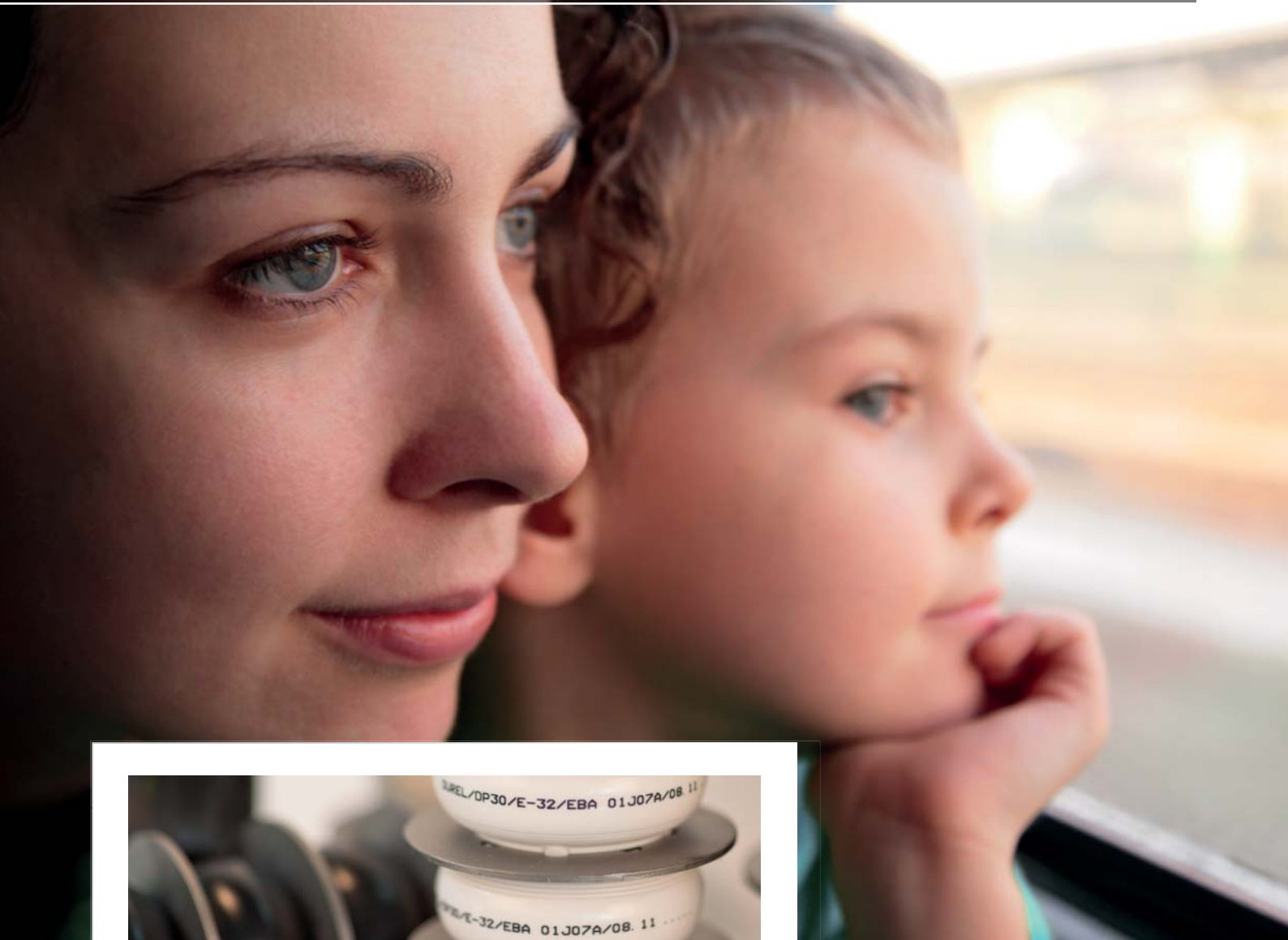


FOR YOUR SAFETY – DUREL POLYMER SPRING SYSTEMS



The DUREL brand name stands for excellence in high-performance polymer spring systems. We manufacture proven and reliable springs for draw gears, buffers, draft gears and coupling systems that are used in rail cars, engineering and industrial applications worldwide.

Our sophisticated and sustainable solutions exceed familiar standards and offer added safety. We are constantly striving to exceed expectations and to offer you custom-tailored solutions – for today as well as tomorrow.

DURABLE. RELIABLE. SAFE.



YOUR POLYMER SPRING EXPERTS

DUREL DZ15/18



DUREL HIGH-PERFORMANCE POLYMER SPRINGS

Buffers and draw gears ensure a smooth ride – from start to acceleration and slow-down. During regular operation, rail cars are exposed to extreme physical forces. When it comes to absorbing these forces to ensure the safe transport of passengers or delicate goods, our reliable polymer springs systems are absolutely essential. In addition to guaranteeing the utmost level of safety, DUREL polymer springs offer added value and long-term sustainability.

Our innovative springs are made of thermoplastic polymer that retains its elasticity longer and is more resistant to wear compared to rubber or steel. Plus, they are made to last!

Quality made in Germany.

The tried and trusted qualities of DUREL springs outperform the standard.

DUREL draws on 30 years of technical expertise in the railway industry that is the result of our close cooperation with an international network of industry experts. Customers from around the world trust our long-standing experience and our technological know-how. Our top priority is meeting highest customer requirements with utmost reliability and on time, while optimizing our clients' processes – across a variety of industries.

MILESTONES

- 1992** Beginning of our cooperation with inventor Rudi Mertens for designing an innovative high-performance polymer spring
- 1995** First DUREL springs in use
- 2001** EBA certification
- 2003** Manufacturer-specific product qualifications
- 2004** Global market expansion
- 2006** Market launch of DUREL DP30K compact spring
- 2007** Headquarters moved to Rhineland-Palatinate, Germany, with improved logistics and increased production capacity
- 2008** Over 100,000 DUREL springs in use worldwide
- 2009** Investments in new manufacturing processes to expand our vertical manufacturing range
- 2010** Founding of the "Surlon DUREL Springs Pvt. Ltd." Joint Venture
- 2011** Over half a million DUREL springs in use worldwide
- 2012** Construction of a larger manufacturing plant

MOVEMENT IS ENERGY

SPRING SYSTEMS FOR BUFFERS AND DRAWGEARS –
UNRIVALED ENERGY ABSORPTION UNDER ANY CONDITIONS.



PRODUCT BENEFITS

- Excellent damping
- Outstanding dimensional stability and consistent spring quality for many years to come
- Excellent energy absorption
- Low torsion ensures high traveling comfort
- Compliant with EN and UIC regulations
- Maintenance-free
- Climate and temperature-resistant
- Chemically resistant to grease, oil, solvents and many other substances
- Fully recyclable
- Compact fitting dimensions, lightweight
- Easy handling
- Small quantities available
- Short delivery times, uncompromising on-time delivery
- German quality workmanship

SYSTEMS BY DUREL ARE USED AROUND THE WORLD

Due to their reliable operation even under difficult conditions, DUREL springs have been certified for use in Germany and many European and non-European countries. Customers all around the world rely on our high-performance polymer springs and appreciate the freedom from maintenance, the unsurpassed energy absorption and the damping rate of more than 50 percent as well as the excellent temperature-stability that enables the use of springs at temperatures between -76°F and 122°F (-60°C and $+50^{\circ}\text{C}$). DUREL has become a trusted partner in countries with extreme climatic conditions, such as India, Africa or Russia.

Worldwide sales:

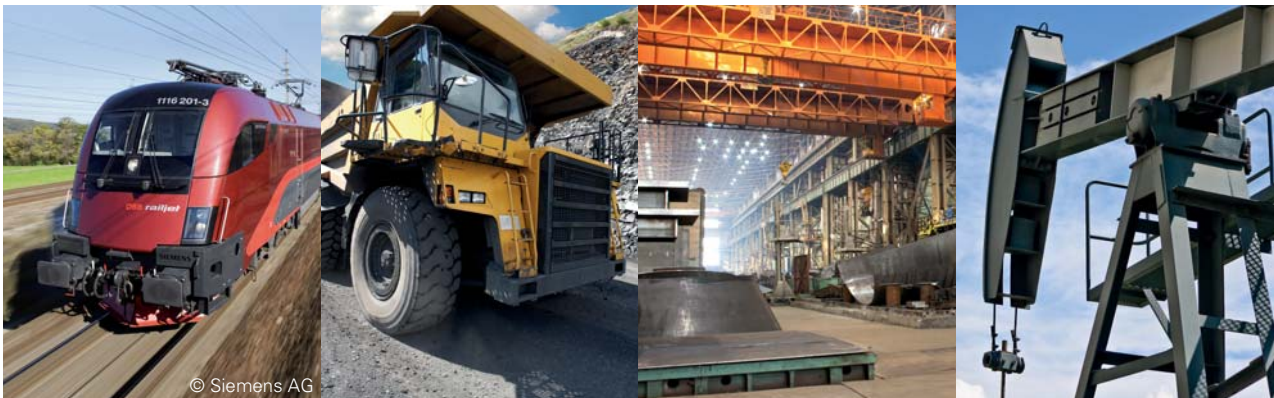
Germany, Austria, Switzerland, France, the Netherlands, Spain, Italy, Great Britain, Russia, Iran, Syria, India, Taiwan, China, Vietnam, Mauritania, DR Congo, etc.

WE DEVELOP CUSTOMIZED SPRING SYSTEMS FOR A WIDE VARIETY OF INDUSTRIES

Innovative applications require individually-tailored solutions and professional service. Are you looking for design specifications that are not met by our standard offering? DUREL develops and manufactures custom springs – even in small quantities.

We offer solutions that are tailored to your needs. We design a variety of products according to customer specifications, significantly contributing to the success of their products. In doing so, we focus on the same high standards of quality that apply to volume production in terms of design, production and quality control.

Talk to us about your ideas and business goals. We would be happy to develop a custom design.



© Siemens AG



SPRING SYSTEMS FOR MAINTENANCE AND RETROFITTING

DUREL offers a broad range of professional services, such as design consultancy, revision, modernization, repair and retrofitting for all types of spring systems to customers around the world. If you are looking for design alternatives for existing components, we propose a solution that matches the designed space. Due to their increased energy absorption, our high-performance polymer springs enable an optimized use of design space. If additional design space is available, dynamic energy absorption can also be increased. This offers you a new level of safety that has been unavailable on the market to date. Our solutions enhance your components and offer you a new dimension of design flexibility.



DUREL POLYMER SPRINGS – SIMPLY SUPERIOR

COMBINED EXPERTISE FOR ADDED PERFORMANCE

The excellent damping and stability qualities of our springs are the result of a specific polymer distortion process. This process is proprietary to DUREL in Europe and exceeds conventional techniques by far.

Moreover, our manufacturing process is extremely flexible and even enables us to produce small quantities. Elaborate retrofitting concepts allow us to flexibly adapt our production processes within a matter of minutes.

The next generation of polymer springs.

DUREL redefines standards – once you compare, you will find that our one-of-a-kind products live up to their promise.

High-performance polymer is a material particularly well-suited for DUREL springs. They are known for their robustness and the unrivaled energy absorption they offer despite their reduced weight or volume. The combination of the exceptional qualities of our raw materials and our patented manufacturing technology ensures that our products exceed the performance of traditional metal, rubber and/or hydraulic-based springs in terms of reliability and durability – with compelling results. In addition to being maintenance-free over the entire lifetime of the rail car, our spring systems are also affordable.



CERTIFIED QUALITY

DUREL springs are manufactured in accordance with a DIN ISO 9001:2000 quality management system. All stages of design and production are subject to consistent quality controls.



SUSTAINABLE SYSTEMS

DUREL PROVIDES **PREMIUM-QUALITY, DURABLE, RELIABLE AND ENVIRONMENTALLY SUSTAINABLE PRODUCTS** – FROM RAW MATERIAL TO FINISHED PRODUCT.





Would you like to learn more?

Our competent and dedicated team would be more than happy to address any questions or design specifications you may have with regard to individually-tailored solutions. We are looking forward to hearing from you.

DURABLE. RELIABLE. SAFE.



YOUR POLYMER SPRING EXPERTS