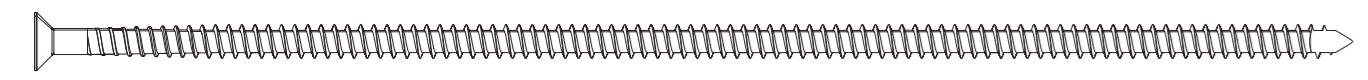


The new WR fastening system
for joints, reinforcements and steel/timber connections
in large cross-sections.



- Convincing advantages:
- very high performance
 - wide range of application
 - lengths up to 1000 mm
 - insertion parallel with the grain also possible
 - no decline of load bearing capacity from 90° to 45° relative to the grain
 - installation without pre-drilling
 - low splitting tendency = small edge and intervening spacing
 - connection not visible
 - high corrosion resistance (Durocoat)



Performance with comprehensive benefits for you

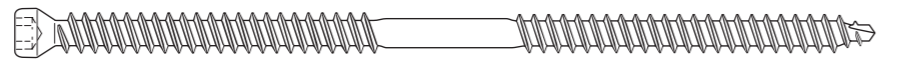
- **Reductions in time and cost**
Structural timber elements are joined with the WR special fastener in a single operation, without pre-drilling. Installation is simple and secure using the recommended tools.
- **Wide range of application**
Applications which have been impossible to date can also be implemented with the WR system. This enables a variety of familiar fasteners to be replaced. Besides simplifying material management, this also results in inventory savings.
- **Secure joints**
Screwed joints are invisible and thus aesthetically pleasing. The fastener is also largely protected against corrosion and against heat in the event of fire.



The proven WT fastening system
for universal application in structural timberwork.

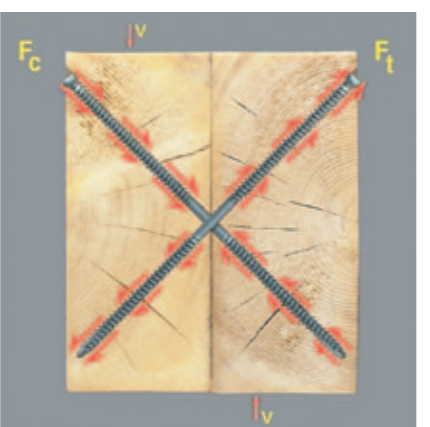


- Convincing advantages:
- simple, reliable calculation
 - diverse range of application
 - durable joints with high load-bearing capacity
 - fast, efficient installation without pre-drilling
 - form-fitting joint due to double thread
 - high aesthetic standard due to countersunk fastener
 - high fire resistance
 - special installation accessories



Optimal combination of installation convenience and cost-effectiveness
For small dimensions like battens or heavily stressed purlin reinforcement: the WT system is a convincing solution for a very wide range of applications and offers comprehensive benefits.

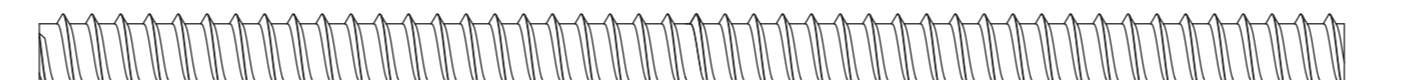
- **Fast, secure installation**
Well-conceived setting tools are available for the WT systems, adapted to a very wide range of applications in structural timberwork. They facilitate efficient, precise installation of the fasteners and fatigue-free working over prolonged periods.
- **Structural engineering and aesthetic advantages**
The high fire resistance due to the concealed insertion of the fasteners and the elimination of heat build-up are especially noteworthy features. The fasteners countersunk in the timber are also an advantage in terms of aesthetics.
- **Durable joints**
The special fastener's double thread pulls the structural elements together to produce a form-fitting joint. Cohesion forces are optimally coordinated even with varying moisture levels in the timber.



The unique WB system
for cost-effective lateral tensile reinforcements in bonded timber structures.

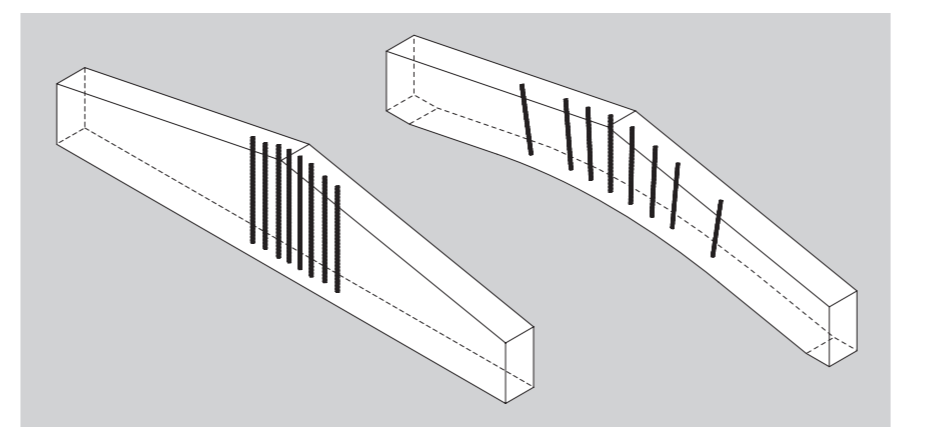


- Convincing advantages:
- lateral tensile reinforcement without adhesive
 - force transmission via the thread
 - high tensile strength of 800 N/mm²
 - reliable calculation using simple general design principles
 - individual cutting to length
 - time savings of up to 50%
 - extremely cost-effective and efficient system
 - invisible



Secure and cost-effective lateral tensile reinforcements

- **High tensile strength**
The high tensile strength of 800 N/mm² means that up to 50% fewer threaded rods are needed.
- **Installation without adhesive**
Forces are transmitted entirely via the gearing of the thread. Time-consuming processing of adhesive is eliminated.
- **Individual cutting to length**
After being individually cut to length the threaded rods can be inserted using the special insertion sleeve and directly countersunk.



Fastening systems you can rely on
SFS intec has been setting standards for years as a manufacturer of fastening systems on the basis of long-standing market experience and intensive research and development work. Tangible proof of this is provided by numerous innovations which have demonstrated their qualities millions of times throughout the world.

Assured quality
A dynamic quality assurance system and extensive tests in our in-house testing laboratory guarantee the high quality standards of SFS intec's products and services.

Fastening systems by SFS intec create comprehensive benefits for planning engineers and installers – everyone benefits equally!

Well-conceived fastening solutions are called for in order to implement creative and productive construction methods in structural timberwork efficiently and cost-effectively. The productive WT /WR /WB systems by SFS intec enable innovative architects and engineers to implement exceptional design concepts economically, without making compromises with regard to security and aesthetics.



- For planning engineers**
- wide range of applications with SFS systems
 - system software for efficient, reliable planning
 - comprehensive documentation
 - very high performance is guaranteed
 - general building regulation approval
 - experience gained from thousands of successfully completed projects
 - quality assurance and control at SFS intec

- For installers**
- simple, convenient and fast installation
 - very high performance with the WT /WR /WB systems
 - WT + WR are self-drilling fastening systems
 - low splitting tendency = smaller purlin cross-sections
 - powerful setting tools = high setting performance
 - only WT + WR can be set parallel with the grain!
 - support during the introductory phase

If you have any queries regarding fastening systems in structural timberwork or our efficient systems, just 'phone us. We'll be pleased to advise you!

SFS intec AG / FasteningSystems / CH-9435 Heerbrugg / fs.heerbrugg@sfsintec.biz / www.sfsintec.biz

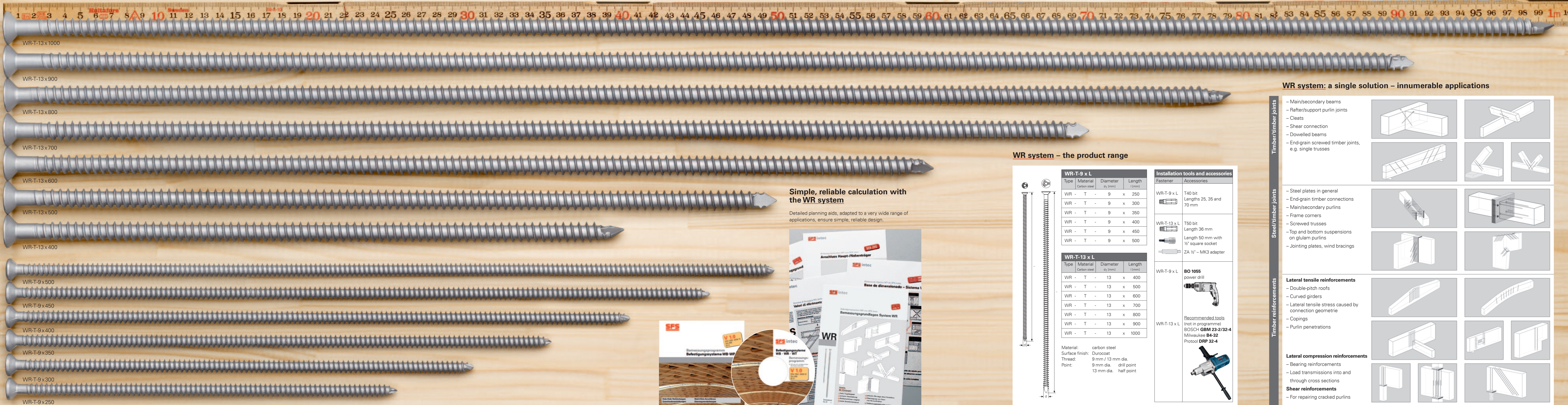


More power in structural timberwork
With the efficient WR fastening system for high-performance joints and reinforcements



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Subject to technical amendments
Printed in Switzerland

New: WR fastening system – efficient and reliable for high-performance joints and reinforcements in structural timberwork



WR-T-13 x 1000

WR-T-13 x 900

WR-T-13 x 800

WR-T-13 x 700

WR-T-13 x 600

WR-T-13 x 500

WR-T-13 x 400

WR-T-9 x 500

WR-T-9 x 450

WR-T-9 x 400

WR-T-9 x 350

WR-T-9 x 300

WR-T-9 x 250

Simple, reliable calculation with the WR system

Detailed planning aids, adapted to a very wide range of applications, ensure simple, reliable design.



WR system – the product range

WR-T-9 x L			
Type	Material	Diameter d ₁ (mm)	Length l (mm)
WR - T -	Carbon steel	9	x 250
WR - T -	Carbon steel	9	x 300
WR - T -	Carbon steel	9	x 350
WR - T -	Carbon steel	9	x 400
WR - T -	Carbon steel	9	x 450
WR - T -	Carbon steel	9	x 500

WR-T-13 x L			
Type	Material	Diameter d ₁ (mm)	Length l (mm)
WR - T -	Carbon steel	13	x 400
WR - T -	Carbon steel	13	x 500
WR - T -	Carbon steel	13	x 600
WR - T -	Carbon steel	13	x 700
WR - T -	Carbon steel	13	x 800
WR - T -	Carbon steel	13	x 900
WR - T -	Carbon steel	13	x 1000

Material: carbon steel
 Surface finish: Durocoat
 Thread: 9 mm / 13 mm dia.
 Point: 9 mm dia. drill point
 13 mm dia. half point

Installation tools and accessories

Fastener Accessories

WR-T-9 x L
 T40 bit
 Lengths 25, 35 and 70 mm

WR-T-13 x L
 T60 bit
 Length 36 mm
 Length 50 mm with 1/2" square socket
 ZA 1/2" - MK3 adapter

WR-T-9 x L
 BO 1055 power drill

WR-T-13 x L
 Recommended tools (not in programme)
 BOSCH GBM 23-Z/32-4
 Milwaukee B4-32
 Protool DRP 32-4

WR system: a single solution – innumerable applications

Timber/timber joints	<ul style="list-style-type: none"> - Main/secondary beams - Rafter/support purlin joints - Cleats - Shear connection - Dowelled beams - End-grain screwed timber joints, e.g. single trusses 	
	<ul style="list-style-type: none"> - Steel plates in general - End-grain timber connections - Main/secondary purlins - Frame corners - Screwed trusses - Top and bottom suspensions on glulam purlins - Jointing plates, wind bracings 	
Steel/timber joints	<ul style="list-style-type: none"> - Lateral tensile reinforcements 	
	<ul style="list-style-type: none"> - Lateral compression reinforcements - Shear reinforcements 	