

# CONSTRUCTION FIXINGS

Professional support and reliable services on site





# PASSION FOR **WORK**

## DEAR WÜRTH CUSTOMER,

Your passion is our passion. This is why we want to support you in your daily work at all times. It is our objective to be on your side, as powerful and reliable partner and to do our bit in helping with your work.

Your passion is our passion. **PASSION FOR QUALITY, PASSION FOR PERFORMANCE, PASSION FOR PERFECTION AND GOOD WORK.** The present brochure shows you a selection of high-quality products that will help you to achieve your goals and live up to your passion.

Please get in touch with your contacts at Würth, if you have any questions regarding products, systems or services.

Best regards from your partner,  
The PASSION FOR WORK Team

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# THE WÜRTH COMMITMENT

**The Würth Group is a world market leader in its core business, the trade in assembly and fastening materials. It currently consists of more than 400 companies in over 80 countries with more than 78,000 employees on its payroll. Approximately 30,000 of these are permanently employed sales representatives.**

We are a specialist for assembly and fastening materials. Our 125,000 products are subject to the highest quality standards. We are known for our commitment to quality and safety has been in the corporate philosophy from the very start. Our goal is quite simple: **to make the work of our customers easier by offering customised services, practical system solutions and a wide range of products.**

## Quality assurance at Würth

To assure the customer that the quality is 100% there, we make no compromises when it comes to selecting suppliers and when testing and approving Würth products. Würth demands the best possible product quality in each respective market in order to meet all our customers' demands. They are the ones who decide whether or not a product is good. Engineers, technicians and masters of their craft work on the following tasks for quality assurance:

- Initial sample testing
- Incoming goods inspection
- Complaint processing
- New product testing

In line with the same commitment, Würth provides the necessary technical support to help make your fastenings safe, reliable, cost-effective and code compliant from design to the construction phase. To do this, our technical support will include the following:

- Technical advise
- International technical support
- Design aids
- On-site project support
- Education program
- Reliable & high quality products
- Customer service

# ONE-STOP-SHOP



































With our wide range of products, we offer a complete reliable and easy-to-use solution. In addition to the competitive anchor products, our tools and accessories support you in your daily business and make sure that you can obtain all needed products from one source – Würth.



























This “one-stop-shop” solution is not only saving you time and money but also ensures a smooth installment on site.

We at Würth care about the safety of the construction workers and a secure application of our products. Our professional accessories like personal protective equipment or tapes and application guns play an important role towards a successful completion for all construction projects.



# CONSTRUCTION FIXINGS OVERVIEW

	Bonded anchors							Mechanical anchors	
									
Product name	W-VIZ	WIT-BS	WIT-UH 300	WIT-VM 250/ WIT-Nordic	WIT-PM 200	WIT-EA 200	WIT-PE 1000	W-BS	W-FAZ
Load capacity									
Assessment/ Approval									
Cracked concrete	 ✓	✓	✓	✓	✗	✗	✓	✓	✓
Uncracked concrete	 ✓	✓	✓	✓	✓	✓	✓	✓	✓
Post-installed REBAR	 ✗	✗	✓	✓	✗	✗	✓	✗	✗
Solid bricks and blocks	 ✗	✗	✗	✓	✓	✓	✗	✗	✗
Hollow bricks and blocks	 ✗	✗	✗	✓	✓	✓	✗	✗	✗
Aerated concrete	 ✗	✗	✗	✓	✓	✓	✗	✗	✗
Plaster-board	 ✗	✗	✗	✗	✗	✗	✗	✗	✗

General fixings											
											
<b>W-FAZ PRO</b>	<b>W-HAZ</b>	<b>W-FA</b>	<b>W-ED</b>	<b>W-NA</b>	<b>W-UR</b>	<b>W-ND</b>	<b>Shark pro</b>	<b>Zebra Shark</b>	<b>Nylon plug</b>	<b>AMO III</b>	<b>W-GS</b>
											
											
✓	✓	✗	✓	✓	✓	✗	✓	✗	✗	✗	✗
✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✗
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✗	✗	✗	✗	✗	✗	✗	✓	✓	✗	✗	✓

# TECHNICAL CONSULTING

**Fasteners exhibit different behaviors and performances depending on their working mechanisms and application conditions.**

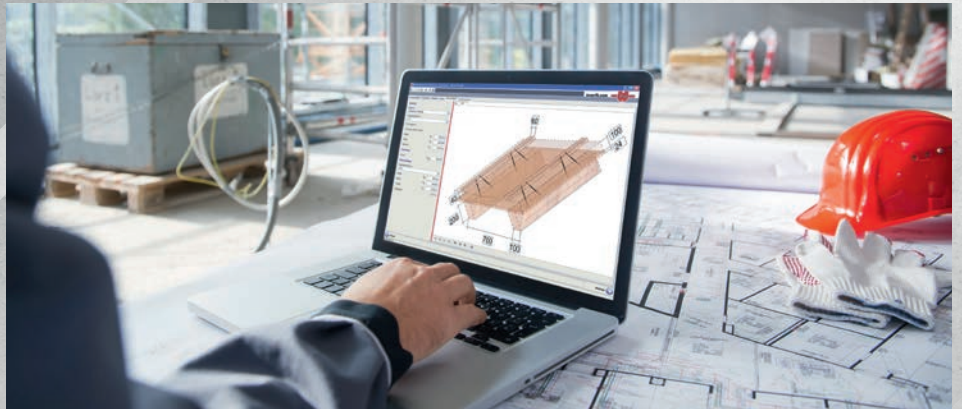
Our Engineering Team can give you expert advice and solutions tailored to the specific requirements of your application—whether it is about safety, performance, constructability, cost-effectiveness and/or code compliance.



# INTERNATIONAL TECHNICAL SUPPORT

**Würth is a large international company with several manufacturing and R&D centers in different parts of the globe.**

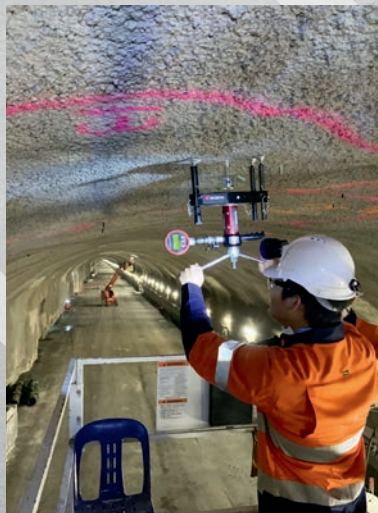
The products that we manufacture are based from extensive materials research, market sensing, current construction trends, developments in standards and state-of-the-art manufacturing processes. If the need arises, we can engage our R&D centers to help find a fastening solution for you.



# ON-SITE PROJECT SUPPORT

**Our Engineering Team can provide technical on-site support to ensure that installations or applications are safe, efficient and specification compliant.**

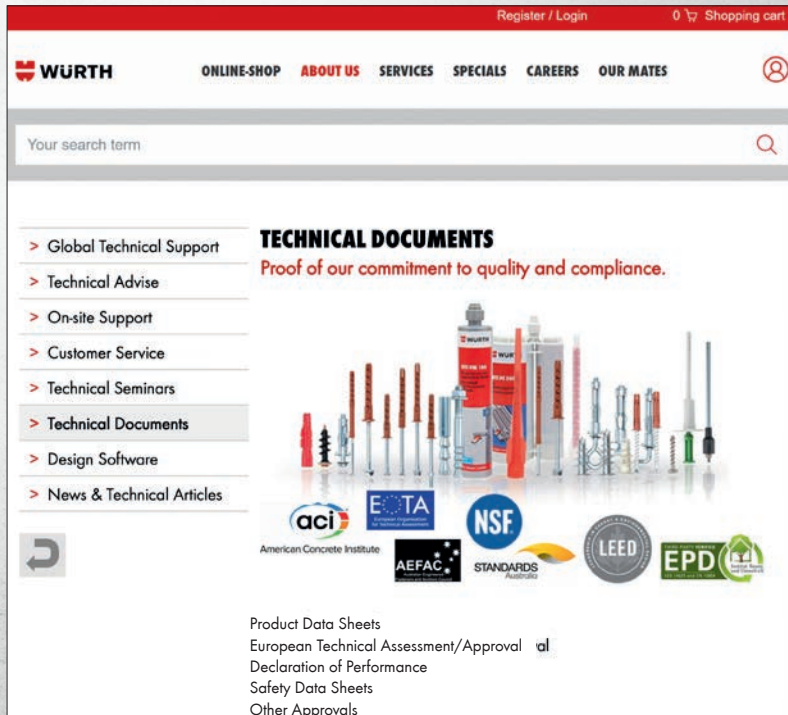
- Joint inspection with the contractor/specifier to verify application feasibility.
- Anchor testing to verify installation quality or investigate performance.
- Training of installers to ensure products perform as intended
- Site relevant trainings for contractors, QAMs and safety managers to increase safety, reliability, productivity and cost-effectiveness of installing Würth products.





# APPROVALS & CERTIFICATES

## Technical Documents



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> Technical Advise  
> On-site Support  
> Customer Service  
> Technical Seminars  
> **Technical Documents**  
> Design Software  
> News & Technical Articles

**TECHNICAL DOCUMENTS**  
Proof of our commitment to quality and compliance.

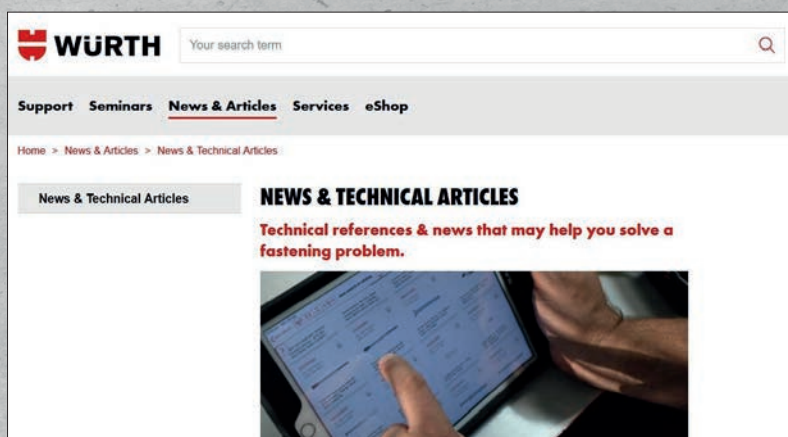
Product Data Sheets  
European Technical Assessment/Approval  
Declaration of Performance  
Safety Data Sheets  
Other Approvals

We ensure that you have all the tools needed to properly design your fastenings.

Technical documents include:

- Product Data Sheets
- European Technical Assessment/Approval
- Declaration of Performance
- Safety Data Sheets
- Other Approvals

## News & Technical Articles



WÜRTH Your search term

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News & Technical Articles

**NEWS & TECHNICAL ARTICLES**  
Technical references & news that may help you solve a fastening problem.

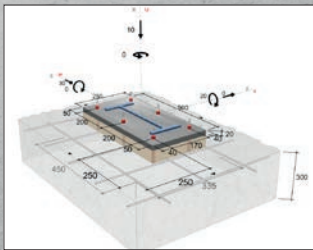
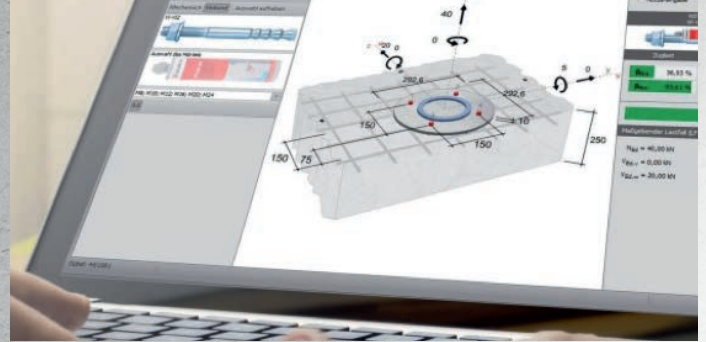
Get the latest local and international news on matters related to fastening. You will also find a series of technical articles that you may find highly relevant or even applicable to your current projects.

# DESIGN AIDS

## Anchor Design Software

We ensure that you have all the tools needed to properly design your fastenings.

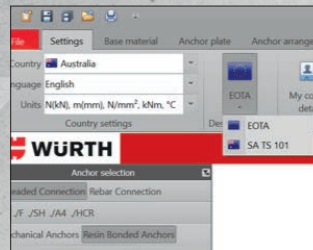
Simplify the complex calculation and design of anchors with the **free** Würth Anchor Design Software. Especially developed for the requirements of engineers, planners and specifiers, the visual and easy to use software have calculation modules are fully aligned with EN 1992-4:2018. Some of its key capabilities include:



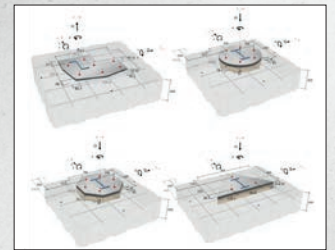
Intuitive and simple input for dimension and load parameters.



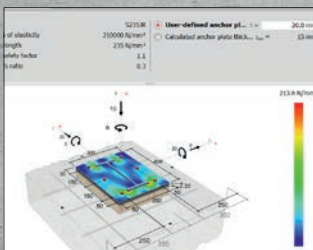
Built-in technical document and approval library.



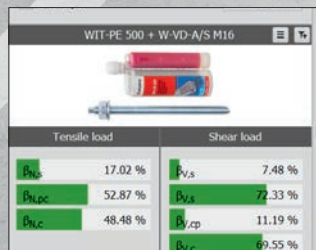
Calculation method in accordance with EN 1992-4:2018 with calculation modes for fire exposure or earthquake. With built-in modules for calculating most efficient configuration and most economic product option.



Capable of accommodating non-symmetric or customised anchor arrangement or steel plate shape.



Anchor plate thickness calculator with stress mapping.



Quick and simple overview of calculation results, critical failure mode and resistance utilisation.

## Post-installed Rebar Design Software

Würth develops and manufactures high performance mortars for the use in post-installed rebar connections. The ETA approved mortars are suitable for the design according to EN 1992-1-1, Section 8: Detailing of reinforcement.

The rebar design software helps to design the anchorage length in "beam to column" or "slab to wall", as well as for "wall to floor" connections and the lap length in beam or slab extensions. The easy to use selection of each design task was especially developed to reduce calculation time for engineers, planners and specifiers.



# WÜRTH EDUCATION PROGRAM

## Technical Seminars

**Safe, reliable and cost-effective connection designs will depend on the depth of understanding for the influencing factors that affect anchor performance, design models, and governing standards. Würth has a list of Technical Seminars that aim to bring you more knowledge on anchoring which can translate to better anchor connection designs.**

### **Design of post-installed anchorages according to EN1992-4.**

This seminar provides a basic background on the origins of EN1992-4, including the design model used in the calculation process and some important pointers to remember. After the presentation, attendees will gain an insight on the design process and how it can be used as a basis for handling complex anchoring applications not covered in the standard. This includes the seismic design and the consideration of fatigue loads for post-installed anchors.

### **A deeper look at the design of anchors in cracked-concrete environments.**

To satisfy ductility requirements in reinforced concrete structures, concrete is expected to sustain cracks at specific acceptable service level conditions. If an anchor is situated in a cracking zone, there is a huge probability that a crack will pass through its axis, resulting in the enlargement of the anchor hole. When this happens, the anchor's tensile load bearing performance is reduced.

This seminar presents the calculation method for cracked concrete and how anchor products are qualified for such applications. You will also learn some design tips to address anchor performance in cracked concrete environments.

### **Design approach for anchorages that are not within the scope of EN1992-4.**

There are limitations to the scope of EN1992-4. Unfortunately, there are common applications in practice that fall outside the scope of the standard. These include anchors arranged in a circular pattern, anchorages in a non-rectangular pattern and anchors significantly outside the perpendicularity tolerances of the standard.

This seminar presents design concepts based on the fundamentals of the Concrete Capacity Design method to address these issues.



### **Minimizing installation risks associated with chemical anchors.**

Chemical anchors are considered to be very good in delivering high load bearing performances in applications where edge distances and anchor spacings are relatively close. Consequently, these advantages are dependent on installation quality – an important aspect of chemical anchoring commonly neglected on site. This seminar presents researches made about the variations in chemical anchor performance brought about by different installation practices.

### **Development length calculation for post-installed reinforcements.**

This seminar covers the calculation and verification of development length for post-installed rebars, according to the provisions of EN1992-1-1 and EOTA TR-023. This seminar also includes a discussion of the installation challenges in deep embedment anchoring and how it can be addressed.

### **Post-installed retrofitting system for improving the punching shear and shear capacity of reinforced concrete elements.**

This seminar covers the concept of improving the punching shear and shear capacity of concrete elements with post-installed anchoring elements. It includes the basic design concepts acc. to EN1992-1-1.

# CONSTRUCTION FIXINGS

**Professional support and reliable services on site**

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