

WIRTHWEIN

Forming Innovation.



HIGH PERFORMANCE FOR THE RAILWAY

english

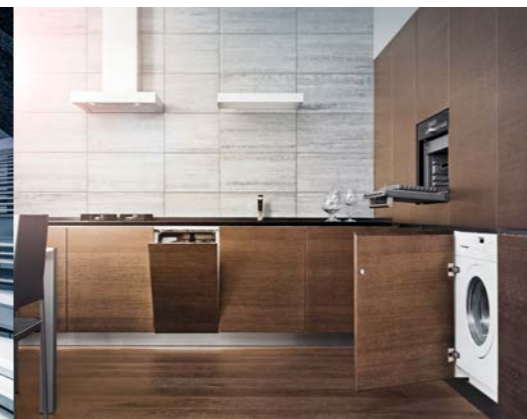
RELIABILITY AND TOP QUALITY

In 1949, company founder Walter Wirthwein began producing lathed wooden parts. A small octagonal wooden dowel used for wooden sleeper repair in railway superstructures symbolizes the beginnings of the Wirthwein-Group. With his keen sense of market conditions, in the mid-1960s the company founder realized that plastics were the future in rail superstructure, too.

Since then, we have become a leading manufacturer of top-quality plastic components, with over fifty years of experience in plastics molding and a mass production volume in the hundreds of millions range every year. We have supplied virtually every European and non-European railway company with our products.

Presently twenty-three companies in Europe, Asia and the USA do business under the umbrella of the Wirthwein-Group. The global plastics expert employs more than 3,500 people in the Automotive, Railway, Electrical Industry, Home Appliances and Medical Engineering business units. Wirthwein has always been a family-run business, which makes us independent and dynamic.

Wirthwein also includes Bembé Parkett and Winkler Design, both Interior Design business units. Group wide collaboration creates innovative and economic solutions from which our customers profit. However different the business units, quality standards are equally high across the group.



PLASTICS IN RAIL SUPERSTRUCTURE

YOUR GLOBAL MARKET LEADER FOR RAIL FASTENING COMPONENTS.



MORE THAN

3,000

WIRTHWEIN RAIL PRODUCTS HAVE PROVED THEIR WORTH IN THE INITIAL EQUIPMENT OF RAILWAY TRACKS, TRACK RECONSTRUCTION OR ALSO MAINTENANCE.

We put trains on the right track

The railway was Wirthweins first customer in 1949. Since then - and with long-term customer relationships - we have steadily developed to become the global market leader for injection molded parts in the rail superstructure industry. Our plastic components for rail fastenings, cable ducts and switch components ensure secure passenger- and freight transport for urban traffic, high-speed lines and heavy load all over the world.

We advise and assist you with the clear goal of a sustainable and state-of-the-art design and functional concept. With our design component development we provide a basis for successful and efficient series runs. Based on our certified quality management, we assure the required quality along the whole value stream.

- Certification and quality assurance according to all common rail standards, such as Q1 and HPQ.
- Flexibility and responsiveness through in-house mold construction and global production strategies.
- Wide product range with a variety of rail fastening components for concrete, steel and wooden sleepers.



FLEXIBILITY AND RESPONSIVENESS

THROUGH IN-HOUSE MOLD CONSTRUCTION.

High-precision molds for premium molded part quality

In close collaboration with our mold making department, we coordinate and implement the most efficient production procedures tailored to our customers' individual needs. Our in-house mold making department produces injection molds on state-of-the-art equipments. Our main strength lies in the design and production of virtually all injection molds and multi-cavity molds for technical components and visible parts. At our certified production plants we process virtually all common design thermoplastics that are particularly suited for rail superstructure thanks to their resilience and load capacity.



MACHINES WITH CLAMPING FORCES OF UP TO

17,000 kN

ALLOW THE USE OF MULTI-CAVITY MOLDS AND ECONOMIC SOLUTIONS FOR YOUR PROJECT.



COMPONENTS FOR

30,000

RAIL KILOMETERS
WORLDWIDE

From heavy load to high-speed lines

The requirements on the most diverse fastening systems are determined by speed and axle load. Numerous fastening systems in many different countries were made with Wirthwein participation. We develop fastening systems for high-speed lines partly in collaboration with our customers.

The result: extremely high load capacity, optimum sound protection properties, premium quality and top profitability. The product range provided by Wirthwein includes fasteners for ballasted tracks and slab tracks for all load profiles. Our product range is as comprehensive as the requirements for rail superstructure are diverse.

EXCELLENT STABILITY



Extremely high load capacity for safety and a long service life

Angle guide plates made of glass fiber reinforced polyamide protect tracks against moving and therefore provide a great degree of stability and safety in rail superstructure. The plates transfer horizontal forces which occur during train crossing to concrete sleepers and so avoid the screw-dowel combinations being strained by shearing and bending forces.

Tracks can be regulated by different widths. Broader angle guide plates are ideal for heavy load traffic as they can carry heavier loads. We manufacture angle guide plates for all application areas: high-speed traffic, heavy load traffic, and urban traffic.

WE PRODUCE AROUND
15 MILLION
 ANGLE GUIDE PLATES EVERY YEAR

Initial equipment of concrete sleepers

Made of state-of-the-art polyamide and high-density polyethylene, dowels produced by Wirthwein are part of the basic equipment of concrete sleepers. They are used to fix sleeper screws and are the anchoring basis and therefore essential for the safety of fastening systems.

Reconstruction of wooden and concrete sleepers

Our product range for the reconstruction of wooden and concrete sleepers includes various types of corrugated dowels, cavity dowels and screw dowels. The plastic dowel Wdü 2/Wd 13 is used to reconstruct concrete sleepers of older types which were originally equipped with wooden corrugated dowels. Our Hdü 8 dowel made of two half shells is the right dowel to reconstruct wooden sleepers. We also offer suitable repair dowels for worn plastic screw dowels.

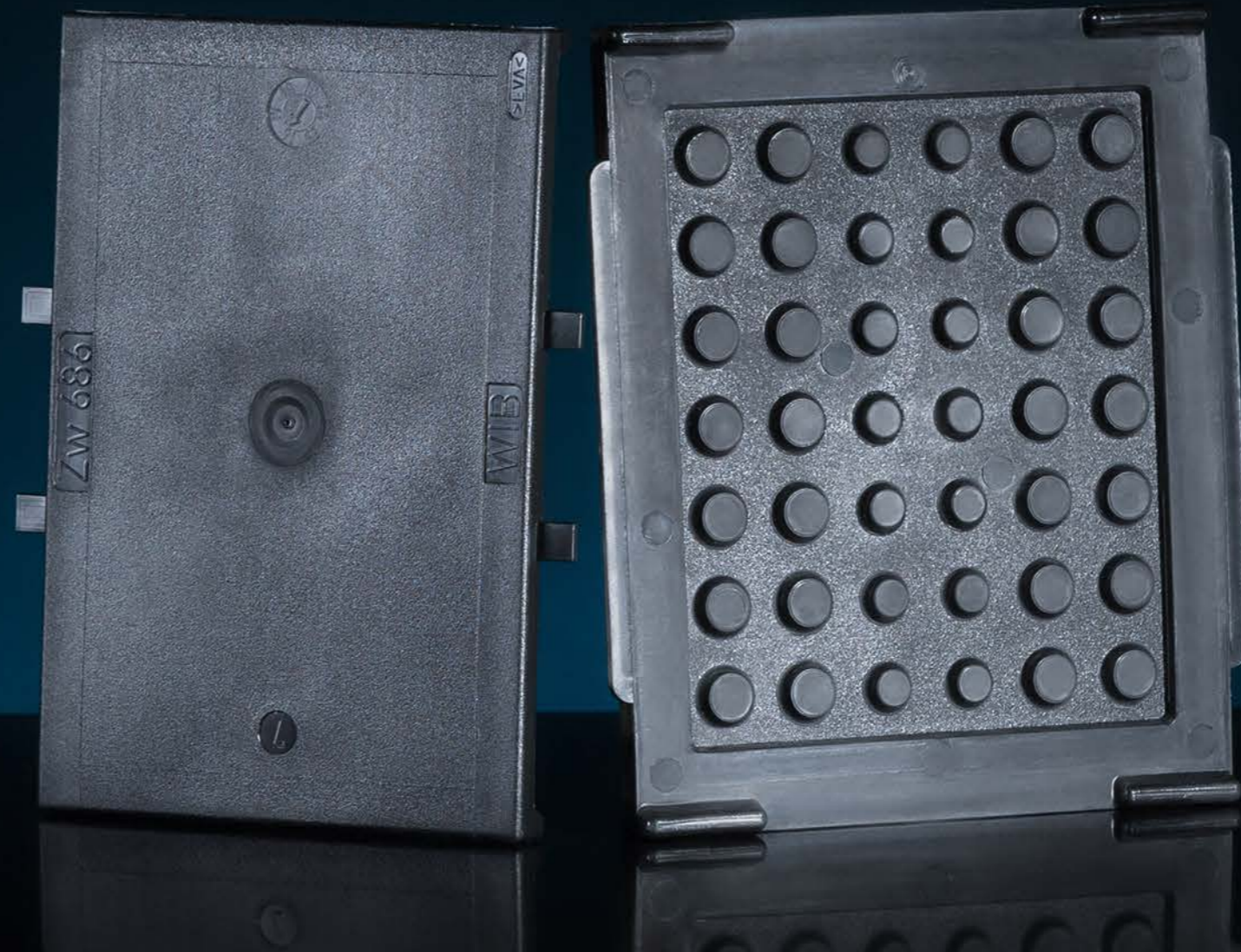
INITIAL EQUIPMENT AND RECONSTRUCTION

DOWELS FOR WOODEN AND CONCRETE SLEEPERS

FRICTIONAL CONNECTIONS



HIGH RESILIENCE



Economic solutions for the rail superstructure

We manufacture our intermediate pads from different kinds of plastic depending on application purposes and geographical regions. Our intermediate pads ensure a homogenous force distribution, effectively reduce vibration and increase the friction between rails and fasteners. Thanks to optimized load distribution and increased elasticity, tracks are longer protected, which in turn prolongs the superstructure service life. Moreover, less vibration and reduced noise improve traveling comfort.

Intermediate pads are among the most highly stressed components in rail superstructure which is why they have to be highly flexible and resilient. Our components meet these essential requirements. Intermediate pads made by Wirthwein have been applied a million times all over the world and have successfully withstood all forces, temperatures and weather conditions. We deliver different versions of intermediate pads to be applied for any need from urban traffic to heavy load lines.

SUPPLIER OF THE HIGH-SPEED LINE BEIJING - SHANGHAI,
ON WHICH AN INTERIM SPEED RECORD OF

450 km/h

(~ 280 mph)

WAS SET.

Additional protection against vibration and structure-borne sound

Resilience is essential in track superstructure. Intermediate plates ensure a quieter train and longer track life. Placed between sleeper and rail support plate, they reduce vibrations and distribute vertical forces optimally. Thus, intermediate plates greatly help to prevent material wear in all areas of rail superstructure.

Wirthwein produces intermediate plates in customized sizes and materials, and also in small output quantities, for highly resilient rail fastening systems and height adjustment plates.



OPTIMUM LOAD
TRANSMISSION



CABLE DUCTS MADE BY WIRTHWEIN:

SAFE, FLEXIBLE AND RELIABLE



Use our cable ducts to lay your cables

Top priority is given to the safe laying of power and data lines. For this we have specifically developed cable ducts. Thanks to their low weight, they can be laid manually without hoisting equipment or heavy devices and are also suitable for small radii. The plug system provides for a stable positive and frictional connection and balances expansion and contraction forces.

Buried cable ducts are available in two sizes and are designed for a load up to 15 kN according to load class A15 under DIN EN 124-1 / DIN EN 1433 / DIN 19580. Plastic cable ducts made by Wirthwein are the basis for the quick, flexible and safe laying of your signal and communication lines.

UNCOMPROMISING QUALITY

FOR YOUR INDIVIDUAL REQUIREMENTS.



We also develop and manufacture your plastic components

We have been producing plastic components for the rail superstructure industry for more than fifty years. During this time we have manufactured and developed numerous products and solutions. We process virtually all common design thermoplastics that are suitable for the rail superstructure due to their resilience and load capacity. Our certified plants produce flexibly, responsibly and in

accordance with our customers' requirements. We see ourselves as a system supplier with comprehensive responsibility and an eye on the whole process, from product design tailored to plastic, to mold development and mold construction, to production and assembly. We offer a wide range of assembly and joining techniques, surface refinement techniques and logistics services.



YOUR PROJECT WITH WIRTHWEIN

You have an inquiry, require technical advice or would like us to call you back? Then please get in touch with our Railway team: use the contact form on our homepage, write us an e-mail or just call us.

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For more than 50 years, the Wirthwein brand has stood for innovative processing of plastic parts

- Thermoplastic injection molding of complex technical plastic parts with shot weights from 0,007g to 10kg
- Processing of all common thermoplastics
- Machines with clamping forces from 250 kN to 17,000 kN
- Capacity: more than 450 injection molding machines and 15 blow mold machines

(Status: September 2022, further investment is planned)

Licenses, certifications and audits

Wirthwein guarantees an excellent quality standard, which is also demonstrated by numerous certifications. We produce according to the corresponding rules and regulations of Deutsche Bahn AG. Licenses, certificates and audits certify our high production quality standard.

Please find an overview of our licenses and certifications according to the most different rules and regulations at www.wirthwein.de/en/downloads

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