitions with my father." Sadly,

Above Steffan's personal motorsport history spans decades of competing in touring cars, which his company strives to keep active through manufacturing of wheels and other essential items

Eberhard has long since passed away, but his legacy remains strong, not least in his son's deep-rooted passion for racing, serving as the foundation for a business expanding steadily in stature and capability.

Steffan started the business by working alone from a small workshop in Rehden and offering competition engine rebuilds and aftermarket racing parts for Opel sports cars. To accommodate growth, he relocated the business to its current base in Drebbler, Lower Saxony, in 2006.

It is here where we meet him, and where his business has continued to specialise in high-performance tuning and engineering, predominantly for Opels, but recently branching out in the world of air-cooled 911s.

In a significant step forward, the company united with GEMA Motorsport in 2020, an integration bringing together two like-minded organisations with shared devotion to motorsport. This merger not only combines technical expertise and advanced engineering capabilities, but creates a powerful platform for innovation, especially in the realm of historic and contemporary Opel tuning and restoration.

GEMA Motorsport has a long-standing presence in the field, having provided specialised motorsport products and services since 1993. With focus on Opel's front-wheel drive platforms — with engines ranging from the General Motors 1.3-litre Family 1 single-cam inline-four to the revered two-litre, sixteen-valve, twin-cam C20XE 'Red Top' — GEMA has played a vital role

of VDAT, the German Association of Automotive Tuners, further reinforcing the company's standing in the industry.

Since the merger, all Irmeler Racing products, including complete vehicles and race parts, are now marketed and distributed under the GEMA Motorsport GmbH umbrella, but carry the Irmeler Racing name. This unification of branding reflects not only a strategic

business decision, but also a symbolic one, representing the shared history, values, and unwavering commitment

CLASSIC SILHOUETTES ARE MAINTAINED, BUT WITH PERFORMANCE ENHANCEMENTS REDUCING WEIGHT AND IMPROVING STRENGTH

in supporting the European tuning and racing community for decades. These powerplants continue to represent the core of the company's tuning expertise and remain highly sought-after by racers and collectors, especially those involved in historic motorsport.

With a new name above the door, Steffan is proud to be operating as GEMA Motorsport GmbH, which is recognised by the German Federal Motor Transport Authority (KBA). This grants the business certification confirming its adherence to the highest safety and quality standards for road and race applications. Additionally, GEMA Motorsport is an active member

of both Irmeler and GEMA to the world of motorsport.

At the heart of the business is a philosophy based on commitment to precision and innovation. The company masterfully combines traditional craftsmanship with cutting-edge technology, bridging eras in automotive engineering. Although technology plays a pivotal role in the process, however, it never overshadows the artistry.

Advanced techniques, such as Hexagon 3D laser scanning, are used for the reverse engineering of parts often no longer obtainable. These extremely accurate measuring techniques ensure correct dimensions and tolerances are

Below Air-cooled Porsches are a new realm of the automotive world for Steffan and his team, but a range of exciting new wheel designs suggest they've created a winning formula





observed for every part, while attention is also paid to the surface coating and hardness of components to ensure maximum performance and durability. Components are designed using SolidWorks 3D CAD software allowing for near perfect reproduction (or even intelligent reinvention), with engineering solutions

tailored to both period-correct restoration and high-performance upgrades far surpassing the strength of the original part. This

meticulous quality control guarantees all GEMA Motorsport products can withstand the extreme demands of competitive motorsport.

Modern tools, including CNC turning and electrical discharge machining (EDM), as well as three- and five-axis simultaneous milling, offer extraordinary precision for both small and large series production, including the precise art of cylinder head machining, yet it's the hands-on craftsmanship invested in the first-rate welding, painting and

hand-built assembly giving each build its soul. This unique integration of old and new has proven to be a key strength for the firm, enabling the offering of restorations and custom components retaining the spirit of the originals, while far exceeding modern performance and safety standards.

WHETHER IT'S A WHEEL SET FOR A 911 OR A REBUILT DRIVETRAIN FOR AN OPEL TOURING CAR, THE PHILOSOPHY REMAINS THE SAME

Today, Steffan and his team offer an extensive range of services catering to enthusiasts of modern-classic road cars with a motorsport bent, as well as owners of classic race and rally weaponry. In addition to the aforementioned reverse engineering of parts, this work includes production of race-ready components for Xtrac, Quaife and Drexler transmissions, as well as the development and production of bespoke forged wheels.

Along with the supply of parts, the

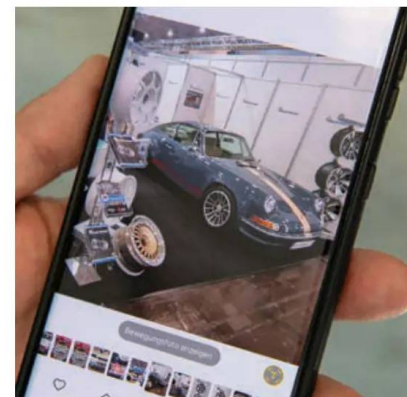
Irmeler-GEMA empire is well-known for its complete body restorations, often starting from bare metal. Paint is stripped. Panels are straightened, reinforced, or replaced. Chassis is strengthened for performance or preserved for originality, depending on the vision. While shells are being

prepared, engines are meticulously revised or re-engineered to perform reliably, while honouring their heritage. It's not just the wide range of services

on offer making GEMA Motorsport special, though. It's the fact every coat of paint, every bolt torqued, every wheel machined and every gasket fitted is part of a larger story, one written by people who understand restoring a classic or modern-classic car isn't just about making it run again. It's about making it meaningful.

GEMA Motorsport's restoration team works closely with each client, guiding their project from dream to drive. Some customers want faithful replicas of cars

Above Thoroughly modern means of manufacturing, but with a nod to the aesthetic of air-cooled Porsches



Above Steffan's wheel designs have proved hugely popular over the years, but this is only one aspect of GEMA Motorsport's output

they grew up watching in touring car championships (Opels and Vauxhalls known for ruling the touring car scene in the UK, mainland Europe and South Africa in decades past have long been an Irmier specialty), while others want modern performance cloaked in vintage skin. The answer is never no, rather "let's see what's possible." Each member of the team approaches every project with an open mind and a shared ambition, seeing their role not just as a builder, but as co-creator of a personal legacy.

As intimated, beyond the Opel blitz and Vauxhall griffin, GEMA Motorsport's reputation is accelerating in a different (but equally passionate) circle: that of air-cooled Porsches. Here, Steffan and his team have found an entirely new arena in which to apply their hard-earned technical skill, design sensitivity, and obsession with detail, resulting in bespoke wheels as functional as they are beautiful. These wheels are more than just accessories. They are tributes to an era, reinterpreted through modern craftsmanship.

"For many years, I was searching for true-to-original racing wheels, but found it extremely difficult to pin down

a reliable source," Steffan recalls. "This led me on a mission to produce the perfect wheel in-house. Since then, we have been passionately dedicated to the production of custom-made forged wheels, as well as lightweight alloy and magnesium wheels for classic touring and race cars." His vision is to inspire not only active sports car drivers, but also collectors. "Every wheel leaving our factory reflects our ruthless pursuit of care and precision," he says. "Our wheels and wheel spiders, which are used in prestigious racing series worldwide, offer long-lasting performance and can be customised to individual specification." With sizes ranging from ten inches to twenty-one and manufactured from a variety of materials, including cast aluminium and exotic lightweight magnesium, GEMA Motorsport has set the standard for classic motorsport wheels.

Drawing on its design and prototyping expertise, the team creates custom wheels balancing visual elegance with structural integrity. Classic silhouettes are maintained, but with performance enhancements reducing weight, improving strength and optimising

fitment, including for G-series 911s and 964s. Steffan and his team understand heritage is sacrosanct in the Porsche world. This is why every project begins with deep research and ends in the creation of a product looking period-correct, but performing like it was built very much in the present.

Currently, GEMA Motorsport offers two new exciting styles of wheel for Porsche enthusiasts. Named IRM-GTR11 and IRM-GTR12, these forged wheels are manufactured from solid billet aluminium to exacting standards by the latest generation of computer-controlled CNC machines. Designed primarily with the 964 backdate market in mind, but also suitable for G-series 911s (not limited to the Carrera 3.2), these ultra-light wheels began life as a computer design, which was analysed by Steffan's dynamic calculation software. This ensured each design is suitable for the rigours of both road and motorsport use. Thereafter, each machined wheel is subjected to a bend-testing machine to check load capability and stability when pushed to the limit.

Both the IRM-GTR11 and IRM-GTR12 are seventeen-inch wheels with widths



ranging from 7J to 10.5J, thereby ensuring the choice of staggered fitment, and are ready to order with offsets including ET 55, 52, 23.5, 28 or 8. Prices start at €2,099 per wheel.

Clients can choose from a range of finishes, lip depths and can even have engraving and branding tailored to their specific 911. It's a process guided not just by visual style, but by function, ensuring the wheels don't just look right, but perform brilliantly when pushed to the limit. Much like the team's Opel restorations, these Porsche projects reflect the company's core philosophy: classic design elevated by modern technology, bolstered by craftsmanship guided by purpose.

Especially compelling about this company is how much of its capability remains in-house. Many classic car builders lean heavily on third-party contractors for core tasks, such as fabrication, scanning, and paint, but at GEMA Motorsport, these processes are integral. This gives the team direct control over every part of the build process — ensuring the highest standards of quality are observed and maintained — and ensures fast turnaround and improved communication between client and creator. Two-way talk is something GEMA Motorsport prides itself on. Every project is carefully documented, with clients receiving regular updates, images and videos detailing progress.

This level of transparency has proven especially valuable for international customers, many of whom are unable to visit the workshop in person. Where needed, GEMA Motorsport's clients can also rely on the firm for full trackside support at the circuit, drawing from decades of first-hand experience in competition environments.

"We have competed in many classic racing championships all across Europe, including the 2019 HSCC Dunlop Saloon Car Cup, where I drove an ex-works Super Touring Opel Vectra B for a full season," Steffan tells us. "I also competed in the Super Touring Power event at Brands Hatch last year, this time in an Opel Astra TS200, where I was racing alongside former touring car champions, including Steve Soper and John Cleland. We have vast experience with sports car and historic racing, meaning we are ideally positioned to support customers who want to follow a similar path to the grid and who understand in the end, every millimetre, every component and every move can make the difference between victory and defeat."

Beyond the company's technical, commercial and racing achievements, there is a deep-rooted mission driving the company's ongoing work: to keep the spirit of classic motorsport alive. For example, all thirty members of the GEMA Motorsport team are passionate about preserving and reviving cars

defining the DTM Championship during the 1980s and 1990s. Their goal is to restore and reproduce original engine and chassis components, using modern techniques alongside traditional engineering methods to keep these iconic machines from being lost to time. Whether through exact reproductions or subtly improved modern interpretations, the company aims to give new life to these coveted classics, ensuring the legends of yesterday remain on the road and racetrack today and tomorrow.

Whether it's a wheel set for a classic 911 or an authentically rebuilt drivetrain for a 1990s Vauxhall or Opel touring car, the philosophy remains the same — every project is approached with meticulous attention to detail and a deep respect for historical context. This combination of historical reverence and engineering innovation sets GEMA Motorsport apart from its peers. The company's work is not simply about restoration. It's about resurrection, reviving not just the cars themselves, but the excitement, character and culture of an era when motorsport was raw, visceral, and intensely personal.

With a client base extending beyond Germany, GEMA Motorsport continues to grow, whilst remaining true to its roots. Through continued investment in technology, talent and tradition, Steffan is ensuring the future of classic motorsport is as exciting and authentic as its past. ●

Above GEMA Motorsport products carry the Irmeler Racing name