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Professional
MotorSport

WORLD EXPO 2015

NOVEMBER 11, 12, 13 COLOGNE, GERMANY

Show Preview 2015

THE COUNTDOWN TO THE 2015
PROFESSIONAL MOTORSPORT
WORLD EXPO STARTS
RIGHT HERE! >>

>> Safety, suspension and speed are three key words that sum up some of what's on show and being discussed at this year's Professional MotorSport World Expo in Cologne. With a record exhibitor turnout and an extensive workshop program throughout the three days, there really will be something for everybody in racing and race car preparation.

Many exhibitors will be looking to extend their sales in Europe and, as always, there will be plenty of companies for interested dealers and distributors to meet. Many of the top race-wear manufacturers will be presenting their latest ranges, and the leading wheel and seat manufacturers will be displaying their newest products. Plus, there will be many innovative race engine developments and transmissions, suspension components, composites, as well as data-capture and analytical equipment on show.

As always, Professional MotorSport World Expo will be open only to race drivers, teams, engineering and technical people, and, of course, dealers and distributors, meaning most importantly that exhibitors will have plenty of time to discuss your requirements and objectives. This year, the show will be running all day Wednesday, Thursday and Friday. Be there!



EXHIBITOR FOCUS: BBS MOTORSPORT GMBH

LIGHTWEIGHT ALLOY WHEELS

➤ For more than 40 years BBS wheels have been the choice of champions. By amassing victories in all major on- and off-road racing series, BBS Motorsport has built a reputation for delivering products with the highest quality and standards in light alloy wheels.

Years of experience in motorsport means that BBS is happiest when its products are put through the toughest demands on the best circuits, and the most demanding rallies around the world. Made in Haslach, in the south west of Germany, BBS wheels are supplied globally and have helped teams win on all continents around the world. BBS has also been the trusted OEM fitment wheel of choice for several high-performance and mainstream manufacturer cars for decades.

BBS light alloy wheels are one of the leading choices for motorsport customers. They deliver great performance and can give customers a crucial advantage. How does BBS do this? The company's staff are passionate about motorsport and apply generations of knowledge, enthusiasm, concentrated expertise and the latest production technologies to create products that make a difference.

When it comes to developing new wheels, BBS works hand in hand with its customers, whether OEM or race team. The end results are individual, precise wheel types, tailored to specific race requirements, supplied as fully forged single- or multiple-piece wheels manufactured from a choice of aluminum or magnesium. The end products are technical masterpieces, which display perfect aerodynamics, minimal weight and maximum stiffness. Let BBS help you take your place on the podium.

Stand 6006



Unique coolant level sensor

Cartek will be showcasing new versions of its unique coolant level sensor products, which now incorporate a water temperature sensor along with the original air-in-water detection functionality.

The self-contained, aluminum units are simply installed in the upper hose of a coolant system to monitor for the presence of air. Cartek's coolant sensors

are designed in such a way that small air bubbles do not trigger the sensor. The sensors only alert the driver, and/or ECUs and dataloggers, when the water level within the cooling system drops dangerously low, which can happen when a radiator is punctured or a hose becomes loose, but is often not noticed by the driver until it is too late, resulting in engine damage.

With the addition of a temperature sensor, this neat and compact product now offers two important functions instead of just one. The original coolant level sensors were developed by Cartek in 2011 and have found application in all areas of motorsport, with the latest demand coming from all Cosworth-Duratec powered cars competing in Uruguay's Superturismo championship.

Stand 5026



Exhibitor news

OBP Motorsport

Visitors to the show can see OBP Motorsport launch its Pro-Race V3 adjustable bias brake pedal box assembly. Described as a 'work of art', the lightweight system is constructed from aircraft-grade aluminum and is machined from a single billet block, offering incredible strength compared with a traditional pedal box. OBP's V3 has been tested with up to 700kg of force applied to the pedal, and gave zero flex.

OBP is also proud of the adjustability the pedals offer. The pedal pad is adjustable vertically and horizontally to ensure an ergonomic fit, while the adjustable pedal ratio and accelerator throw give even more comfort. Long life is ensured through the hard anodized finish, while the option for a drive-by-wire (DBW) or cable accelerator ensures installation is possible in a wide range of cars.

The V3 system is available with OBP's Spec master cylinder as standard, with the option to upgrade to an Alcon Spec cylinder. OBP states that the V3 has all the ingredients needed to deliver faster lap times and help put race cars on the top podium spot. **Stand 8024**

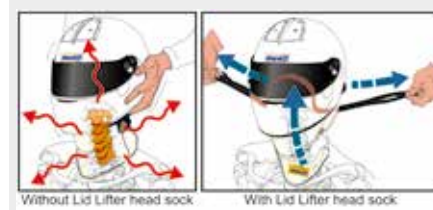
Stand 21

Extracting a driver from a car that has crashed can be an extremely delicate operation, even when performed by professionals. A particular problem is helmet removal, the first step in providing first aid. Stand 21's Lid Lifter head sock is a revolution in driver safety.

To minimize the risk of damage to the cerebral vertebrae, Stand 21 has created a new device that was developed in collaboration with motor-racing medical specialists. The Lid Lifter allows a helmet to be removed correctly from an injured driver. The item is made of an exclusive fire-retardant fabric offering comfort, protection and softness to the skin. The material also allows the transfer of perspiration to its outside surface, to evaporate naturally, further improving comfort.

Simple, reliable and fail-safe, the Lid Lifter has already been accepted by NHRA, IMSA and SCORE. Other major racing organizations are reviewing the device. FIA 8856-2000 & SFI 3.3-certified, the Lid Lifter is available in two eye port configurations, in both black and white.

Stand 4000



EXHIBITOR FOCUS: SENTRONICS

FIA HOMOLOGATE SENSOR

➤ A year after its unveiling at PMW Expo 2014, Sentronics' FlowSonic Elite sensor has been homologated by the FIA for F1 and LMP1, race series around the world are evaluating the FlowSonic Super and Pro models, and a version for industrial applications is on the drawing board.

The FlowSonic range is designed to help control peak engine power, enforce technical regulations, balance performance, and foster energy efficiency in motorsport. Its next-generation technology has been proven in extensive bench and track testing (including over 300 hours of in-car running) and includes several enhancements over the original sensor approved by the FIA, delivering improved performance in a robust and affordable package. The FlowSonic is offered in three variants – Elite, Super and Pro – to suit the full spectrum of racing categories, from F1 to F4 and LMP1 to GT3, as well as touring and rally cars.

Sentronics managing director Neville Meech says, "The competitors' experience of the technology in its first year led to a much more rigorous set of criteria for homologating a second sensor. Satisfying these requirements was challenging, but our end product is all the stronger for it. We expect the current testing by race teams and engine manufacturers to lead to widespread adoption in 2016 and beyond."

Sentronics chairman and renowned racing pioneer Daniel Partel says, "Beyond the appeal to F1 and LMP1 of the advantages offered by the FlowSonic Elite, our other models have generated strong interest from series in Europe, Asia and North America. We can meet their requirements with a solution that promotes efficiency for less than it costs to create inefficiency through the imposition of air restrictors, ballast, or drag. We are also committed to providing the kind of warranty, service and support motorsport customers demand, whatever the level."

Sentronics was formed in late 2013 by principals of sensor producer Reventec, precision manufacturing firm Mikina Engineering, electronics specialist Cawte Engineering, and renewable racing consultancy Hyspeed. In 2009, Hyspeed originated the concept of using ultrasonics to meet the FIA's anticipated fuel flow control regulations, as implemented in 2014. Since then, F1 and LMP1 have seen their hydrocarbon consumption fall by over 30% thanks to the combination of fuel flow control and hybrid powertrains.

Championship organizers, race teams, OEM engine manufacturers, specialist race engine builders and fuel suppliers can now order all three FlowSonic models directly from Sentronics or dedicated distributors worldwide.



Stand 7058

FIA-approved flexible fuel bladders

Willans will be launching its FIA-approved flexible fuel bladders. They are made from Willans' own W301 material, a novel mixture that consists of a Kevlar woven fabric covered in a unique elastomer, which is strong, thin, flexible and light. The resulting tanks are very light, able to hold more fuel and easier to insert through small apertures than traditional nylon bladders. The innovative features are indicative of the brand philosophy toward product design.

Managing director Simon Perkins says "We are very excited about our new fuel bladders, which extend our range of safety products and bring innovative, advanced technology to every customer. We have invested heavily in the latest CAD/CAM software and CNC cutting machinery to allow a quick turnaround from initial design. We can now create a custom bladder from an old tank, a CAD drawing or a sketch."

Stand 8023

Exhibitor news

Variohm

For the simultaneous measurement of pressure up to 25 bar and temperatures up to 150°C, Variohm EuroSensor has developed the compact EPTTE 3100 combined sensor. Space-saving and cost-effective, the sensor offers the ability to monitor two important measurements with a single connection port.

The EPTTE 3100 offers both M10x1 and 1/8in NPT thread connection, and features a linearized output signal for pressure measurement and a PT1000 resistance element for temperature. The proven, dry stainless steel diaphragm allows monitoring of all customary motorsport gases and liquids. The pressure output signal is standard ratiometric or absolute over 0.5-4.5V, and insensitivity to vibration, a wide environmental temperature range and immunity to electromagnetic interference are all included.

By eliminating the separate need for a temperature sensor and its mounting, the sensor is attractive not only for reasons of weight and space saving, but also because of a particularly favorable overall price for both measured values.

Stand 2024



Caseliner Europe sro

The MAGSEAM II seamless garage walling from Caseliner is an aluminum 3mm sandwich-type panel, which offers high rigidity and low weight. The advantages of the new walling are improved product quality and a seamless surface. The material does not become brittle, but is tough and resilient with excellent surface strength.

The system offers great flexibility and variability and as a result it is possible for Caseliner to modify the system and final delivered product to individual requests. A range of options and modifications can be undertaken, such as integrated TV monitors, cabinets and even shelves for racing helmets with integrated driers. Further options, for example, a roof or windows, can be added as part of the box for engineers, mechanics and the VIP area. Everything is possible. Caseliner can prepare CAD work of the perfect working environment, which is very elegant, with simple installation, and is above all affordable.

Stand 5028

FULL-MOTION SIMULATOR

➤ Base Performance Simulators (BPS) is now offering a full-motion system at its UK base, just 15 minutes from Silverstone. With five years' experience with both single seater and GT simulators, BPS has invested in a 6DOF platform, manufactured by Moog Controls, to bring motion cueing to its BPS 4.8 rental system. Available to hire by the hour for driver development, circuit familiarization and event preparation, the discrete facility is available for manufacturers, teams and individual drivers to carry out their driver-in-the-loop simulation programs.

From one-off sessions with our in-house driver coaches to working alongside race and performance engineers on multiyear deals, BPS brings specialist simulation knowledge to all levels and formats of motorsport. The addition of this motion



system will give a much higher level of immersion and realism for drivers. Commissioning has been carried out by a selection of drivers and engineers with Formula One experience, to guarantee that what a team needs from a simulator will be provided by the BPS 4.8+. **Stand 6068**

Special temperature measurement system

In the field of e-mobility, where high-voltage batteries are controlled and the safety of the user needs to be guaranteed, SAB Bröckskes, together with its partner CSM, has developed a special temperature measurement system.

As well as high-voltage sensors, the company produces harnessed cables and wires for pressure sensors, turbo rev counters, and flow sensors. SAB Bröckskes' harnessed cables for strain gauges, which determine the compression and extension of objects by resistance changes, are used in the automotive industry for the determination of material changes in a car.

Additionally, fast evaluation of the measured values plays an important role. An increase in efficiency is reached through the TEDS (transducer electronic data sheet)



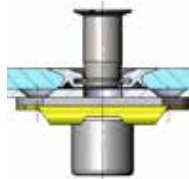
system. Similarly to plug-and-play, this system is termed 'plug-and-measure'. It serves as a fast and direct analysis of measured data on evaluation units.

SAB Bröckskes is your trusted partner for sensors. The company delivers temperature measurement, wires and harnessed cables from one source. **Stand 7060**

LIGHTWEIGHT PANEL FASTENERS

➤ Clarendon Engineering is adding the new 3334 series of LiveLock lightweight panel fasteners to its extensive portfolio. The new series has been specifically designed for reduced weight in racing applications using composite panels with a high strength-to-weight ratio and quick operation. The fasteners are lighter and smaller than the conventional series, with the proven ability to withstand high vibration environments. And with a 'hold-out' feature retaining the

stud, they are especially useful on curved panels as well as offering easier handling within a racing environment. The studs are available with recessed combi-drive heads for both hexagon and slot tooling and various combinations of stud length, head style and receptacle are available to suit all applications. **Stand 3026**



Exhibitor news

Redx International

Since designing the original XTR7 and SR5 Instant Shelters, Redx has continued to develop its range with ongoing improvements. Earlier in 2015 the company unveiled its latest products, the Robust Internal Brace System (RIBS).

The RIBS strengthening system for both SR5 Commercial and XTR7 industrial Instant Shelters is a direct result of Redx's development. By incorporating these internal ribs to the insides of all concertina X-bars, the internal braces increase the strength and rigidity of its frames by around 25%.

The exceptional strength of the XTR7 and SR5 Instant Shelters is based on the combination of hexagon profile H/D aluminum framework, internal ribbing in the concertina bars and high-quality brackets. Each shelter is supplied with a choice of colored canopies and sidewalls and all come with a heavy-duty wheeled store bag and anchor kit. Redx's range of instant shelters can be professionally branded to individual requirements using heat-press vinyl or full flood digital printing, offering photographic quality images. Redx has a dedicated team of designers who work with customers to achieve their goals.

Stand 2036



Specialty Fasteners

There are few forms of motor racing that haven't used the Dzus fastener, which has almost become a household name. But now engineers at Specialty Fasteners, working with production partner Camloc, have come up with a 21st century alternative: AeroLoc.

The key to its improvement is the use of a cross-head stud, which all but eliminates the risk of damaging expensive body panels. AeroLoc is also available with a bail handle for hand operation in situations where use of a screwdriver is difficult.

The new AeroLoc self-ejecting fastener is interchangeable with the Dzus EHF5 series and is more secure when fastened, thus negating the occasional need for tank tape to keep it in position. So retrofitting is not only possible but designed in. A cam receptacle replaces the Dzus spring, providing a more positive lock.

Stand 3026

Exhibitor news

Turbosmart

Turbosmart has introduced a new addition to its range of parts for Ford's ST performance models, with the Compact Shortie Recirc diverter valve for the Fiesta ST 1.6 EcoBoost.

The Kompact Shortie might be small, but it's anything but light on performance. With its billet aluminum construction and a lightweight brass/aluminum two-piece piston and precision engineered springs, the Shortie provides razor sharp boost response and much greater boost handling abilities, up to a massive 30psi.

The Recirc Shortie is a 100% recirculating BOV, so its operation is quiet and won't draw unwanted attention. It seamlessly integrates with the vehicle's standard mapping, so it's perfect for the driver seeking big performance from an ST while keeping under the radar.

The Recirc Shortie joins the Dual Port diverter valve and the IWG-75 Internal Wastegate Actuator in Turbosmart's range for the Fiesta ST.

Turbosmart's Shortie diverter valves are direct replacements for the Fiesta's standard plastic valve, which can leak and crack, especially under increased boost pressure. The Shortie is a far more durable replacement and bolts right up to the Ford's turbo compressor cover, enabling you to turn up your Fiesta's performance without costly custom work.

Stand 8018



Arcasting

Italian alloy wheel manufacturer Arcasting is expanding its product portfolio beyond its current OEM fitment range. The company has developed a full range of high-quality wheels through the use of low-pressure casting technology.

Made in Italy, the new racing line of wheels joins Arcasting's car, SUV, light truck and heavy-duty ranges. Available in two styles, 4x4 and rally, the wheels are available in 16-17in and 14-18in options, respectively.

Both rally and 4x4 ranges are created from AlSi7 alloy, which is heat treated and features steel inserts and a special paint cycle for excellent wear resistance. Stand 8030

LIGHT SIGNALING AND SAFETY SYSTEM

Pixel Motorsport by PixelCom is a complete light signaling and safety system for installation at motorsport circuits.

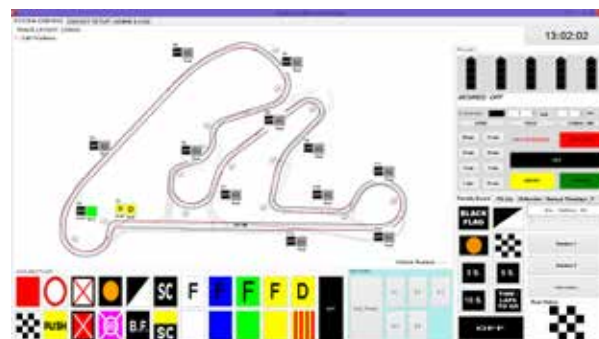
With proven experience at a variety of tracks globally, Pixel Motorsport is proud to offer a complete and highly integrated solution that can fulfill any circuit request. PixelCom also offers complete turnkey solutions for motorsport facilities at competitive prices. All of Pixel Motorsport's Units are offered as wired or wirelessly controlled systems, and are also offered with two power options – mains or battery operated – and with or without photovoltaic solar panels and chargers. Pixel Motorsport can build on these options further, offering custom adaptations so that its systems are perfectly matched to any track layout or special requirement.

PixelCom's range of system components includes starting lights, FIA/FIM LED starting lights with repeaters, pit lane out lights and detection loop/beams, and a control panel for use in both rolling and standing start procedures. Black flag display and 'pit lane in' detection loops and warning systems are also available. The pit and light options are bolstered by a range of marshal track-side safety lights, which feature a full color graphic panel so that

all mandatory flags and race numbers can be displayed.

PixelCom's range of lighting options is backed up by comprehensive signaling server control software, which offers complete control for all panels and lights in a system by one person. Before each installation, Pixel Motorsport offers a complete track study to ensure that the most competitive and integrated solution on the market is offered to clients.

Stand C310



Data management and analysis

With an increasing number of electronic components and sensors in racing cars, data management and analysis become more challenging. At PMW Expo, ITK Engineering will present its Race Data Configurator (RDC), which helps with data analysis and gives the possibility of driver and race car performance comparisons to cope with such challenges. RDC focuses on the preconfiguration of an increasing

amount of data labels and channels, fully automated post-processing of recorded signals, and individual report generation. In this way RDC empowers race engineers to handle, organize and evaluate large amounts of data in a structured way with high performance.

ITK Engineering was established in 1994 and is an internationally operating development partner for customers in motorsports, automotive and medical technology. Its mission is to develop electronic components, software and simulation models to bring intelligence into machines. Energy management, drive dynamics and race data analysis are only some of the topics for which ITK offers individual solutions. With a staff of more than 750, ITK Engineering has representatives in Germany, the USA, Japan, Spain, and Austria. Stand 7020



FLURO OPTIMIZES PRODUCT RANGE

➤ This year the Fluro Company will again present its full range of spherical plain bearings and rod ends for motorsport applications. Fluro remains a leading player in this segment of products and expands its market share worldwide. As sponsor for the Porsche Hömberg Racing Team, Fluro has gained a good reputation and profile within the motorsport world. The company's Reiner Höhn, Alexander Streit and Gino Fusco will

welcome visitors to the stand and show you the continuous improvement and optimization of the products and range, which has for many years been a reliable and trustworthy source for the motorsport enthusiast. Parts made in special materials or for unique applications, and parts from the special parts division for custom-designed products – and even custom-made solutions – will be displayed. **Stand 4046**

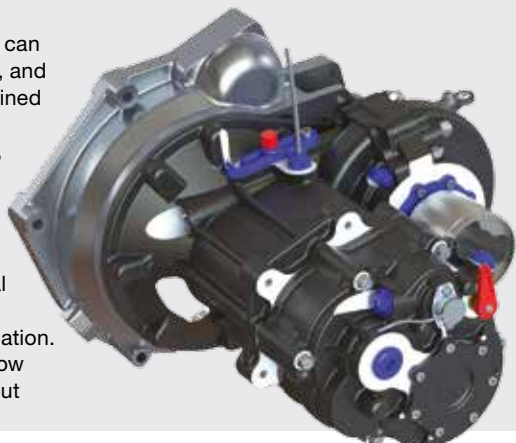


High-torque sequential gearbox

Bacci Romano Transmission will introduce its latest sequential gearbox at the Professional Motorsport World Expo 2015. The RC131 is a high-torque version of Bacci's well-known and race proven RC111 transverse 6-speed unit, which can now transmit up to 550hp and 650Nm, and can be installed in any transverse-engined 4WD car.

During development of the gearbox, Bacci chose to start with the bell-housing for one of the most requested applications – the Lancia Delta 16V Evoluzione. As with Bacci's 2WD sequential gearboxes, the central differential will be offered with the possibility for external preload modification. The preload settings for the RC131 allow adjustment from 0Nm to 225Nm without

influencing other settings within the plate-type limited slip differential. **Stand 6014**



ONLINE STORE FOR TURBOCHARGERS

➤ Founded in 2004, TurboZentrum is now regarded as the largest online store for turbochargers and accessories. The company offers all products and services necessary for performance engines. From air filters to exhaust systems, it offers everything

in a reinforced version. With a growing range and as the exclusive representative of foreign manufacturers, TurboZentrum offers its customers up-to-date products at any time. The newest TurboZentrum service is also to repair and modify turbochargers. **Stand 7014**

Exhibitor news

con-sept

After the presentation of its hollow head valves at last year's Expo, con-sept and Toa & Arai will show the second generation of improved hollow head valves with smaller wall thicknesses, higher tolerances and improved materials. The forged inner shape with a smooth surface does not require any machining and increases the hollow area up to 35% compared with a standard hollow valve with a cylindrical shape. When sodium filling is applied, the temperatures are substantially reduced.

The thermal and mechanical loads on the valves are extremely high in motorsports, but for series production cars, too, temperatures are getting higher and higher. To improve the efficiency of the engine, lighter components that can withstand higher temperatures are a big step forward in engine development to create the engine of the future. **Stand 6054**



KAPS Transmissions cz sro

The LS7 Lotus 7-speed sequential gearbox from KAPS Transmissions is the ultimate statement that the 3.5 liter V6 engined Lotus deserves. There are so many features included in this gearbox that no competitor can match the same level of quality and engineering craftsmanship. The sequential gearbox is made to handle 900Nm.

With some clever engineering and shaft setup, instead of a 6-speed gearbox there is now increased performance, acceleration and higher top speed from the gearbox. You have the additional benefits of a 7-speed sequential gearbox without compromise.

A unique feature is that the preload of the diff is adjustable externally. The diff itself will have two standard ramp angles (53/0, 40/0). The gearbox is available in five ratios, ranging from low to high top speed and will be able to suit all customers. For installation, the clutch case is original and the rest of the parts in the gearbox are from KAPS Transmissions production. The rear casing is from billet aluminum CNC. It will install exactly to the original mounting points in the Lotus engine bay, with other parts unchanged. Clutch, driveshafts and mounts are retained, helping cut costs. **Stand 3054**

Exhibitor news

Harwin

Leading hi-rel connector and SMT board hardware manufacturer Harwin is introducing a horizontal version of its 1.25mm pitch hi-rel Gecko connector, reducing the stacking height of PCBs to just 5.6mm. Available in the eight standard positions – 6, 10, 12, 16, 20, 26, 34 and 50 – the new style also facilitates motherboard and daughterboard configurations.

G125 series connectors offer high performance in a miniature package. Connectors can handle 2A per contact and function within a wide temperature range (-65°C to +150°C) and under extreme vibration (Z axis 100g, 6m/s). Other features include optional latches that enable simple and fast delatching that requires no special tooling. Horizontal styles feature a new mechanical hold-down latching system for additional connection security.

Harwin has also launched a family of high-density power connectors that can handle currents up to 10A. Based on a 3mm pitch, the new M300 connectors are designed for rugged environments and withstand twice the number of operations as older-generation products. To aid design activities, Harwin provides CAD models, test reports and live technical support. **Stand 7068**



CES Europe

Over the past 12 months CES Europe has been developing an idea by a graduate tasked to look at the aesthetics and operation of Paoli wheel guns. The resulting brainstorming and practical parameters have led the company to produce a radical design that can be retrofitted to nearly all existing Paoli wheel guns. It both enhances and improves the current design, and has a number of fantastic operator benefits.

Could this be the answer to quicker, easier, more consistent pitstops? **Stand 2006**

FOUR-WAY MDS MOTORSPORT SUSPENSION

Bilstein is presenting four-way and two-way versions of its MDS motorsport suspension. It will focus on the four-way MDS system for the new Porsche 911 GT3R and Mercedes-Benz AMG GT3. This suspension has had a successful track record, especially in endurance racing, since 2014.

With independent damping force adjustment in one rebound and three compression stages, the four-way version of the MDS offers an even wider range of individual adjustment options. Each setting can be adjusted independently by means of aluminum

adjustment wheels in rebound (red) and three compression stages (two blue/one black). Ten clearly discernible clicks from one (soft) to 10 (hard) are available to meet the demands of every circuit or vehicle.

Also on the Bilstein stand will be the proven two-way version of the MDS, which it has revamped especially for the hybrid BMW i8. Bilstein will also demonstrate the adaptability of the modular damper system, with a special two-way version of the MDS, developed specifically for the all-electric FIA Formula E Championship. **Stand 8014**



Sequential-operation 6-speed gear system

Pfzner Performance Gearboxes (PPG) has earned a reputation for producing some of the most durable automotive gear sets and sequential engagement systems in the world. This has been achieved through innovative design coupled with technologically advanced engineering and manufacturing processes.

The company is proud of its motorsport credentials. As competition plays a large part in its success, this active participation sees its products tried, tested and proven in the most demanding of conditions.

Recent innovations from PPG include the first ever sequential-operation 6-speed gear system that upgrades both in-line and transaxle configurations of the TREMEC T56/TR-6060 gearbox (also known as Magnum and Magnum XL). Due to the number of units in existence, PPG regards the introduction of this product as the most important release in its 15-year history.



Also recently introduced are two 6-speed sequential products: a dog-engagement system for the Subaru Impreza WRX STI and a helical-cut gear set for the Audi R8 and Lamborghini Gallardo. In each case the sequential gear set drops into the manufacturer's OE gearbox housing, allowing many standard components to be retained. **Stand 5058**

AUTHORIZED GARRETT PERFORMANCE DISTRIBUTOR

STK Turbo Technik's core competence includes the matching, manufacturing and distribution of motor sport and upgrade turbochargers. The company's experience in turbocharging led to it being appointed by Garrett/Honeywell as the only authorized Garrett performance distributor for motorsport turbochargers in Germany. Its reputation in motorsport has been recognized by SETRAB IC, which made the firm its German distributor.

Other STK Turbo Technik activities include the distribution of new and remanufactured turbochargers, the remanufacturing of turbos, and the development and engineering of prototypes. The company is also involved in the production of small batch, pre-series and special series for reputable vehicle manufacturers. STK Turbo Technik offers R&D service for OEMs, as well as for OES customers.

Stand 6008

FREE-TO-ATTEND WORKSHOP PROGRAM

DAY 1: WEDNESDAY, NOVEMBER 11

WORKSHOP 1:

Exhaust energy exploitation

TBC - Presentation to be confirmed
Development engineer, Audi, Germany

TBC - Presentation to be confirmed
Lucia Marmorini, ex Ferrari, F1 Engine Systems, Italy

TBC - Presentation to be confirmed
Jaap van der Lee, turbocharger specialist, Van Der Lee Turbo Systems, Netherlands

DAY 2: THURSDAY, NOVEMBER 12

WORKSHOP 1:

Electric engines in racing

TBC - Unlocking cutting-edge power density and efficiency using silicon carbide electronics

Anthony Law, systems engineer, McLaren Applied Technologies, UK

TBC - Developing EV systems for motorsport

Angus Lyon, director, Rockfort Engineering, UK

TBC - Electronic control of individual fuel injection throttle bodies

Mike Jenvey, managing director, Jenvey Dynamics, UK

Chassis design and setup

1:00pm - F1 and Le Mans suspension design

Terence Goad, engineer, Performance Projects, UK

1:30pm - The importance of a good suspension geometry

Ton Serné, race car engineer, Cursus Wegliging, Netherlands

2:00pm - Media disruption-free product development: Semantic Validation Platform

Dr Thomas Freudenmann, project manager, Semantic Validation Platform, Karlsruher Institut für Technologie, Germany

2:30pm - Setup and driveability of a modern race motorcycle

Reino Eskelinen, owner and founder of Reino Race Consulting, Germany

Data acquisition

3:00pm - Video and data acquisition innovations from Cosworth

Robert Kirk, sales manager, Cosworth Electronics, UK

3:30pm - Motorsport wind tunnel testing - current state and future trends
John Gleeson, aerodynamics research and development engineer, MTS Systems Corporation, UK

4:00pm - Determining a driver's trajectory from logged data
Jörg Segers, director, JS Engineering BVBA, Belgium

4:30pm - RDC: a tool for flexible data configuration and automated post-processing
Houssem Abdellatif, program manager, ITK Engineering, Germany

DAY 3: FRIDAY, NOVEMBER 13

WORKSHOP 1:

3D printing/additive manufacturing

10:30am - Faster race teams with additive manufacturing

Amos Breyfogle, senior application engineer, Stratasys, Germany

11:00am - Additive manufacturing: the level of maturity in motorsport and aerospace

Stuart Jackson, regional manager UK and Ireland, EOS Electro Optical Systems, UK

11:30am - Added value of additive manufacturing in the motorsport field
Dr Stéphane Abed, CEO, Poly-Shape, France

Safety technology - building safe race and rally cars

12:00pm - Driver performance monitoring during racing

Joachim Taelman, senior project manager, BioRICS, Belgium

12:30pm - Mechanek: an improved head and neck restraint for automotive racers

Mark Gallagher, Masters student, University of Pennsylvania, USA

1:00pm - Uttering the unspeakable: making functional safety benefit motorsport technology developments
Angus Lyon, director, Rockfort Engineering, UK

1:30pm - How body temperature affects performance

Robert van der Linden, owner, Body Control Systems, Netherlands

2:00pm - Your safety: Simple measures mostly without cost and weight

Hubert Gramling, Research and Resolution, Germany

Race communication

2:30pm - Presentation to be confirmed
Derek Perry, chief executive officer, MRTC - Event Communications, UK

3:00pm - Reverse engineering puts Strakka in pole position - a case study
Kieron Salter, managing director, KW Special Projects, UK

WORKSHOP 2:

Simulation and testing

10:30am - Presentation to be confirmed
Giuseppe Callea, head of technology, BhaiTech, Italy

11:00am - Interactive tire simulation for motorsport applications

Michael Kleer, project manager, Fraunhofer Institute for Industrial Mathematics ITWM, Germany

11:30am - Simulation: the ultimate race car setup tool

Danny Nowlan, director, ChassisSim Technologies, Australia

12:00pm - Suspension design and full vehicle simulation with Adams/Car

Astrid Hahne, mechanical engineer researcher, Ecurie Aix Formula Student Team RWTH Aachen, Germany

Tobias Vogler, mechanical engineer researcher, Ecurie Aix Formula Student Team RWTH Aachen, Germany

Lightweight materials and design

12:30pm - Use of carbon fiber/natural fiber hybrid composites in motorsports - cost effectiveness and vibration damping

Dr Hrushikesh Abhyankar, research fellow - Lightweight Structures, Cranfield University, UK

1:00pm - Manufacturing of lightweight components using laser processing technology

Dr Oliver Meier, managing director, Laser On Demand, Germany

1:30pm - Design and testing of additive-engineered, high dynamic load lightweight components

Aron Pfaff, scientific researcher, Fraunhofer EML, Germany

2:00pm - Aluminum matrix composites and the ALPF production process

Niall Johanson, motorsport and high-performance sales, Composite Metal Technology, UK