fischer

Greatness is built on great solutions.

We have the right solution for every application.

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What makes fischer special?

Whether it is digitalisation, robotics or sustainability, fischer is always leading the way in the construction industry as a fastening pioneer. The company has over 75 years of innovative power and technological expertise to draw on. Starting with a patented plastic expansion plug in 1958, the company continued to develop and now offers products, system solutions and services for the entire building supply chain.

Heavy-duty fixings for professionals or DIY solutions for do-it-yourselfers, fischer provides the right solution for any fixing project. fischer's extensive portfolio includes plastic plugs, steel anchors, chemical systems and screws, in addition to drills, smart tools and much more for customers' fastening projects. Product ranges designed for specific applications complete fischer's versatile offer, which includes solar fastenings, anchor channels, as well as facade, installation and fire protection systems. fischer develops and manufactures its own products, mainly in Germany.

With a comprehensive range of services, the company offers its customers an ideal and individual support service, which includes the development of custom solutions. Engineers, application engineers and field staff guarantee individual and professional support. 52 subsidiaries around the globe provide added customer proximity. With a diverse range of online and in-person training sessions provided by the fischer Academy, customers can always stay up to date with the latest fischer products, applications and current regulations. From planning and implementation to documentation and subsequent monitoring of structures and facilities, fischer offers a 360-degree service. The digital offer meanwhile comprises BIM (Building Information Modelling) services and digital scanning tools for existing buildings. There's also a range of useful apps that offer advice on selecting and using the company's products in addition to the fischer FiXperience design software for carrying out structural calculations with fischer fixing systems. The company also provides its customers with access to automated construction with the BauBot construction robot and increased maintenance efficiency with the Construction Monitoring sensor innovation for digitally monitoring and documenting buildings.

More than 75 years of innovative power and technological skill are incorporated into the continuous development of the fixing specialist's products and services. The workforce of the fischer Group of Companies files 20 times as many patents per employee than the average of the German economy.

Rooted in the Black Forest, at home in the world.

Facts and figures

Locations worldwide
52 subsidiaries in 39 countries.
Distributed in around 120 countries.

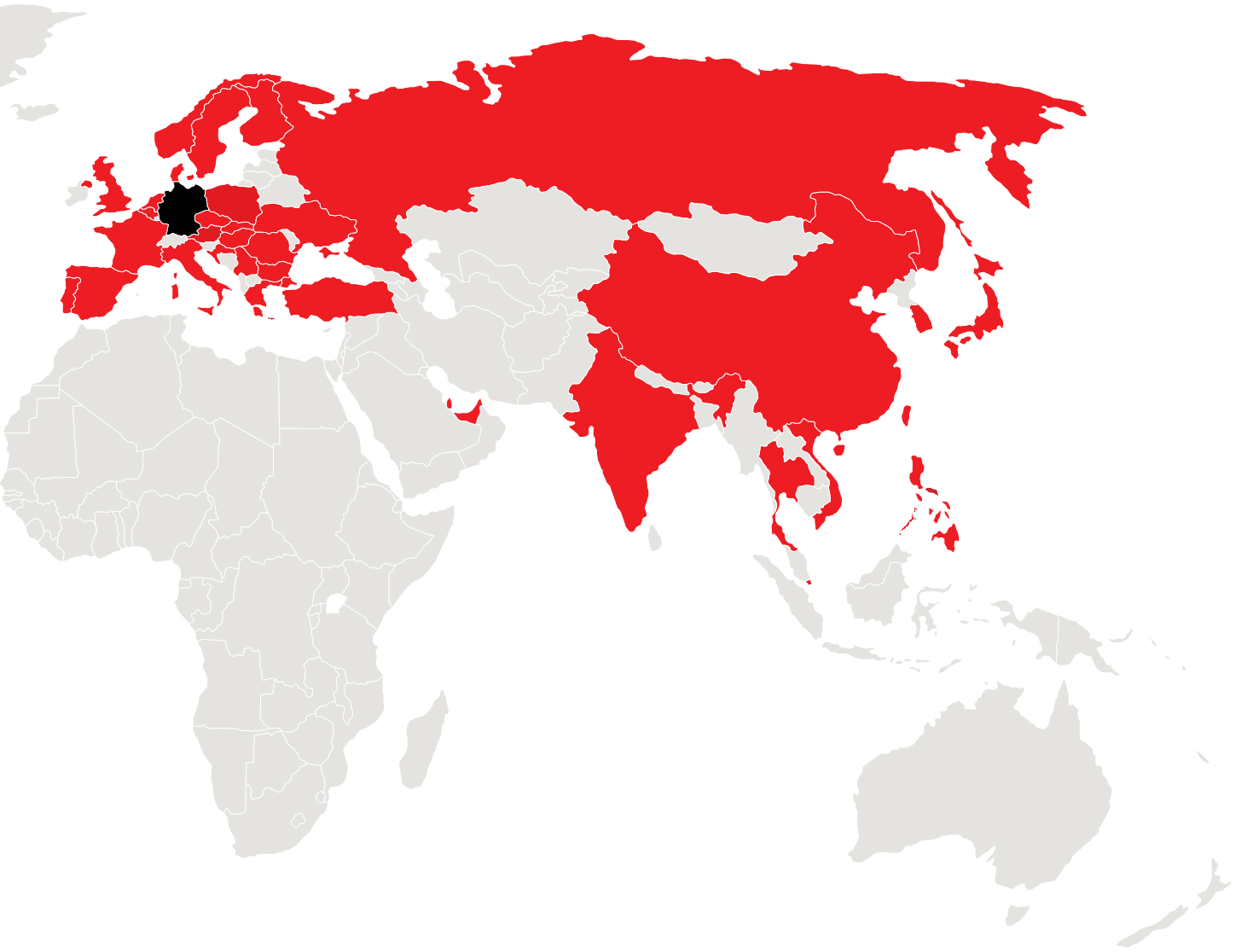
Production sites

9 countries
Headquarter in Germany.

Innovation leader
for fastening systems.

4.700
employees worldwide in 39 countries.

1.16 billion
euros in gross sales in 2023.



Over **1.500** industrial property rights.
The fischer group of companies registers
20 times more patents per employee than
the german economy on average.

10 million
wall plugs sold per day.

300 engineers
at fischer worldwide.

Over **5.000**
annual users of
fischer e-learnings.

fischer

Everything you need for your building project.

Service & system solutions from a single source.

Get an overview of fischer's comprehensive services and innovative approaches which will help to make your construction projects effiecient and future-oriented.

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Sustainability at fischer

fischer is committed to sustainability, combining environmental responsibility and social equity with economic success. With its own process system (fPS), the company optimises resource and energy efficiency and decouples growth from resource consumption. Through innovation, the use of green energy and its own photovoltaic systems, fischer actively contributes to climate protection and has received several awards for its efforts, including the German Sustainability Award 2020.

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360 degree services

Our holistic service approach includes the provision of tender documents, 3D scans, BIM models and load testing. We provide customized product consultations, user training and measurements with traceable reports. To increase efficiency on your construction site, we provide the digital construction site robot ‘BauBot’, which takes over time-consuming drilling and assembly work. Customised and pre-assembled components and comprehensive warehouse management round off our range of services.

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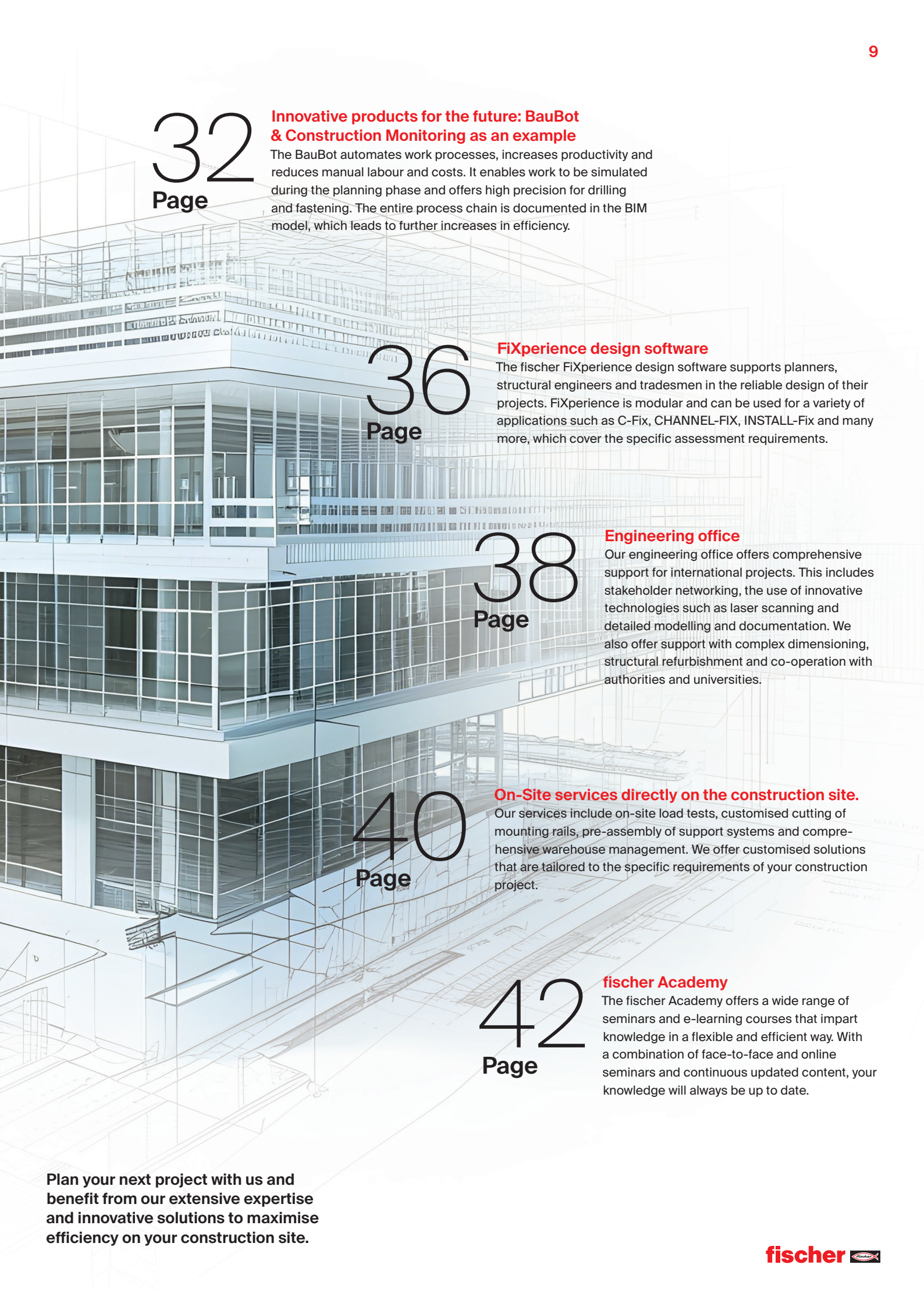
BIM

We offer BIM-capable data in common formats and support you with 3D scans that enable precise modelling. Our BIM engineering covers the entire service chain from conceptual design to detailed modelling, including on-site support. This enables precise positioning of drill holes and pre-assembled components on the construction site.



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Innovative products for the future: BauBot & Construction Monitoring as an example

The BauBot automates work processes, increases productivity and reduces manual labour and costs. It enables work to be simulated during the planning phase and offers high precision for drilling and fastening. The entire process chain is documented in the BIM model, which leads to further increases in efficiency.

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FiXperience design software

The fischer FiXperience design software supports planners, structural engineers and tradesmen in the reliable design of their projects. FiXperience is modular and can be used for a variety of applications such as C-Fix, CHANNEL-FIX, INSTALL-Fix and many more, which cover the specific assessment requirements.

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Engineering office

Our engineering office offers comprehensive support for international projects. This includes stakeholder networking, the use of innovative technologies such as laser scanning and detailed modelling and documentation. We also offer support with complex dimensioning, structural refurbishment and co-operation with authorities and universities.

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On-Site services directly on the construction site.

Our services include on-site load tests, customised cutting of mounting rails, pre-assembly of support systems and comprehensive warehouse management. We offer customised solutions that are tailored to the specific requirements of your construction project.

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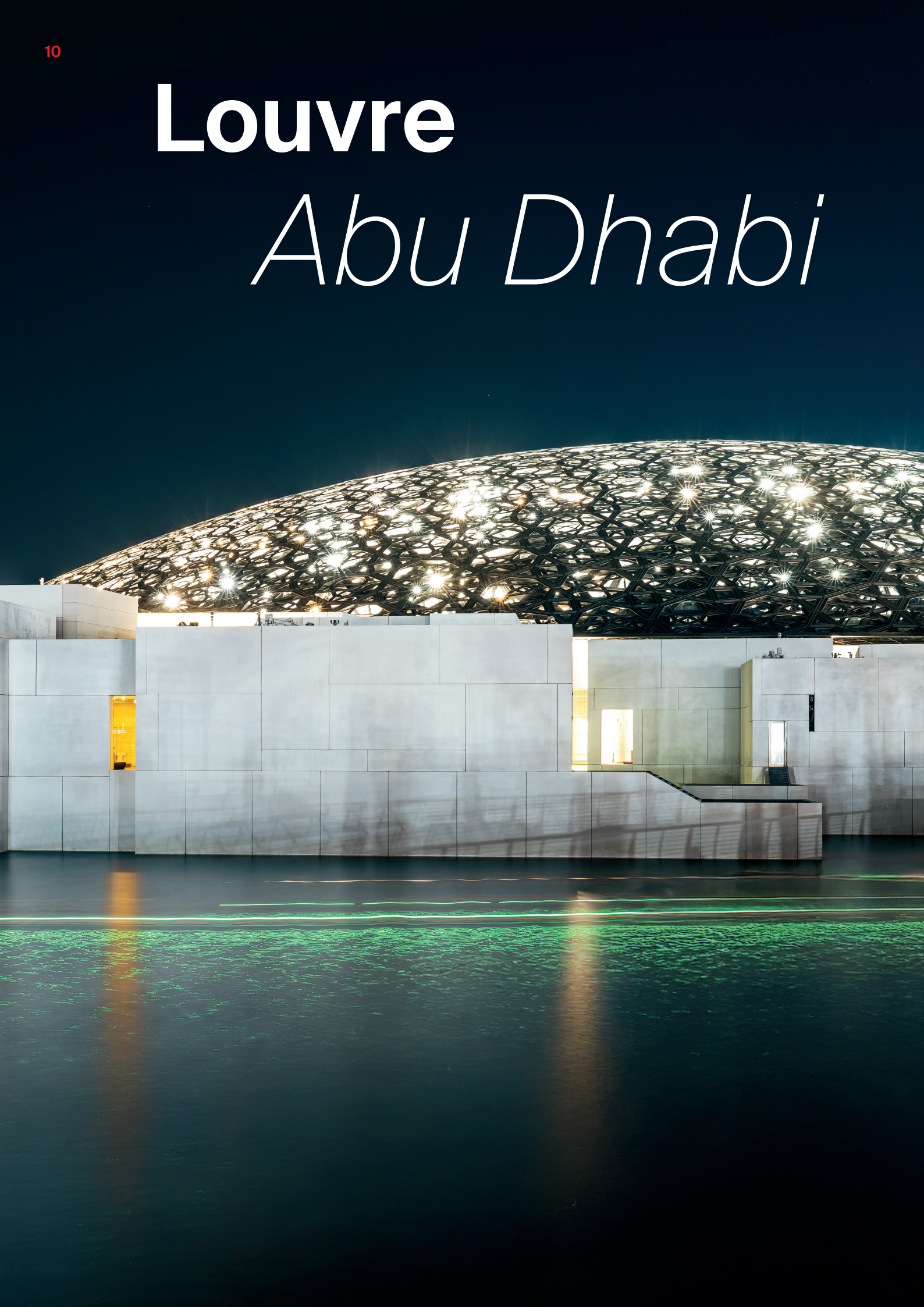
fischer Academy

The fischer Academy offers a wide range of seminars and e-learning courses that impart knowledge in a flexible and efficient way. With a combination of face-to-face and online seminars and continuous updated content, your knowledge will always be up to date.

Plan your next project with us and benefit from our extensive expertise and innovative solutions to maximise efficiency on your construction site.

fischer

Louvre *Abu Dhabi*



Anchor set for new cultural landmark.

The Louvre Abu Dhabi is the first museum outside France to bear the famous loud name, Louvre. It is located on the coast of Abu Dhabi and impresses with a total area of 24,000 square metres, including an 8,000 square metre exhibition space that houses the largest art collection in the Arabian Peninsula. Particularly striking is the silver dome with a diameter of 180 metres, which consists of layers of steel and aluminium in a star pattern and creates a floating effect through light openings. The construction of the museum posed major technical challenges due to the extreme climatic conditions of the region, such as earthquake risks and temperature changes.

Products used:

To secure the technical basis of the building, a joint venture between DRAKE and Scull, International PJSC and Habtoor Leighton Specon relied on various fixing solutions from fischer. The fischer EA internally threaded anchor, the FFPK and FFPS fixed point saddles and clamps, the FAZ II bolt anchor, the FHB II highbond system and the FIS EM epoxy resin mortar (predecessor model of the current FIS EM Plus) were used. FUS mounting rails and connecting elements such as FAF, FFF1 and FUF 180° were also used. Other products such as the FCN Clix P sliding nut, the SF L saddle flange and threaded rods, nuts and washers helped to securely fix power lines and pipelines. To ensure the safety of the structure, fischer application engineers carried out earthquake simulations and load analyses.

FIS EM Plus FHB II-A FHB II P FAZ II

fischer

Landsbankinn *Iceland*

A safe bank for heavy loads.

Between 2018 and 2022, the new corporate headquarters of Landsbankinn was built in Reykjavik, bringing together all departments and around 1,000 employees under one roof. The four interlocking buildings, located near the Harpa concert hall and opera house, are inspired by Iceland's rugged nature. Their shape and design reflect the topography of Iceland and, with their basalt stone façades and expanses of water, mirror the rugged landscapes.

However, realising the architectural vision posed a number of challenges, as Höskuldur Arnarson, managing director of the construction company Málmtækni HF and responsible for the façade construction, reports. Technical innovations and new solutions were needed to meet the design and safety requirements. The project managers relied on the expertise of the fastening specialist fischer.

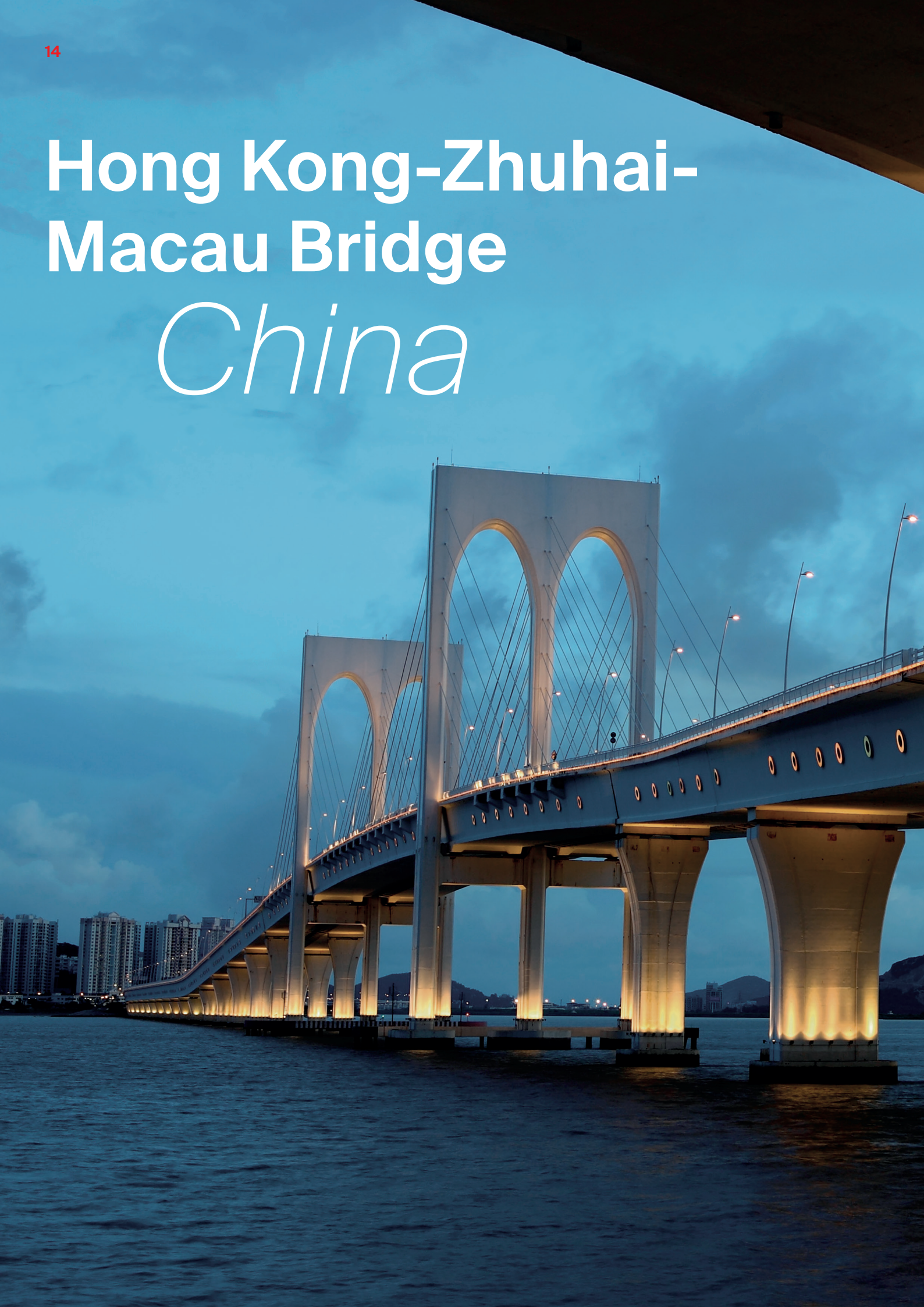
Products used:
To fix the heavy basalt stone panels – weighing around 400 kg per square metre – securely and durably, fischer Zykon FZP II panel anchors were used. Due to the challenging shape, the panel dimensions and, above all, the high wind load requirements, which are four times higher in Iceland than in Germany, up to 25 anchors were used per square metre. The undercut anchor offers the perfect solution for fastening the rear-ventilated rainscreen façade to the aluminium subframe, which was also supplied by fischer and specially developed for this project.

The project also posed design challenges: the natural basalt stones were originally delivered in the shape of a pentagon, but were then cut into three parts to maximise the use of materials. The cooperation between the construction partners and fischer was crucial in this. Thanks to the fast and competent support of the key account managers, the team was able to develop innovative solutions and meet the high expectations of the clients.

FZP II

Hong Kong-Zhuhai-Macau Bridge

China



A secure hold for the longest bridge over the sea.

The world's longest bridge across the sea took 9 years to build. This impressive bridge spans around 55 kilometres across the Pearl River Delta and connects the special administrative zones of Hong Kong and Macau with the province of Guangdong (city of Zhuhai) on the mainland. The project is considered the largest infrastructure project on the water.

Products used:

As part of the project, chemical and mechanical fixing systems from fischer secured several buildings on the artificial island of Zhuhai Port. The Superbond system with the RSB reaction cartridge and the high-performance FIS EM Plus epoxy resin mortar for subsequent reinforcement connections were used in particular. The fischer Zykon undercut anchor FZA was also used. The fischer FIS EM Plus is ideal for demanding conditions due to its resistance to salt water, high temperatures and corrosion. The ease of use of the products and the customised support from fischer in all project phases, from planning to construction, ensured a secure and durable fixing.

FIS EM Plus FZA RSB RG M

fischer

St Mark's Basilica

Venice

Lasting protection on the water's edge

St Mark's Basilica is an architectural masterpiece and landmark of Venice. Every year, hundreds of thousands of tourists visit the Basilica di San Marco, which houses one of the largest continuous mosaic surfaces in the world, covering an area of 8,000 square metres. A system of glass barriers was developed to protect the historic building from flooding. This consists of thermally toughened laminated glass arranged at a defined angle around the basilica so as not to obstruct the view of the façade. With a height of 1.20m, the balustrade will protect the Basilica against flooding up to a level of 2m above sea level, helping to keep this historical landmark dry and preserving it for future generations.

Products used:

fischer FIS EM Plus injection mortar and fischer FIS A anchor rods were used to permanently anchor the glass barriers in the ground. The chemical fixing system ensures secure anchoring in concrete and is approved for a service life of 100 years. The mortar, which is approved for seismic requirements, is also suitable for use in water-filled boreholes and up to a fire resistance of R240.

FIS EM Plus

FIS A

fischer

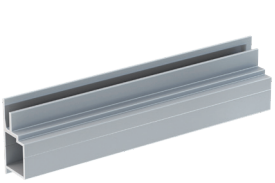
Parliament *India*

fischer fixing solutions prove their worth in India.

As part of India's prestigious Central Vista Redevelopment Project, a new Parliament building was constructed in New Dehli to accommodate a large number of lawmakers and ensure sustainability for nearly 150 years. The project was also symbolically linked to the 75th anniversary of India's independence and symbolises the nation's growth and vision for the future. The foundation stone was laid by Prime Minister Narendra Modi on 10 December 2020, with the grand opening taking place on 28 May 2023. The architectural design of the magnificent building is inspired by the Vijaya Temple in Vidisha, Madhya Pradesh. The facade of the building was designed using Dholpur sandstone from Jaipur. This stone is extremely brittle and delicate and requires special care when working and laying on such a symbolic and important building. As per the current government's 'Made in India' and 'Vocal for Local' guidelines, it was also a challenge for all suppliers to provide a local range for the delivery of this prestigious project.

Products used:

fischer, well known for its expertise even in dealing with sensitive facade cladding and for its close relationships with decision-makers such as the Central Public Works Department (CPWD), was the first choice for the planning and material supply of the facade system. Utilising the state-of-the-art facade technology 'SystemOne' and keeping in mind the importance of 'Made in India' products, fischer India supplied all sub-structure components such as HP, supports, wall brackets etc. (manufactured in India) and German manufactured undercut anchors for the project. All the material, including the substructure and anchoring accessories, were delivered in record time and contributed to a turnover of around 1 million euros. fischer is honoured to have played a crucial role in the construction of this iconic building, often referred to as the 'Temple of Democracy'.

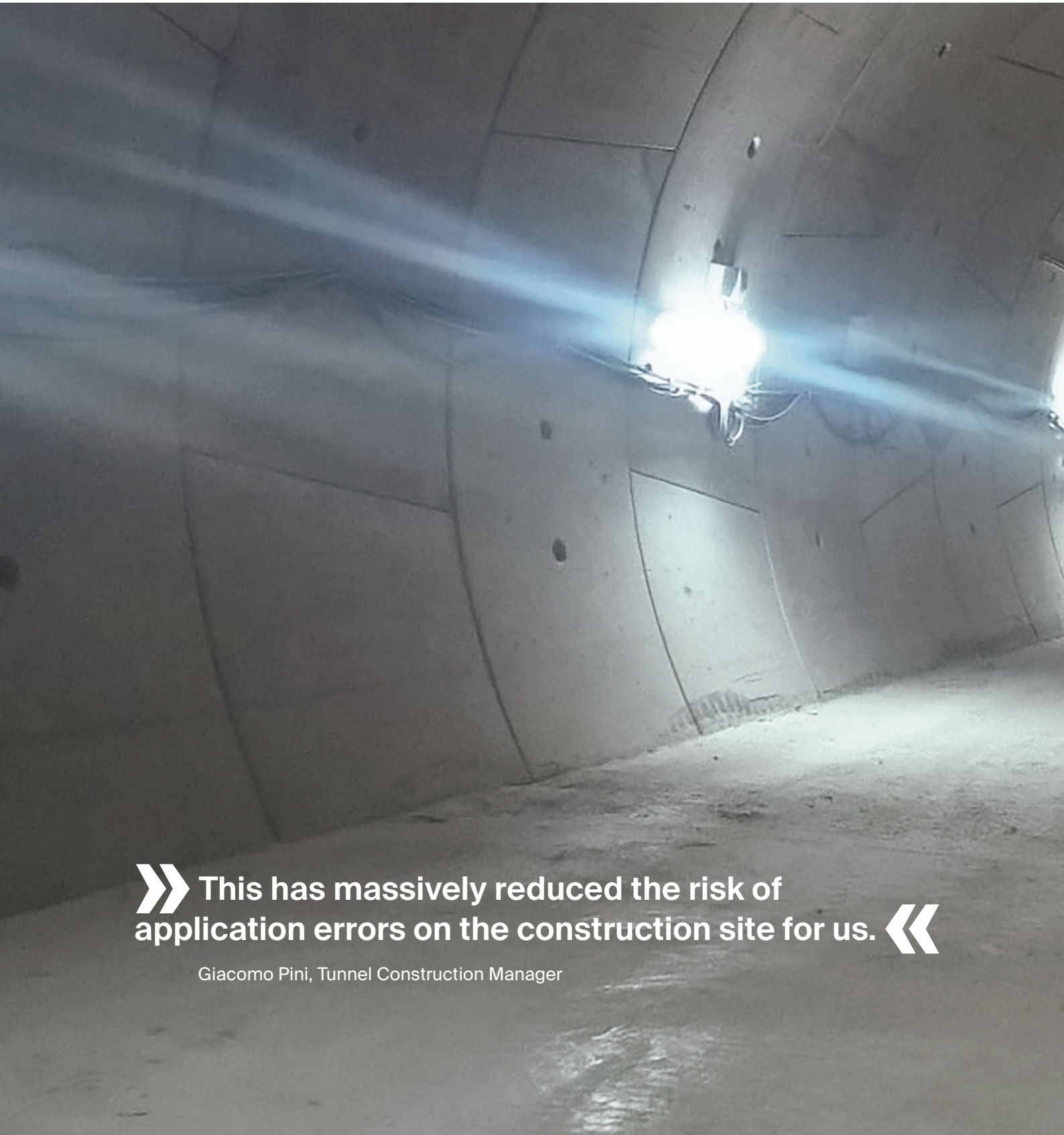


HP

ATK

FSU

Metro *Grand Paris*



» This has massively reduced the risk of application errors on the construction site for us. «

Giacomo Pini, Tunnel Construction Manager

Secure fixings for the underground model of the future.

'Le Grand Paris Express' is one of the largest infrastructure projects in Europe, which is to be completed by 2030 with a budget of around 35 billion euros. The project comprises 200 kilometres of rail network, 68 new underground stations and four additional metro lines, which will significantly expand the metropolitan region around the French capital. Numerous construction companies, including the international group Eiffage, have been involved in the realisation since 2016.

Products used:

Eiffrage relies on fischer products, particularly the injection mortar FIS EM Plus, to ensure swift and safe progress on the construction site. The fischer products FBS II 14 and FBS II 8 are used for the walkways and the framework of the rail slabs in the tunnel in order to solve various load cases with just two products. In addition, 77,000 fischer RSB resin cartridges are used to securely anchor cable trays and steel plates for cable support systems. These resin cartridges enable fast overhead installation without waiting times. They have a European Technical Assessment (ETA) for cracked concrete, seismic loads of performance category C1 and fire suitability in accordance with fire resistance class R120. fischer is also demonstrating its expertise in the extension of the existing Line 14 by using heavy-duty fixings to securely fasten the power cable bracket systems.

FIS EM Plus FBS II RSB RG M

fischer

International network of experts.

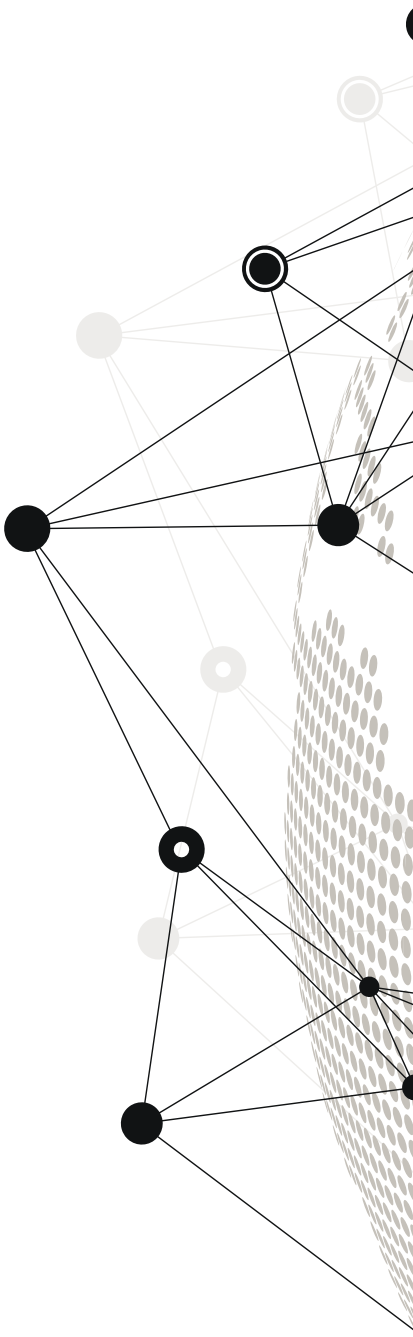
University of Natural Resources and Life Sciences, Vienna
Focal points:
- Tunnel and bridge construction
- Fastening technology
- Building renovation
- Robotics, digital planning and production
- Timber construction

University of Stuttgart, IWB
Focal points:
- Fastening technology
- Plugs qualification
- Anchorages and adhesive anchorages
- Bond behaviour of reinforcement and anchors

Purdue University, USA
Focal points:
- Earthquake engineering, reinforcements
- Innovative methods for anchor design
- Improving the performance of fastenings
- Finite Element Method

Ghent University, Belgium
Focal points:
- Structural applications of glass
- Behaviour of novel interlayers, adhesives
- Durability of fastening systems
- Behaviour of polymers in the construction industry

Politecnico di Milano, Italy
Focal points:
- Wood-wood connections
- Brickwork
- Earthquake engineering



Close cooperation with science & research.

Sustainability at fischer

At fischer, we understand sustainable corporate behaviour as responsible action that strives for long-term economic success in harmony with ecological responsibility and social justice. The in-house fischer-ProcessSystem (fPS) is designed to avoid waste and, with its defined processes, has always ensured that customer satisfaction is guaranteed and that resource and energy efficiency are realised. As a manufacturing company, the focus is on decoupling resource consumption from growth. From fischer's perspective, the greatest potential lies in innovative strength and technological progress.

fischer contributes to the energy transition by purchasing green electricity and generating its own electricity from two photovoltaic systems at its German site, including an open-space system that also contributes to the promotion of biodiversity and the regeneration of the soil. Due to its ambitious efforts in the area of climate protection, fischer was included in the network of climate protection companies in 2023. The company's exceptional achievements earned it victory in the 'Large Companies' category of the German Sustainability Award (DNP) 2020, among others. In addition to the successes in product and production responsibility, fischer's holistic and integrative sustainability management was explicitly recognised.

Sustainability awards

Innovation campus

We are the innovation centre of fischerwerke. We track down, evaluate and integrate relevant start-ups, technologies and trends. Our goal? To sequence promising ideas and business models that are relevant to our company and thus contribute to the sustainable success of our company.

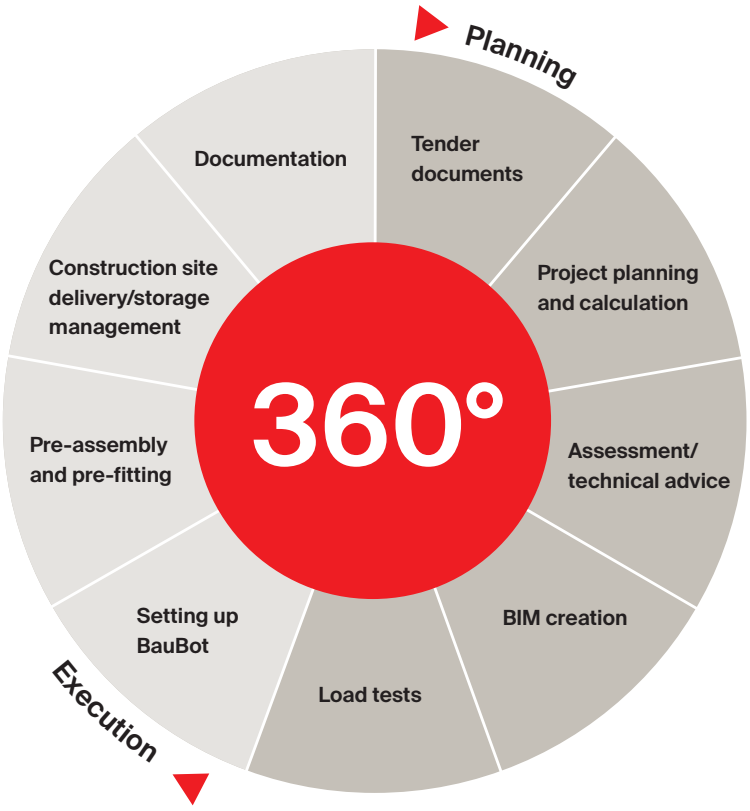

InnovationTouch!
fischer

fischer 360° Service.

All from one source!

With our engineers in our own fischer planning office and the fastening specialists on site, we pursue a holistic consulting and service approach. We support you in the creation of 3D scans including point clouds as well as BIM models with our extensive BIM objects. Our service includes the provision of tender texts. With load tests, we offer customised product consultations and user training as well as measurements with comprehensible protocols based on the latest standards. For maximum efficiency on your construction site, we provide you with our digital construction site robot 'BauBot' with a certified operator, which takes over time-consuming drilling and installation work for you. To save further costs, we supply you with customised and pre-assembled installation systems directly to your construction site, which can be installed in no time at all. assembled in no time at all. We are also happy to advise you in regards to your warehouse management and enable automatic restocking via our container service. Finally, you will receive detailed construction site documentation, which you can conveniently access at any time via our online platform 'myfischer'.

Plan your next project with us and increase efficiency on your construction site.



BIM

Digitalisation in construction.

BIM-enabled data for planning.

The fischer products are available in common BIM-enabled formats (RVT, RFA, IFC, etc.) and are equipped with the basic product information in the form of attributes. This enables the design and planning of our products and system solutions. We offer the data for free download via bimobject and our homepage.

3D Scans, Field to BIM.

In the case of renovation and other construction measures, 3D scans are the ideal basis for precise modelling of the building. This makes it possible to capture complex existing buildings or new buildings in order to save costs later during execution. fischer offers 3D scans in the network, including the further processing of the captured point clouds. 3D scans can be created as as-build documentation to document the execution. Thus, the portfolio includes the complete service chain from Field to BIM.

BIM Engineering.

To ensure a smooth running of the projects, we support you from conception to detailed modelling, including attribution in the required Level of Detail (LOD). Services include fastening technology and installations in building technology as well as the facade.

On-site support, BIM to Field.

The precise positioning of drill holes or pre-assembled components has never been easier than with our BIM to Field Service. Our employees project the components from the 3D model onto the construction site with pinpoint accuracy and make adjustments directly on site. We use the latest measuring technology in the form of Robotic Total Stations (RTS) to provide a complete BIM to field service chain.

Link to BIMobject:
www.fischer-international.com/bim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Digitalisation in construction. *BauBot*

Advantages at a glance.

Automating work processes increases productivity and accelerates the operational time of your project.

The BauBot software allows the simulation of work processes in the planning phase, and thus preventing the occurrence of unexpected problems before they occur.

The working range of 360 degrees allows drilling under any angle and setting of anchors to ceilings, walls and floors, covering the majority of all applications. A working height of over 5m is possible on the ceiling and wall.

The large radius of the robot arm allows more holes to be drilled in less time without changing the position of the robot‘s plattform, which further increases productivity.

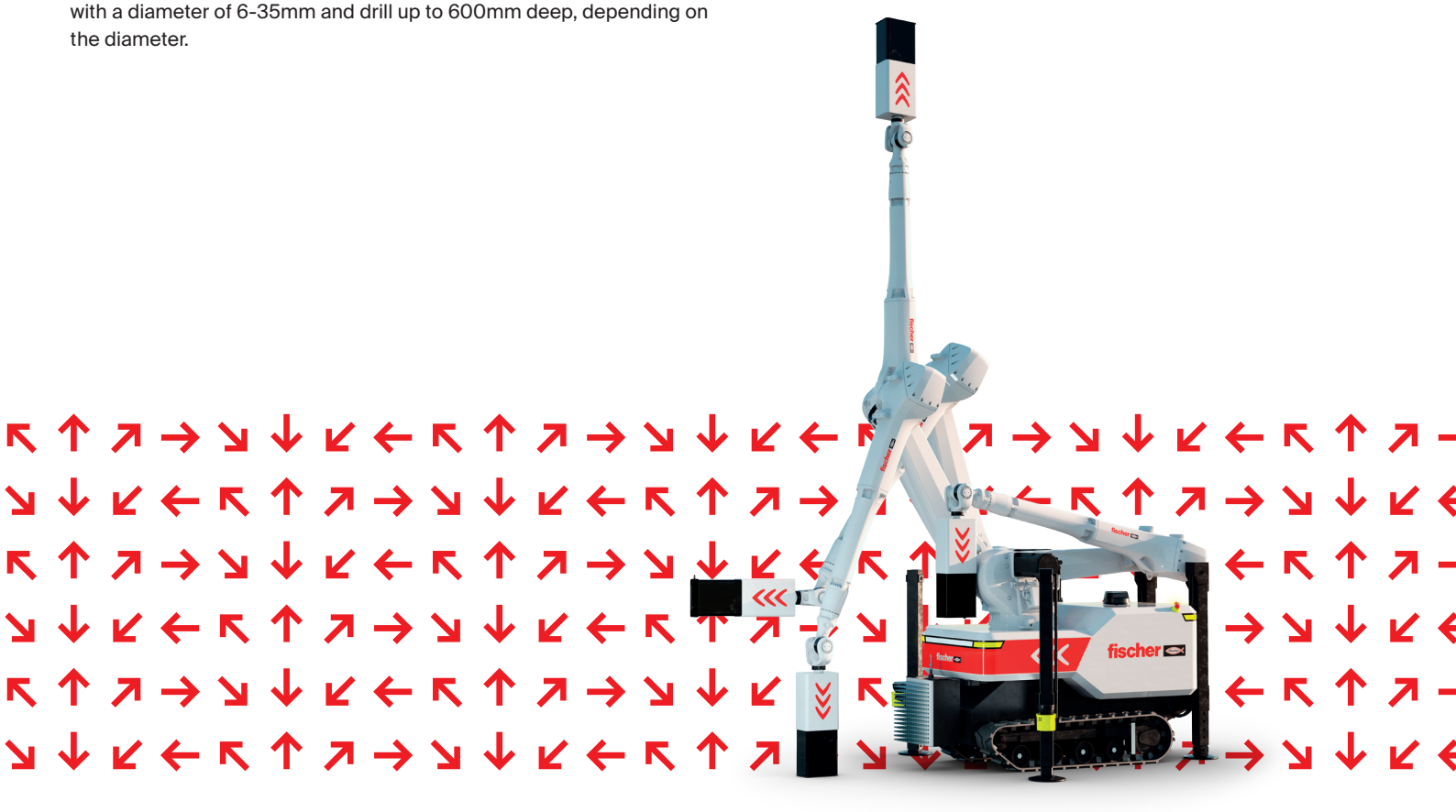
High precision allows for the pre-installation of fasteners and, in combination with fully automatic drilling and cleaning of the drill holes, contributes to enormous efficiency increases. The robot can create holes with a diameter of 6-35mm and drill up to 600mm deep, depending on the diameter.

The automatic drill hole cleaning enables an ETA-compliant and safe setting of anchors and creates a health-friendly and clean working environment for more safety on construction sites. The robot is capable of setting anchors from diameter M6 to M16.

The automatic drill hole marking guarantees a fast identification of the drill holes for the individual trades for quick completion on the construction site.

The automatic tool change completes the automated process for efficient work without additional manpower and free from interruptions.

The possibility of documenting the entire process in the BIM-model, enables an end-to-end digital process from drill hole creation to the setting of anchors. That saves a lot of manual work and costs.



Digitalisation in construction.

Construction Monitoring

SensorDisc.

Digital monitoring and documentation of the preload force of screw connections, simple readout of the data by scanning the SensorDisc with your smartphone and low-cost installation or retrofitting similar to existing washers: This is the new fischer SensorDisc.

The advantages at a glance

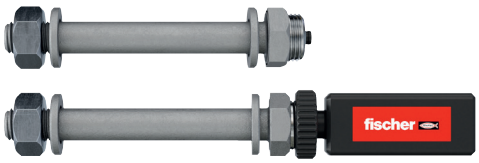
- The innovative SensorDisc makes it possible to check the pre-tensioning force of bolt connections wherever it is used. The safety and service life of bolted joints can be increased and impending failure can be detected at an early stage.
- Scanning the SensorDisc is very simple: just tap the disc with a standard smartphone is all it takes to measure the current load value and instantly store the value in the cloud.

SensorBolt.

Maximum data transparency thanks to remote monitoring, a high level of safety thanks to the absolute force measurement of preload and operating force and reduced maintenance effort thanks to simple and convenient data monitoring anytime and anywhere via smartphone and web application: This is the new SensorBolt with modular radio transmission module from fischer.

The advantages at a glance

- The built-in sensor in the SensorBolt determines the absolute preload and operating force. These are then transmitted to the Construction Monitoring cloud application via the plug-in wireless module. This not only allows assembly processes to be controlled, but also ensures long-term monitoring. A big plus in terms of safety and transparency.
- The modular design of the plug-on radio module allows both components of the system to be separated and replaced and can also withstand demanding environmental influences.
- The measurement technology can be adapted to any bolt size and type without changing the properties of the bolt. This means that conformity with EN 14399 is maintained when used in HV fittings.



Awards

GERMAN INNOVATION AWARD '23 GOLD

GERMAN DESIGN AWARD WINNER 2023

fischer

Safe and reliable!

The fischer FiXperience design software supports you as a planner, structural engineer and craftsman safely and reliably in the design of your projects. The FiXperience Suite has a modular structure and can be used for a wide range of applications:

C-FIX
For the design of steel and composite anchors in concrete and injection systems in masonry. In our online version, a realistic verification of the anchors and anchor plates using finite elements is also possible.

WOOD-FIX
For the dimensioning of on-roof insulation systems, facades and junctions in structural timber construction.

INSTALL-FIX
For the design of installation systems in technical building equipment.

REBAR-FIX
For the design of post-installed reinforcing bars in reinforced concrete components.

SOLARPANEL-FIX
For the planning and calculation of mounting systems for photovoltaic systems.

MORTAR-FIX
For determining the injection mortar requirement for bonded anchors in concrete and masonry, as well as post-installed rebar connections in concrete.

RAIL-FIX
For the planning and dimensioning of railings and guardrails on reinforced concrete components.

FACADE-FIX
For the design of façade fixings with timber constructions.

CHANNEL-FIX
For the dimensioning of inserts and anchor channels.

REINFORCE-FIX
For the design of structural reinforcements of reinforced concrete components.

FiXperience Suite.

Register in the myfischer portal to use FiXperience online or download FiXperience free of charge.

Online-link
www.fischer-international.com/fixperience

fischer

Service portfolio of the fischer engineering office.

All those involved in international projects face diverse and complex challenges. These include the global networking of stakeholders, ensuring that data and documentation are up-to-date and of high quality and maintaining a consistent level of knowledge across all project participants.

With the ongoing development of planning and construction processes, topics such as big data, the generation of large amounts of data, the increase in brownfield projects and the sustainability of the materials used are becoming increasingly important. These challenges require targeted measures, such as promoting market proximity through our own specialist staff, the global acquisition and integration of partners and the use of innovative digital technologies.

One example of such technologies are precise scans that provide detailed information on the properties of materials and surfaces as well as the exact geometry. They enable the comparison between digital building models and the as-built situation by providing information on deviations, dimensional tolerances and the orthogonality of building elements.

'We take your project to the next level and give you time to concentrate on your core competences. By effectively utilising our engineering services, we increase the efficiency of your construction project and create added value for your project. fischer not only connects components, but also all project participants.'

Project business and innovative approaches

- Complete and complex designs of facades, TGA routes, wood-concrete composite ceilings and fastening solutions incl. BIM modelling
- Project-specific data preparation for the fischer BauBot
- General support for BIM projects: Modelling, attribution and documentation
- Laser scans, comparison of reality/construction site and planning

Calculations that go beyond the standard

- Preparation of structural analyses for submission to the inspection engineer
- Building renovation and structural reinforcements, e.g. concrete topping, post-installed rebar connections, bridge cap anchors
- Sophisticated fastening designs (e.g. seismic, fatigue, etc.)
- Load tests, evaluation, documentation

Expert reports and cooperation with authorities

- Cooperation with authorities, test engineers, universities
- Expert reports for projects (e.g. for cases of damage with an external expert)
- Solutions outside the scope of approval
- Fire protection Engineering judgments (EJ)

Our claim:

- We get the most out of your project
- We create long-term partnerships that we expand and maintain
- Our engineering services are state-of-the-art
- We think in terms of the future and creative solutions
- We always act in accordance with our corporate values: innovative, responsible, serious and profitable

Please contact one of the fischer project engineers in your market.
E-mail: engineering@fischer.de
T +49 7443 126545


tellonhomes

Services around the construction site.

On-site advice and instruction for execution

Our experts are on hand to help you with complex installation situations directly on site. We support you in checking the boundary conditions and ensure that all fastening solutions are optimised to meet your requirements. You will also receive detailed instructions on how to use the products correctly. With our on-site support, we ensure the successful and reliable realisation of your projects.

Load tests

In challenging installation situations, our specialists work with you to check the anchoring base directly on site and carry out load tests to determine the load. This means you are always on the safe side with fischer. We would be happy to work with you to create a customised fixing concept for your construction project.

Cutting to size

We cut our mounting rails to size for your individual project, depending on the local conditions and individual requirements. You can choose flexibly between the fischer FUS/FMS and FLS channel types and your desired dimensions. We are also happy to support you with the preparation of installation plans for your construction project.

Pre-assembly

We take over the tedious assembly work for you on the construction site and supply customised and pre-assembled support systems including accessory assembly (pipe clamps, angle connectors etc.). The ready-to-install modules can then be delivered to your construction site just-in-time. Our digital order processing guarantees fast processing and delivery of the module. We also offer customised assembly to optimally meet your individual requirements.

Warehouse management

We take care of the automatic replenishment so that you can concentrate on the essentials. With our smart shelving systems and our container service, replenishment can be delivered directly to your construction site in no time at all.

Fire protection site inspection

Our specialists carry out a comprehensive on-site inspection to propose suitable fire protection solutions that meet the legal requirements. This is how we ensure optimum protection for your building project.

Support during construction

Our engineers are at your side during the entire construction phase. We advise on the selection of the right products, provide support with technical issues and help on site to ensure smooth and professional execution. This is how we contribute to the optimal realisation of your construction project.

fischer Academy.

The new world of learning.

Customised seminar selection with proven practical seminars, complemented by a comprehensive digital learning offering - for flexible and efficient knowledge transfer.

- Expand your knowledge: Intensive digital seminar series and learning journeys on trade-specific and target group-specific topics offer comprehensive further training with certification.
- Learn flexibly: time and location-independent learning without travelling time and additional costs for accommodation or missing working hours.
- Manage your seminars online at any time: Enrolment and registration for face-to-face and online seminars are quick and easy via your own profile in the learning portal after logging in via our myfischer customer portal.

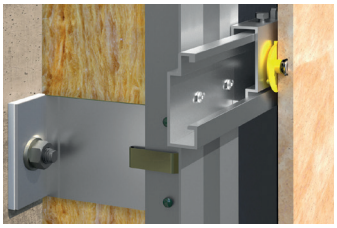
Achieving success efficiently and independently.

- By saving the learning history, completed and certification-relevant learning content can be documented in compliance with the law and made available at any time.
- The newsfeed on the start page of your learning profile immediately alerts you to new knowledge topics that are relevant to you.
- Our Learner Communities support you in exchanging ideas with people interested in your specialist area and also offer you helpful and individualised opportunities for knowledge transfer after the training, including with trainers from our academy.
- By continuously updating our training content, you will always inspire your customers with the latest knowledge and stay up to date.
- Thanks to the option of checking your learning status, you can easily repeat content and newly acquired seminar topics can be checked by organising your own learning time.

The variety of fischer solutions.

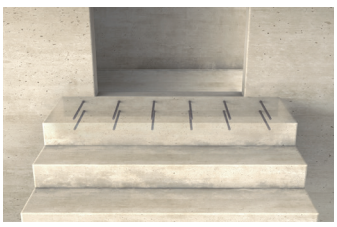
Light ventilated *façade systems*

The requirements for rainscreen facades are constantly increasing in all areas. A positive ecological balance through energy savings and a consistent circular economy, a long service life and more design freedom in terms of aesthetics. All these requirements are fulfilled by the fischer facade systems consisting of various complete systems for visible and concealed fixing of all common cladding materials for rainscreen facades.



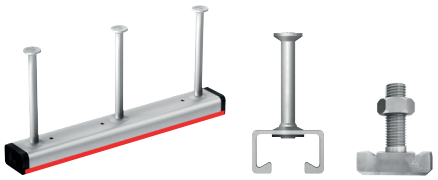
Post-installed *rebar connections*

fischer offers various approved systems (with ETA, ICC) for the creation of post-installed rebar connections. FIS RC II is the economically attractive solution and is also suitable for low temperatures and for large bonding depths of up to 2 metres. The short processing and curing times ensure fast working progess in the construction project. The high-performance inejction mortar FIS EM Plus can be used to install post-installed rebar connections - even in diamond-drilled holes - up to a bar diameter of 40 millimetres and alternatively with the FRA reinforcement anchor. The battery-operated FIS DB S Pro or FIS DB SL Pro cartridge injection device ensures quick and easy injection of the mortar to speed up work progress on the project.



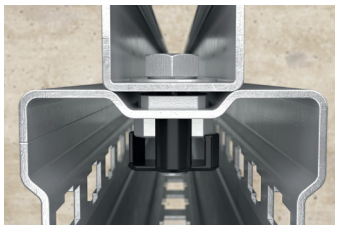
Fasting solutions for *solar systems*

Based on fischer's expertise in the field of fastening technology, a special range of fastening systems for photovoltaic modules has been developed. For fixing solar modules, fischer offers systems that can be mounted directly on the roof structure, whether flat or pitched roof, suitable for various roofing materials such as tiles, shingles, slates, fibre cement sheets, trapezoidal or standing seam sheets and waterproofing membranes. Whether in industrial, commercial or residential construction, the fixing systems from fischer offer security with high performance and cover a wide range of requirements. Safety in the installation of fischer solar systems: The solar products have TÜV certification, which confirms that the structural calculations for the product have been carried out in accordance with the DIN 1055-4, DIN 1055-5, EN1991-1-3 and EN 1991-1-4 standards and guarantees the assessment of the parameters for the effects of snow and wind loads.



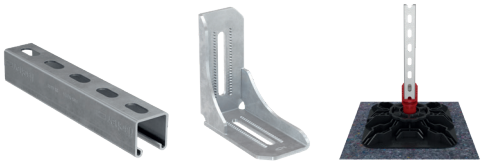
Fastening solutions with *cast-in channel systems*

Anchor channels are pre-positioned cast-in fixing solutions. They can be used for anchoring in cracked and non-cracked concrete while offering higher safety and slightly higher load capacity due to mechanical interlocking in the substrate. The ETA approved cast-in channel system consists of the anchor channel FES and the T-Bolt FBC. The cast-in channel system has to be positioned and fixed in the formwork prior to the casting of the concrete. After the concrete is hardened and the formwork has been removed the foam filler / sealing tape can be conveniently pulled out using the rip-line. Afterwards the T-Bolt can be inserted into the channel and used to fix the base plate.



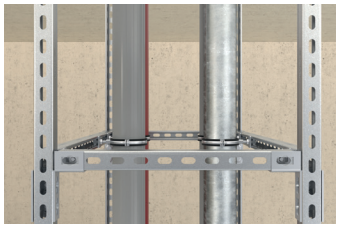
System solutions for *structural retrofitting*

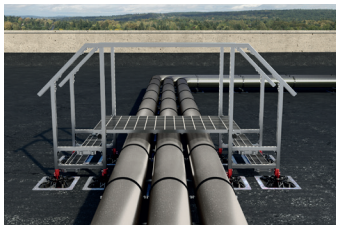
With the increasing age of buildings and the growing demands on infrastructure, the need for robust and reliable retrofit solutions has never been greater. To this end, fischer offers a wide range of products, such as for retrofitting structural reinforcement or concrete repair, to meet the different requirements of our customers and to help extend the service life of existing buildings and structures - with the same or even improved properties.



Installation systems & *flat roof systems*

The technical requirements placed upon building services engineering and thus on fixing systems are increasing. fischer installation systems provide safe, cost-effective mounting and fixing elements for diverse applications in building services engineering. The fixing solutions made from zinc-plated, hot-dip galvanised and stainless steel are suitable for light, medium-weight and heavy conduit systems. The assortment consists of mounting channel systems, pipe clamps, fix points, sliding elements, ventilation fixings, fixings for steel construction elements and an extensive range of accessories. Suitability certificates as per VdS, FM and UL as well as fire protection and sound protection checks guarantee added safety.





Product solutions for *Fire Stop*

As fire prevention is a crucial consideration for those who are responsible for the design, specification and construction of new and refurbished buildings, fischer has developed a range of passive fire protection products, which will help to reduce the spread of fire, smoke and toxic gases, and greatly increase life safety of occupants and protection of property.

Fastening solutions in *timber constructions*

Bonded wood-concrete composite ceilings. In Amstetten, Austria, an innovative pilot project was realised for the renovation of a residential building: industrially prefabricated and bonded wood-concrete composite ceilings (HBV ceilings) are being used for the first time. Developed by the fischer group of companies and the University of Natural Resources and Life Sciences, Vienna (BOKU), the system uses an epoxy resin adhesive. The advantage: the glued joints can be separated cleanly, which promotes recycling and sustainability. The process also enables more efficient, industrially prefabricated production compared to mechanical joints, which simplifies construction and protects the environment.

fire-resistant composite *fi:resist*

With the worldwide unique, non-combustible fibre composite material, fischer offers innovative solutions for tunnel applications in railway infrastructure. fi:resist is not only the first, but also the only glass fibre reinforced fire-resistant composite material on the market to date. In addition to its heat resistance, it is also mechanically highly resilient, corrosion-resistant, UV-stable, electrically non-conductive and permeable to radio signals - the perfect material as an alternative to wood, concrete or steel to fulfil fire protection requirements and ensure safety in your construction project. Thanks to the pultrusion process used, fi:resist profiles can be produced cost-effectively in large quantities with consistently high quality. You benefit from simple and safe installation: the material is lightweight, odourless and contains no hazardous substances. Thanks to its special properties, you can also look forward to low maintenance requirements.

Application solutions for *steel anchors*

The fischer strong undercut anchor FSU is a self-cutting undercut anchor made of galvanised and stainless steel for applications where highest loads and safety are required (e.g. heavy steel plant construction, nuclear power plants, oil & gas industry). The undercut anchor is ideal for heavy duty fixings to anchor steel structures, heavy piping and industrial machinery indoors and outdoors in cracked and non-cracked concrete. The anchor cuts the undercut when it is set, creating a form-fitting connection. This ensures maximum safety even with large crack widths in seismic areas.

Further reference projects at a glance.

Acropolis Athens

The Acropolis of Athens and the Parthenon Temple in particular are outstanding monuments of ancient Greek culture and have been on the UNESCO World Heritage List since 1987. Various structural interventions, natural disasters, wars and the ravages of time have caused damage and deterioraten. In order to study the behaviour of the walls of the Acropolis, a network of so-called ‘fibre Bragg grids’ was attached to the walls to continuously measure the degree of deformation using highly sensitive sensors. Bolt anchors from fischer ensure that the nets are held securely in place and make an important contribution to the preservation of the cultural monument.

Skyscrapers Raffles City

The 30 million inhabitants of the Chinese metropolis of Chonqing have a new landmark with the construction of 'Raffles City'. The complex comprises six 250-metre skyscrapers and two 350-metre skyscrapers with a total floor area of 1.12 million square metres. A key component of the Raffles City Chongqing project is the facades of the buildings, which are clad in glass and the reddish natural stone Red Sesame Granite on the podium. They are both the face and the protection of the buildings. Around 300,000 fischer Zykon FZP II panel anchors ensure that the natural stone panels are firmly fixed to the structures.

Metro Cityringen

At the end of 2019, an underground rapid transit system opened in Copenhagen, connecting central areas of the city. It offers connections to existing lines as well as to commuter and regional trains. 17 new underground stations are served by Cityringen. During the drilling work for the tunnel system, two tubes, each with a diameter of 5.78 m and a depth of 25 m, were drilled through the Copenhagen limestone over a length of 15.5 km. With a large number of different fastening and installation systems, services in the form of dimensioning and calculation of suitable systems, as well as support during installation on the construction site, fischer made a significant contribution to the success of this major project.

Solar new build Fenecon

When constructing a new production site in Iggensbach (Bavaria), Fenecon planned a large facade solar system for generating electricity. For the secure attachment of the photovoltaic modules, the planners and executors used a facade system from fischer BWM Fassadensysteme, which was further developed in cooperation with the module manufacturer Solarwatt for the project-specific requirements.
Gaass Florian GmbH from Grainet, Lower Bavaria, was commissioned to carry out the facade work. Solar modules from our partner Solarwatt from Dresden were used. A total of 552 Solarwatt vision GM 3.0 construct glass-glass solar modules were installed on an area of approx. 1,050 square metres. They provide a peak output of 204 kilowatts peak (kWp). The solar modules have a general building authority approval (abZ), which means that they can also be used for solar parking lot monitoring and for facades without additional protection.

Media lines in new assembly hall

August Weckermann decided to build a new 3.500 square metre building in Eisenbach Oberbränd to expand its production, logistics and administration areas. To install supply lines in the new assembly hall, the FIS and FUS rail systems with pipe clamps and mounting accessories were used in large quantities. Pre-assembly and other comprehensive fischer services simplified and speed up the process.

www.fischer-international.com

fischer stands for

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fischertechnik
Consulting
Electronic Solutions

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