

# Roofing and Cladding



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# The building envelope specialist

**We strive for continuous improvement and innovation – always in close collaboration with our customers, colleagues and suppliers. We want to be successful together, improve all the time, see where the technological limits are and drive them forward.**

SFS creates value with advanced fastening systems for the building envelope. As the leading specialist in this application we offer the highest possible expertise focusing on specific customer segments. Our offering embraces application consultation, development, manufacture, distribution and after sales services.

Together with our partners we invent new products and services for our shared success.





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### Evidence

A new neighbourhood has emerged in New York, USA, in the past few years: Hudson Yards, with the publicly accessible Hudson Yards Vessel at its beating heart. This extraordinary building, an architectural masterpiece in steel and bronze, was created by Thomas Heatherwick and Heatherwick Studio and assembled on site by Italy-based Permasteelisa with the help of stainless steel fasteners from SFS.



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### Added Value

- Stainless steel A4 fasteners for high durability
- Test support at customer laboratory
- Specification support for the design team

### Cost Savings

- Same fasteners for different applications
  - Only one supplier for different fastening solutions
  - Reduced installation time with self drilling fasteners
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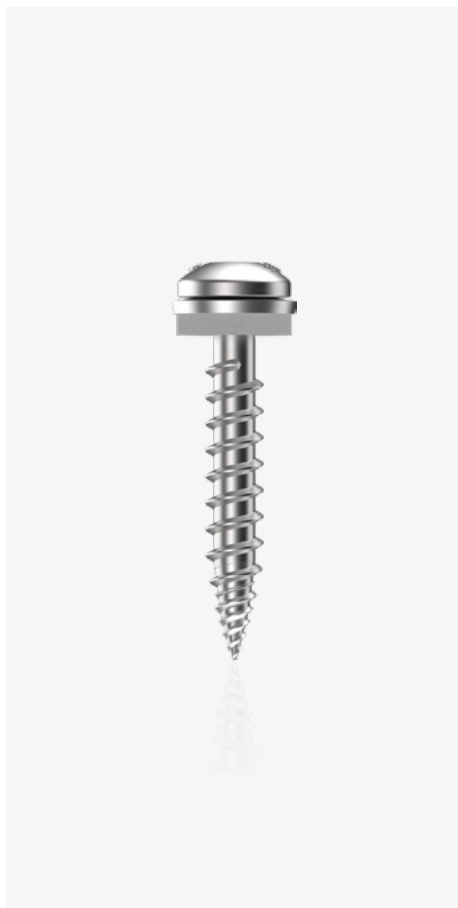


# Latest products

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## Hybrid fastener CXLW-4,8

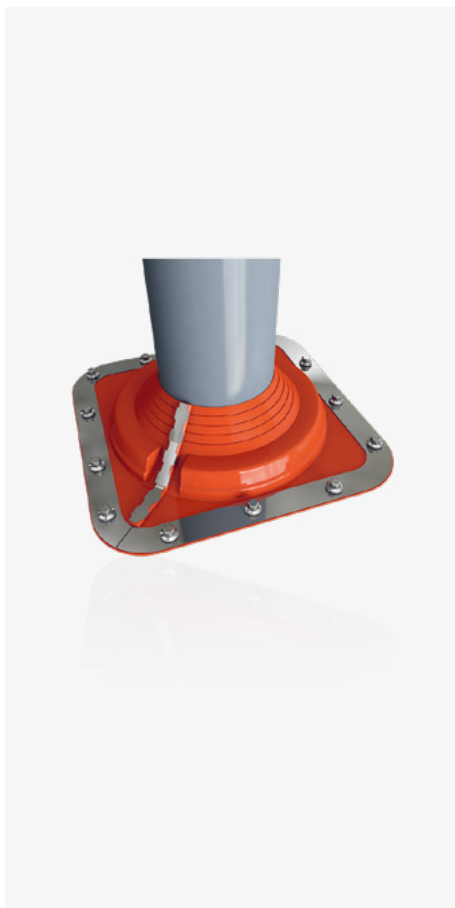
New side lapper suitable for fastening onto metal and timber subconstruction. Fast and chip-free installation thanks to the FastTip.



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## New pipe flashing – Flashing Combo

Multifunctional all in one product, which enables new and retrofit installations.



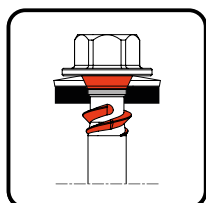
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## Safe setting SOK-IT®

New SOK-IT® for safe setting of all fasteners from diameter 4,8–6,3 mm.



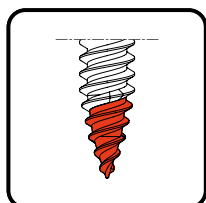
# Features and Innovations



## Premium-Sealing – improved air- and watertightness

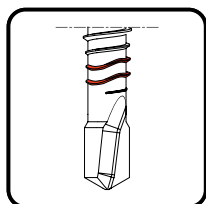
The Premium-Sealing allows valley-fixing on the roof and is characterised by the following attributes

- Thread-free zone
- Double-support thread with cut-off thread-end (patent pending)
- Cone underneath the head for improved settlement



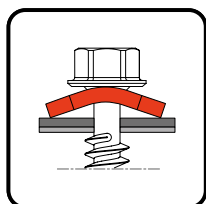
## FastTip – for rapid, chipless insertion

The FastTip allows ergonomic, low-force insertion, while simultaneously providing super-efficient setting and improved technical characteristics.



## Wave-Thread – improved values, saving customers money

This innovative SFS solution increases pull-out values, meaning that the number of fastening points and/or the thickness of the substructure can be reduced; saving tons of steel.



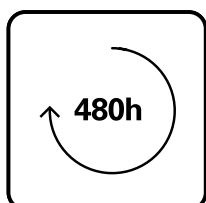
## Thick to Thin – high application area

Products featuring “Thick to Thin” offer an extremely variable clamping range coupled with 100% setting security. This all-rounder meets customer needs head-on when it comes to non-seal-tight connections between thick components and thin substructures.



## Safe setting – resistant to unwinding and vibration

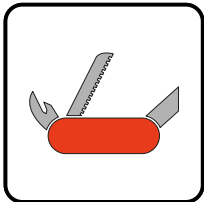
The cut-off thread-end and defined free-spin zone join forces to offer easy-to-use, highly secured fasteners – safe against over-torquing. The result is a vibration-resistant connection that will not unwind.



## Durocoat® 480 – high corrosion resistance

This special surface stands for a high corrosion resistance and guarantees a very long protection against corrosive environmental influences. Durocoat® 480 corresponds to a resistance of 480h in the salt spray test according to DIN EN ISO 9227.

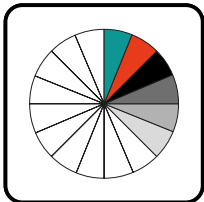




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## Multi Series – customer centered design

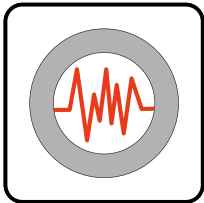
SFS Multi series products demonstrate particular ease-of-use in various applications. These are good all-round products, offering easy insertion, technical performance and simplification in use for the customer.



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## Paintable fasteners – all variants available

SFS offers a wide solution of coloured fasteners, wet or powder painted. The coating process produces a robust finish that is excellent against weathering, offering colour stability in exposed external applications.



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## Seismic approved – high physical life

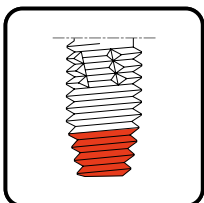
Seismic approved products have been developed for category C1 and/or C2 according to Eurocode EN 1992-4 and ensure high durability and service life.



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## Fire approved – reliable and secure

These products are produced from non-flammable material (class A1) according to EN 13501-1, and tested for their fire resistance to class R30–R120 according to EN 13501-2.



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## Centering point – easy installation

The special thread inlet makes it easy to install even mis-aligned components.

# Selection guide

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## 1 Application and subconstruction

### Application

Single skin	18
Twin skin	19
Sandwich panels	22
Liner tray	20
Standing seam	21
Single-Ply insulation roof panels	23
Flashing	24
Structural connection	25

### Subconstruction

Steel	28
Timber	30
Concrete	31

### Find further information

Product Compass	16
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## 2 Fastener material, corrosion resistance

Stainless steel:	A2, A4 or R5
Carbon steel:	Zinc or Durocoat®

### Find further information

Working Life Guidance and Limited Warranties	12
Corrosion Test and Environmental Influences	14
Recommended Fastener Material	15

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## 3 Fastener type

Self drilling fastener:	No pre-drilling needed
Self tapping fastener:	Pre-drilling needed
Blind rivet:	Pre-drilling needed

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## 4 Drilling capacity (steel) and fastener dimensions

### Subconstruction

Steel thickness
Steel quality

### Clamping length

Depending on application and subconstruction

### Find further information

Product Compass	16
Clamping Length	28
Product Data Sheets	34

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## 5 Head shapes

### Variants

HEX head - standard and H15
Pan head
irius® head
Countersunk head

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## 6 Additional components

### Sealing washer

Material:	Aluminium, A2, A4, or carbon steel
Diameter (mm):	10, 12, 14, 16, 19, 22, 29

### Find further information

Sealing Washers	27
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## 7 Approvals and technical values

### Find further information

Approvals	11
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## 8 Cross selling

### Additional products to the main fixings

Side Lappers  
Sealant tapes, pipe flashings  
Bits, drills, tools, etc.


# Approvals

## ETA – European Technical Assessment

ETAs represent evidence of the technical suitability of a construction product in line with the Construction Products Directive (CPD) of the EU member states. An ETA is issued for a construction product which is not covered by a harmonised EU standard for the

application concerned. The issue of such an approval allows the product manufacturer to use the CE mark on construction products and free access to all contracting states within the European marketplace.

### An overview of European Technical Approvals


ETA-05/0011	Concrete screws for use in concrete	
ETA-10/0198	Fastening screws for metal members and sheeting	
ETA-11/0191	Self tapping screws nonut®	
ETA-13/0183	Fastening screws for sandwich panel	
ETA-13/0255	Blind rivets	
ETA-15/0784	Screw anchor for use in cracked and uncracked concrete	

## AbZ – National Technical Approval

National technical approvals are the most common form of national verification of suitability for use for construction products. DIBt started granting them as early as 1968. The AbZ regulates

those properties of the construction product that are of regulatory relevance as well as the fields of use and other aspects like confirmation of conformity.

### An overview of National Technical Approvals

Z-14.4-776	Screws for connection of steel structural members in steel and high bay warehouse structures	
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# Working life and limited warranty

In order to bring a product with a CE mark to the market, an ETA approval for the particular product in our Roofing and Cladding application area is needed. In the ETA the product is defined geometrically and technically. In addition to the characteristic values for static calculation, the application area of the fastener is also defined. Here, the umbrella organisation The European Organisation for Technical Assessment (EOTA) has defined a minimum working life for fasteners. This depends on the expected working life of the whole works and the type of fastening.

The works in the area of Roofing and Cladding are usually specified in the category medium and normal.

In Roofing and Cladding we are mainly talking about fastenings that can be repaired or replaced with additional effort. If they cannot be repaired or replaced, either "easily" or "with increased effort" then we talk about a life long category.

## EOTA Guidance document 002 – Assumption of working life (1999)

Assumed working life of works (years)		Working life of construction products to be assumed in ETAGs, ETAs and hENs (years)		
Category	Years	Category		Life <sup>2</sup>
To be defined by the specifier		Repairable or easy replaceable	Repairable or replaceable with additional efforts	
Short	10	10	10	10
Medium	25	10	25	25
Normal	50	10	25	50
Long	100	10	25	100

General: According to the Construction Products Directive "the products must be suitable for construction works which (as a whole and in their separate parts) are fit for their intended use, account being taken of economy, and in this connection satisfy the following essential requirements where the works are subject to regulations containing such requirements. Such requirements must, subject to normal maintenance, be satisfied for an economically reasonable working life".

### SFS Working Life Declaration WLD

SFS supports designers and specifiers with the correct specification of the suitable fastener and therefore provides a specific WLD depending on the fastener and application. The durability of the work is defined by the Specifier. The fastener category can be selected from the above table in EOTA guidance document 002. This results in the expected working life of the required fastener. SFS WLD documents demonstrate the long term performance of SFS fasteners and are available on demand, from 25 up to 50 years.

### SFS Limited Warranty Declaration LWD

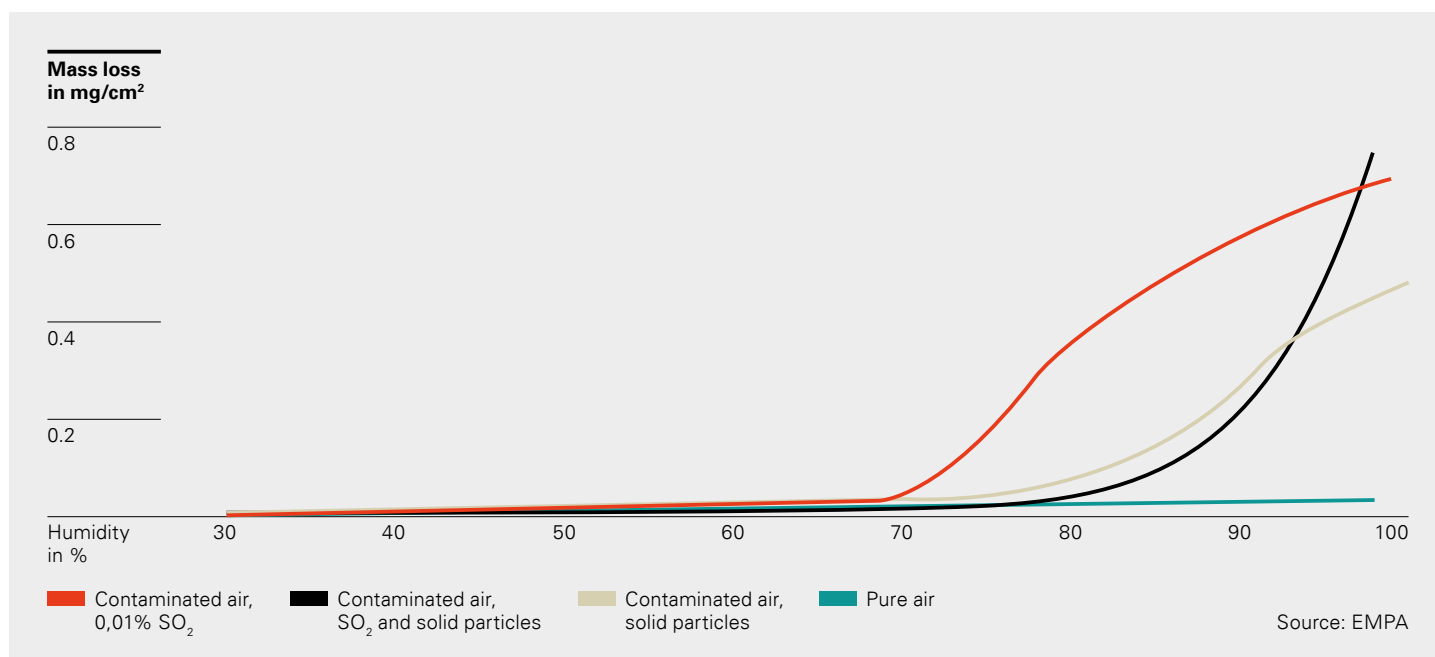
While there is no standard in the field of Roofing and Cladding that regulates the variety of fastener types and surfaces, SFS Roofing and Cladding have defined a uniform warranty period for all SFS RC fasteners. Thanks to years of experience in the field of fastening technology, SFS can offer the longest warranty periods in the field of roofing and cladding. Through the SFS-LWD documents the customer knows which warranty period is valid in each environmental category. LWD's are available for the RC global range covering standard environmental applications. As an additional value-added service, a project specific LWD can be requested. In these circumstances, further project information is provided to SFS headquarters using the required form. SFS will review the application and provide the maximum possible LWD for each product requested in the application. Compared to the Working Life Document, the Limited Warranty Declaration is only valid for SFS contracting partners and starts counting from the day of purchase.

# Corrosion causes and contact corrosion

Corrosion is the irreversible damage of living material due to a chemical or electrochemical reaction. For metal atoms the metallic iron is the high energy condition and they aim for a low-energy condition which means rust. This means that corrosion will occur if nothing is done to prevent it. With the right design planning and the right choice of materials, we can make a major contribution to corrosion protection.

There is an increased risk of corrosion from a relative humidity of over 70% and a temperature above 60° Celsius. In the same way, contaminated environmental air has a negative influence on corrosion protection. If the air also contains salt or sulfur dioxide, there is an increased risk of corrosion. In these special areas like swimming pools or tunnels, more attention must be paid to the selection of the correct fastener.

## External conditions and media that accelerate corrosion



## Contact corrosion

Material of fixing part or substructure	Fastener Material			
	Carbon steel	Austenitic stainless steel		
	T	A2	A4	R5*
Galvanised steel	R	R	R	R
Aluminium alloy	N	R	R	R
Stainless steel	N	R	R	R

R Recommended, N Not suitable

\*Internal SFS code referring to the corrosion resistance class V (CRC) out of the EUROCODE3

The table shows the material of the fixing part and sub-structure and the suitability of the fastener material under atmospheric conditions.

# Corrosion tests and environmental influences

## Current state of the art

Thanks to efforts to improve air purity, the sulfur dioxide SO<sub>2</sub> in the air has fallen by over 90% since 1987. For this reason, the application of the salt spray test in the RC area has become more important than the Kesternich test, which focuses on sulfur dioxide.

For this reason, SFS coatings are designed for today's corrosion resistance tests to withstand the salt spray test according to EN ISO 9227.

The test results obtained cannot be regarded as a guideline for corrosion resistance of the tested protective coatings in all environments. Therefore, Kesternich and salt spray testing cannot be compared. It is important to highlight these aspects, which are state of the art, in order to understand the influence of the current atmosphere on corrosion resistance. The SO<sub>2</sub> content in the atmosphere has decreased considerably in recent years.

## Salt spray test

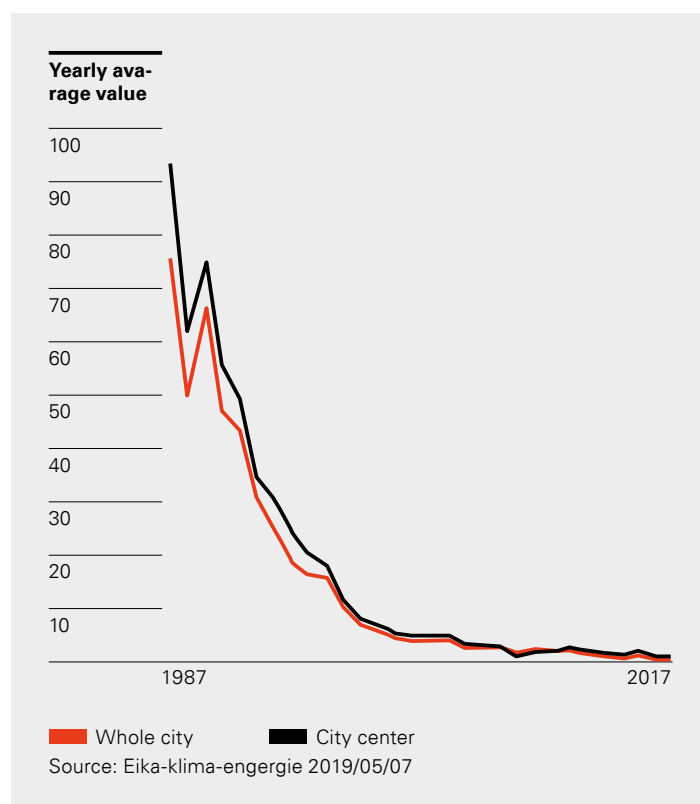
### Extract from the standard EN ISO 9227

Salt spray tests are generally suitable as corrosion protection tests for rapid analysis for discontinuities, pores and damage in organic and inorganic coatings. In addition, for quality control purposes, comparison can be made between samples that have the same coating.

## Evolution of sulfur dioxide concentration of air in µg/m<sup>3</sup>

Example: City of Berlin

Decrease in SO<sub>2</sub> concentration by 96% – the pollutant has almost completely disappeared.



## Kesternich test

### Extract from the standard EN ISO 6988

Moist air containing sulfur dioxide quickly produces visible corrosion of many metals in a form resembling that occurring in industrial environments. It is therefore a test medium well suited to detect pores or other sources of weakness in protective coatings and deficiencies in corrosion resistance associated with unsuitable alloy composition or treatments. The test results obtained in the test should not be regarded as a direct guide to the corrosion resistance of the tested materials in all environments.

# Recommended fastener materials

To suit EN 12944-2 exposure categories

Corrosivity category	C1 Very low	C2 Low	C3 Medium	C4 High	C5-I Very high (Industrial)	C5-M Very high (Marine)	Swimming pools and chemical plants
<ul style="list-style-type: none"> <li>Examples of typical environments in a temperate climate (informative only)</li> </ul>	<ul style="list-style-type: none"> <li>Interior</li> <li>Heated buildings with clean atmosphere</li> </ul>	<ul style="list-style-type: none"> <li>Rural areas</li> <li>Low levels of pollution</li> <li>Unheated buildings where condensation may occur</li> </ul>	<ul style="list-style-type: none"> <li>Urban and industrial areas</li> <li>Moderate pollution</li> <li>Coastal area with low salinity</li> <li>Production rooms with high humidity and some air pollution</li> </ul>	<ul style="list-style-type: none"> <li>Industrial and coastal areas with moderate salinity</li> </ul>	<ul style="list-style-type: none"> <li>Industrial areas with high humidity and aggressive atmosphere</li> <li>Permanent condensation and high pollution</li> </ul>	<ul style="list-style-type: none"> <li>Coastal and offshore areas with high salinity</li> </ul>	<ul style="list-style-type: none"> <li>Within pool halls and certain chemical processing plants</li> <li>Fasteners that penetrate or are below vcl and exposed to chlorine vapour</li> </ul>
<b>R5*</b> Working life (ETA)	<b>S</b> >25	<b>S</b> >25	<b>S</b> >25	<b>S</b> >25	<b>R</b> 25	<b>R</b> 25	<b>R</b> consult expert
<b>A4</b> Working life (ETA)	<b>S</b> >25	<b>S</b> >25	<b>R</b> >25	<b>R</b> 25	<b>R</b> 25	<b>R</b> consult expert	<b>N</b> –
<b>A2</b> Working life (ETA)	<b>S</b> >25	<b>R</b> >25	<b>R</b> 25	<b>A</b> consult expert	<b>A</b> consult expert	<b>N</b> –	<b>N</b> –
<b>T</b> Working life (ETA)	<b>R</b> 25	<b>A</b> consult expert	<b>A</b> consult expert	<b>N</b> –	<b>N</b> –	<b>N</b> –	<b>N</b> –

**S** Suitable but not economic, **R** Recommended, **A** Requires approval, **N** Not suitable

\*Internal SFS code referring to the corrosion resistance class V (CRC) out of the EUROCODE3.

This table is based on an average working life for typical applications. The final decision on the required fastener material must be made by the customer. SFS accepts no responsibility regarding the suitability of a product for a specific application, even if informed of the application's conditions.

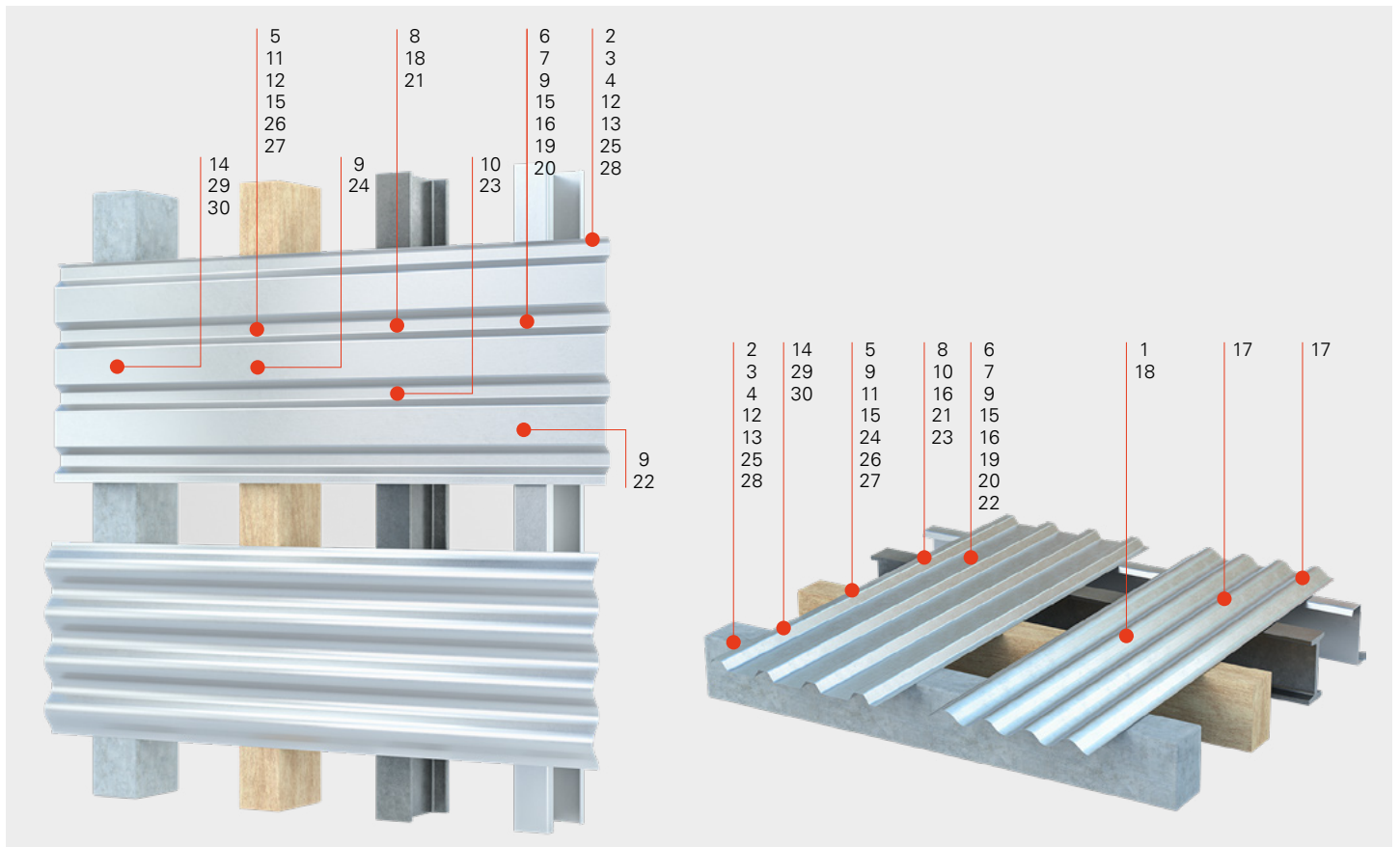




Page	Type	Material					Sandwich panels	Single-ply insulation roof panels	Flashing	Structural connection										
		A2	A4	R5	T	A														
36	CXLW-4.8						S			S										
38	MMS-A4																			C
16	MXC-7.5								C											
44	SCFW-S-6.5																			
46	SDC2-S-5.5																			
48	SDC3-S-5.5																			
50	SL2-S-4.8						S												S	
52	SL2-S-5.5						S												S	
54	SL2-S-6.3						S												S	
56	SL3/2-5-S-6.0						S													
58	SLG-S-4.8						S												S	
60	SLG-S-6.5						S													
62	SW2-S-4.8																			
64	SX3-6.0																			
66	SX5-5.5																			
68	SX5-D10-5.5									P										
70	SX14-5.5																			
72	SX14-D10-5.5										B									
74	SXC5-6.3							P			W									
78	SXC16-5.8								B											
82	SXK2-6.0																			
84	SXW-6.5																			
86	TDA-S-6.5						S				W									
90	TDB-S-6.3							P	B											
94	TDC-S-7.1																			
96	CDM-4.8																			
98	MDC-7.5								C											
102	MMS-plus-7.5/10/12																			C/M
106	nonut®																S	P	B	
108	SC5-5.5																	P		
110	SCF-6.3																			
112	SCFW-6.5																			
114	SD3-5.5																			
116	SD3-D10-5.5										P									
118	SD6-5.5																			
120	SD6-H15-5.5																			
122	SD14-5.5																			
124	SD14-D10-5.5											B								
126	SD14-H15-5.5																			
128	SDRT2-5.5																			
130	SDT5-5.5							P												
134	SDT14-5.5								B											
138	SDTW-6.5									W										
140	SL2-4.8																			
142	SL2-H15-6.3																			
144	SL2-T-4.8						S												S	
146	SL3-H15-6.3																			
148	SLG-T-4.8						S												S	
150	SW-T-4.8																			
152	SW2-T-D10-5.5										W									
154	SW3-T-6.5																			
156	TI-6.3								C											C
158	BULB-TITE®						S	P	B										S	

S = Sheets, P = Profiles, B = Beams, C = Concrete, M = Masonry, W = Wood/Timber

# Single Skin



Self driller	Page	●	FastTip	Page	●	Self taper	Page	●	Rivets	Page	●
A2 SCFW-S-6.5	44	1	A2 CXLW-4.8	36	12	A4 MXC-7.5	40	14			
A2 SL2-S-4.8	50	2	A2 SLG-S-4.8	58	13	A2 TDA-S-6.5	86	15			
A2 A4 SL2-S-5.5	52	3	T SLG-T-4.8	148	28	A2 A4 TDB-S-6.3	90	16			
A2 SL2-S-6.3	54	4				T MDC-7.5	98	29			
A2 SW2-S-4.8	62	5				T TI-6.3	156	30			
A2 A4 SX3-6.0	64	6									
A2 A4 SX5-5.5	66	7									
A2 A4 SX14-5.5	70	8									
A2 A4 SXC5-6.3	74	9									
A2 A4 SXC16-5.8	78	10									
A2 SXW-6.5	84	11									
T SCF-6.3	110	17									
T SCFW-6.5	112	18									
T SD3-5.5	114	19									
T SD6-5.5	118	20									
T SD14-5.5	122	21									
T SDT5-5.5	130	22									
T SDT14-5.5	134	23									
T SDTW-6.5	138	24									
T SL2-T-4.8	144	25									
T SW-T-4.8	150	26									
T SW3-T-6.5	154	27									

A2 Austenitic stainless steel A2

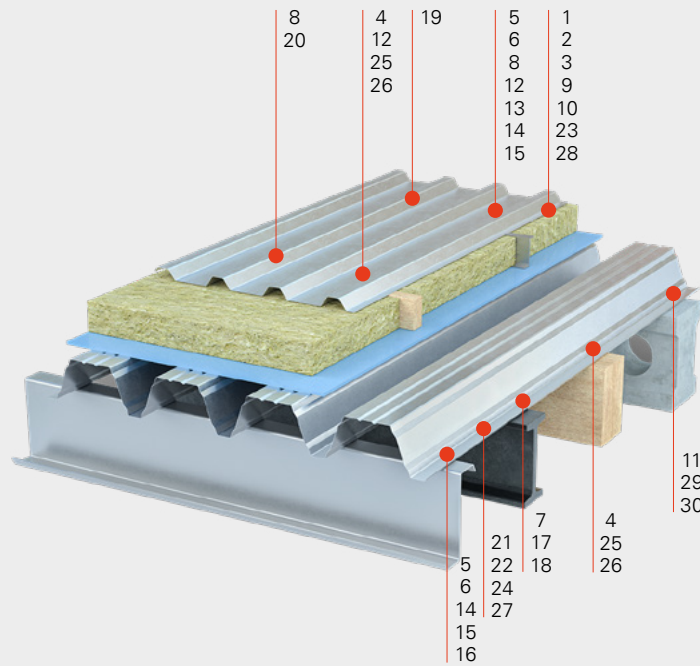
A4 Austenitic stainless steel A4

R5 Austenitic stainless steel R5

T Carbon steel

A Aluminium

# Twin Skin



Self driller		Page	●	FastTip		Page	●	Self taper		Page	●	Rivets		Page	●
	A2 SL2-S-4.8	50	1	A2 CXLW-4.8	36	9		A4 MMS-7.5/10/12	38	11					
A2	A4 SL2-S-5.5	52	2	A2 SLG-S-4.8	58	10		A2 TDA-S-6.5	86	12					
	A2 SL2-S-6.3	54	3	T CDM-4.8	96	27		A2/A4 TDB-S-6.3	90	13					
	A2 SW2-S-4.8	62	4	T SLG-T-4.8	148	28		T MMS-plus-7.5/10/12	102	29					
A2	A4 SX3-6.0	64	5					T TI-6.3	156	30					
A2	A4 SX5-5.5	66	6												
A2	A4 SX14-5.5	70	7												
A2	A4 SXC5-6.3	74	8												
	T SD3-5.5	114	14												
	T SD6-5.5	118	15												
	T SD6-H15-5.5	120	16												
	T SD14-5.5	122	17												
	T SD14-H15-5.5	126	18												
	T SDT5-5.5	130	19												
	T SDTW-6.5	138	20												
	T SL2-4.8	140	21												
	T SL2-H15-6.3	142	22												
	T SL2-T-4.8	144	23												
	T SL3-H15-6.3	146	24												
	T SW-T-4.8	150	25												
	T SW3-T-6.5	154	26												

A2 Austenitic stainless steel A2

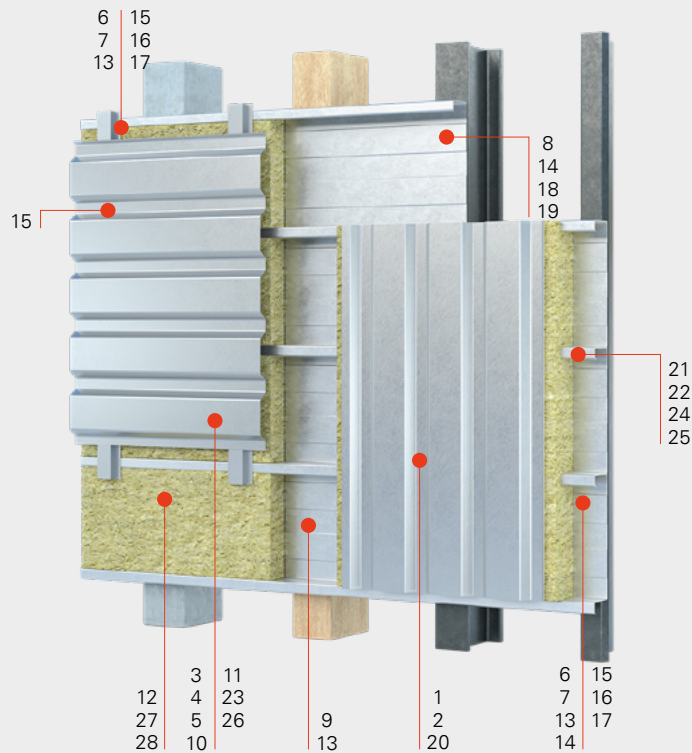
A4 Austenitic stainless steel A4

R5 Austenitic stainless steel R5

T Carbon steel

A Aluminium

# Liner Tray



Self driller	Page	●	FastTip	Page	●	Self taper	Page	●	Rivets	Page	●
A2 SDC2-S-5.5	46	1	A2 CXLW-4.8	36	10	A4 MMS-7.5/10/12	38	12			
A2 SDC3-S-5.5	48	2	A2 SLG-S-4.8	58	11	A2 TDA-S-6.5	86	13			
A2 SL2-S-4.8	50	3	T CDM-4.8	96	25	A2 A4 TDB-S-6.3	90	14			
A4 SL2-S-5.5	52	4	T SLG-T-4.8	148	26	T MMS-plus-7.5/10/12	102	27			
A2 SL2-S-6.3	54	5				T TI-6.3	156	28			
A2 A4 SX3-6.0	64	6									
A2 A4 SX5-5.5	66	7									
A2 A4 SX14-5.5	70	8									
A2 SXW-6.5	84	9									
T SD3-5.5	114	15									
T SD6-5.5	118	16									
T SD6-H15-5.5	120	17									
T SD14-5.5	122	18									
T SD14-H15-5.5	126	19									
T SDRT2-5.5	128	20									
T SL2-4.8	140	21									
T SL2-H15-6.3	142	22									
T SL2-T-4.8	144	23									
T SL3-H15-6.3	146	24									

A2 Austenitic stainless steel A2    A4 Austenitic stainless steel A4    R5 Austenitic stainless steel R5    T Carbon steel    A Aluminium













# Installation instructions

## General information

- Install self-drilling fasteners in general at 1,200–2,000 rpm
- Recommended drilling pressure for self-drilling fasteners: 200–300 N
- Use clean tool, which fits exactly for installation of painted fasteners

## Use of impact wrench

- Is only allowed in combination with SFS socket SOK-IT® for fasteners with diameter 4,8–6,3 mm

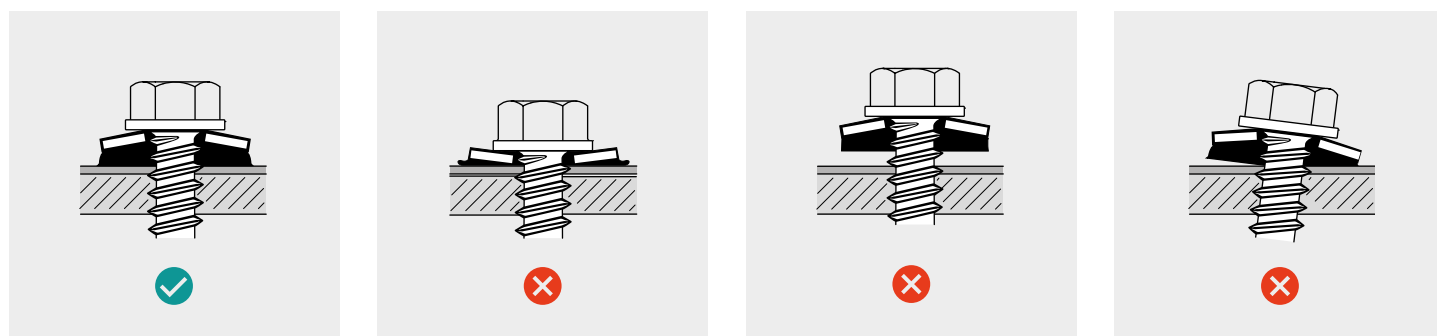
## Installation of fastener without washer

- Use of impact wrench is only in combination with SFS socket SOK-IT®
- Maximum tightening torque ~ 8 Nm

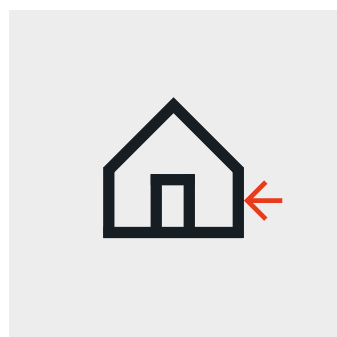
## Installation of taper (TDA-S, TDB-S) according EN 1090-4:2018

- The taper-thread engagement must be as long as component II thickness, if component II thickness  $\leq 6$  mm
- The taper-thread engagement must be at least 6 mm, if component II thickness  $\geq 6$  mm
- NOTE: only the load-bearing part is relevant

## Correct washer setting

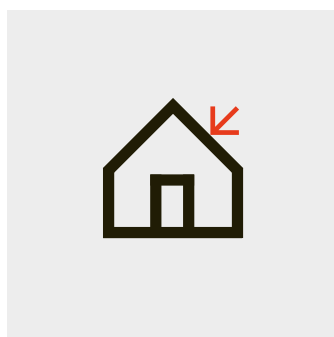


Fastener with sealing washer can only be set correctly by using setting tools equipped with depth locator. Setting with a depth locator results in a uniform setting depth for all fastener.



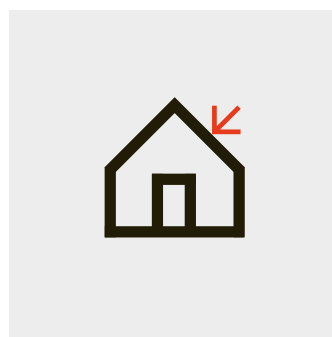
### Cladding

Primary fixing	$\geq 16$ mm
Secondary fixing	$\geq 10$ mm



### Roofing

Primary fixing	$\geq 19$ mm
Secondary fixing	$\geq 14$ mm



### Rooflights

Primary fixing	29 mm
Secondary fixing	29 mm

### Primary fixing

A fastener that secures the profiled sheeting, bracket or secondary steel to the supporting structure e.g. sheeting to structure or spacer, spacer to structure.

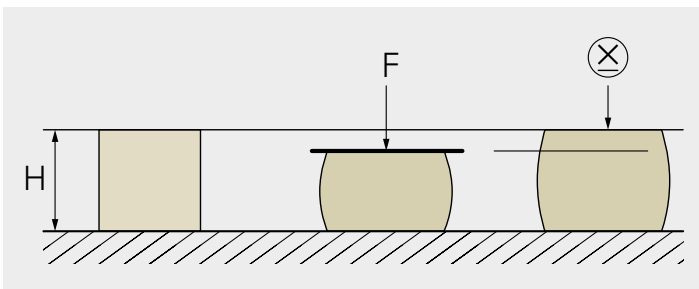
### Secondary fixing

A fastener that secures the laps of profiled sheets to each other but not to the supporting structure; and also used to attach lightweight flashings to profiled sheeting.

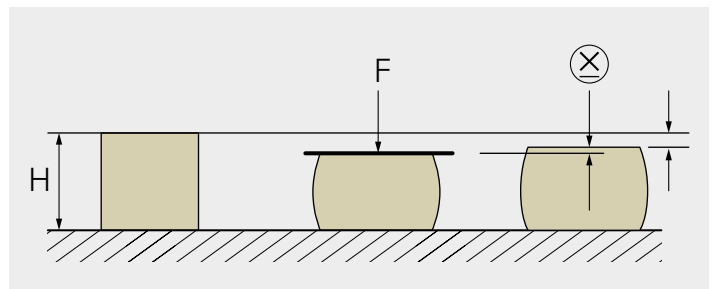
# Sealing washer quality

Our EPDM bonded sealing washers are used for weathered roofing and cladding applications and guarantee a long term sealing. The non-conductive EPDM rubber is based on the elastomer EPDM with reinforcing fillers and has high weather and ozone resistance with long-term durability. Further characteristics are high chemical and temperature resistance.

**Our solution**  
**High weather tightness** given by high EPDM elasticity. ✓



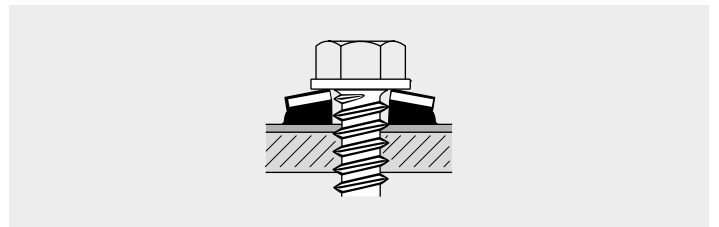
**Standard solution**  
**Restricted weather tightness** due to low elasticity of sealing material. ✗



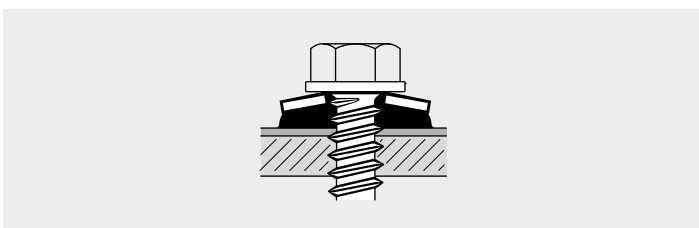
**High weather tightness** given by adapted inner diameter of the sealing washer with the fastener geometry. ✓



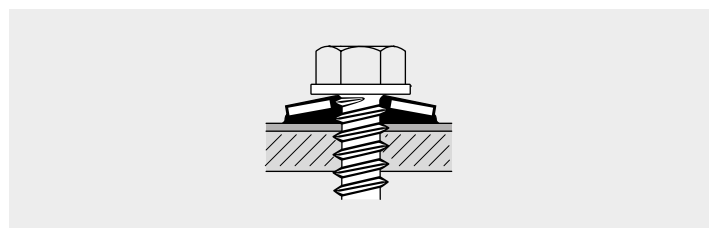
**No weather tightness** because of inner diameter of sealing washer does not fit with the fastener geometry. ✗



**Minimal risk** of dimpling of the outer skin and high weather tightness given by thick and soft EPDM. ✓

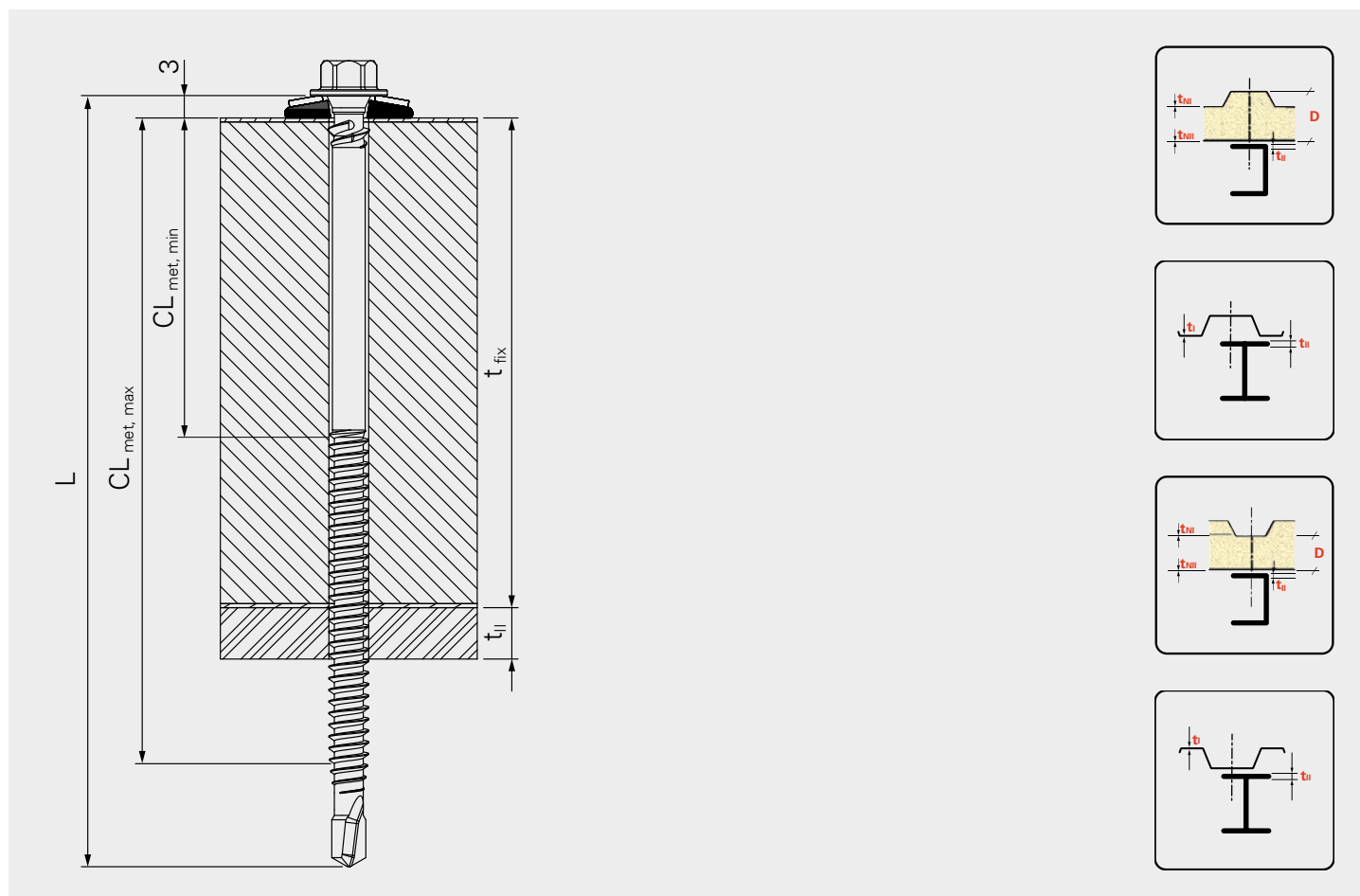


**High risk of dimpling and leakage** given by thin and hard sealing materials. ✗



# Subconstruction metal

## Clamping length $CL_{met}$



### Fastener length selection according Eurocode 1990-1-4:2018

#### $t_{II} < 6 \text{ mm}$

Total component  $t_{II}$  is within the clamping length.

$$CL_{met, min} \leq t_{fix}$$

$$CL_{met, max} \geq t_{fix} + t_{II}$$

#### $t_{II} \geq 6 \text{ mm}^*$

Min. 6 mm of component  $t_{II}$  is within the clamping length.

$$CL_{met, min} \leq t_{fix}$$

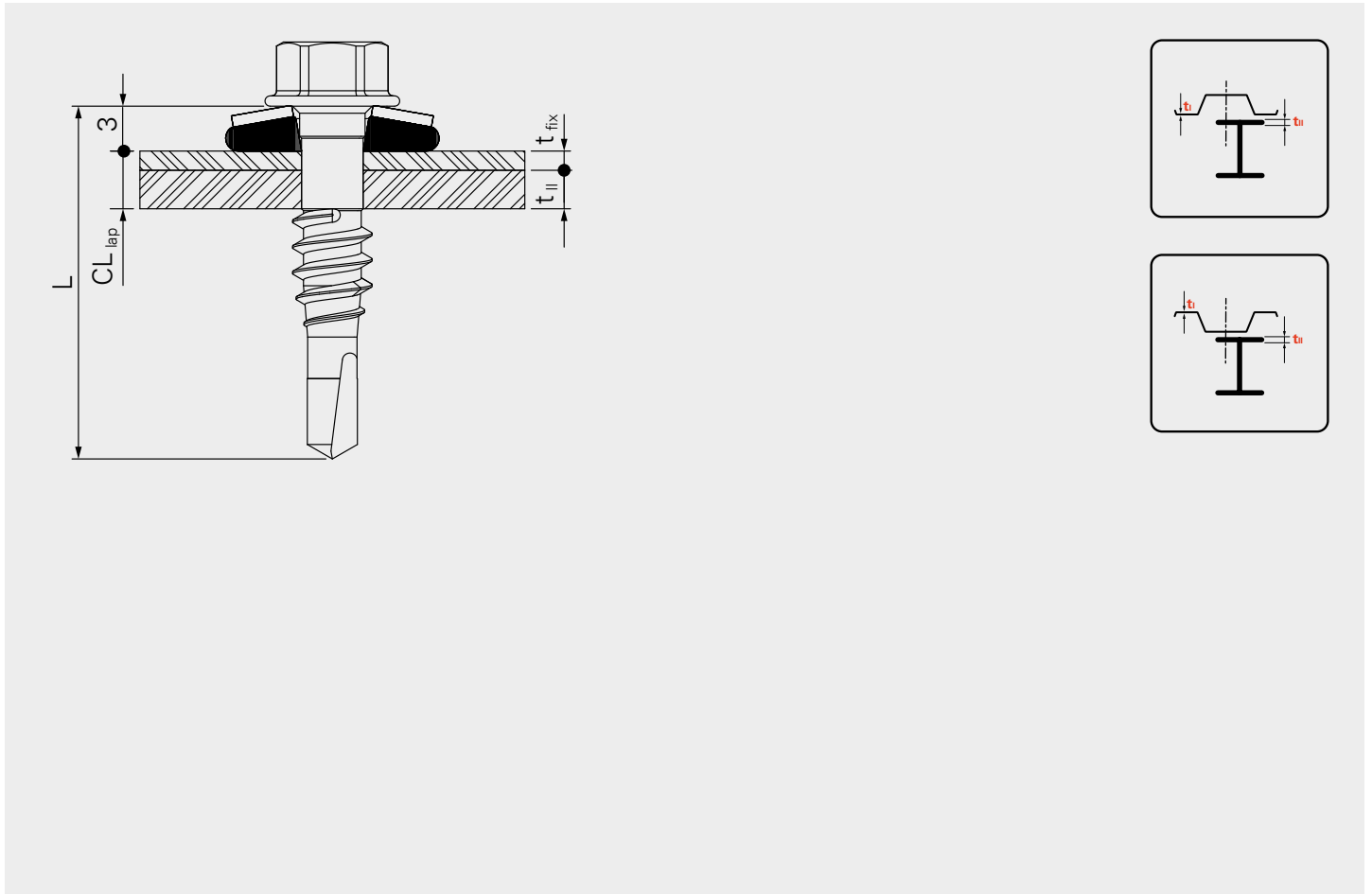
$$CL_{met, max} \geq t_{fix} + 6 \text{ mm}$$

### Explanation and short cuts

$CL_{met}$	Clamping length of the fastener
$L$	Length of the fastener
$t_{fix}$	$\Sigma$ of: $t_i$ , sealing tape, insulation etc.
$t_{NI}$	Thickness of the outer skin of component I (sandwich panel)
$t_{NII}$	Thickness of the inner skin of component I (sandwich panel)
$t_i$	Thickness of component I
$t_{II}$	Thickness of component II made of metal. The thickness $t_{II}$ corresponds to the load-bearing clamping length of the fastener in component II, if the load-bearing clamping length does not cover the entire component thickness.

# Subconstruction metal

## Clamping length $CL_{lap}$



### Fastener selection

$$CL_{lap, \min} \leq t_{fix} + t_{II} \leq CL_{lap, \max}$$

Total component  $t_{II}$  is within the clamping length.

### Explanation and short cuts

$CL_{lap}$  Clamping length of the fastener

$L$  Length of the fastener

$t_{fix}$   $\Sigma$  of:  $t_i$ , sealing tape, insulation etc.

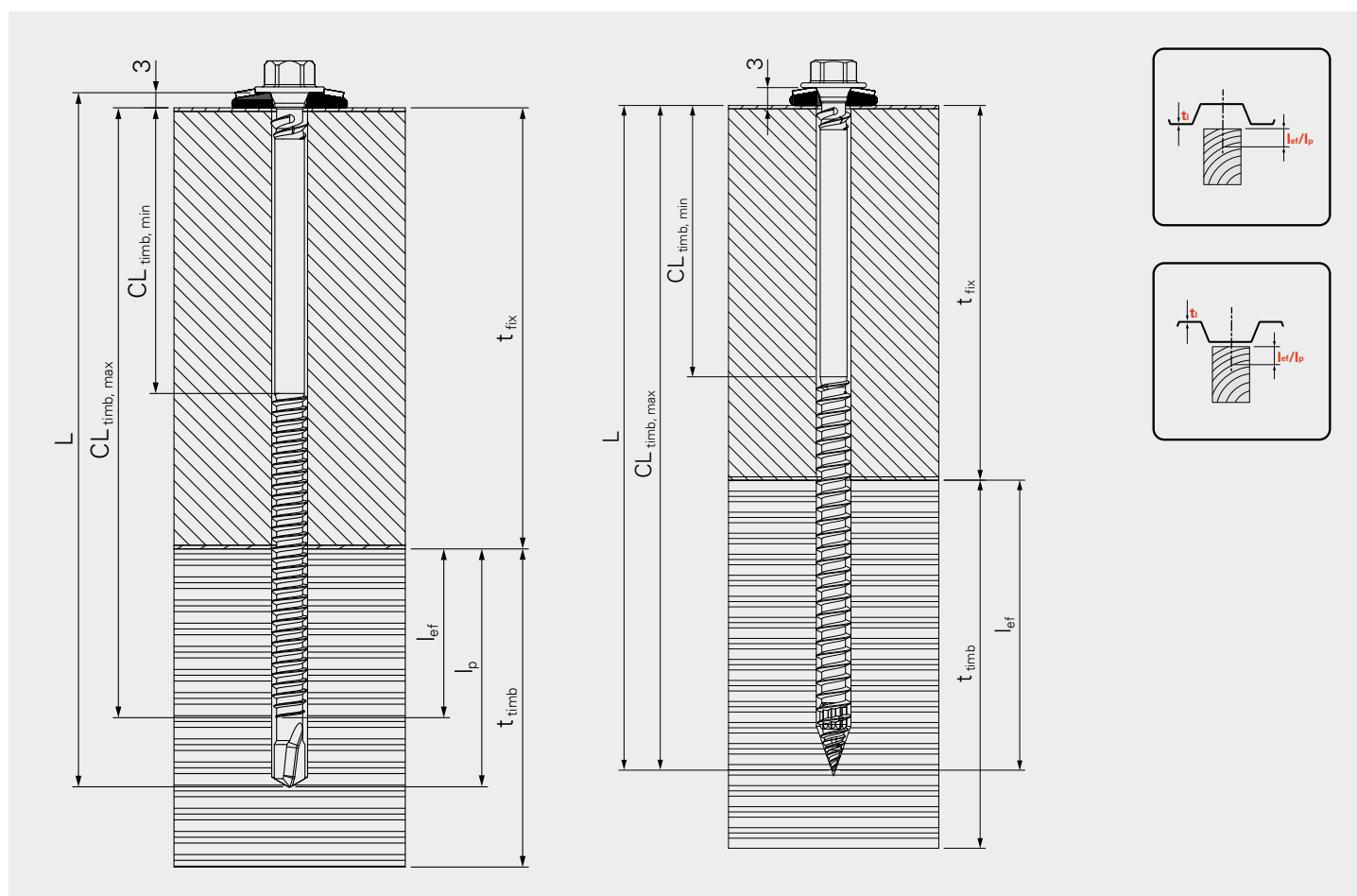
$t_i$  Thickness of component I

$t_{II}$  Thickness of component II made of metal.

The thickness  $t_{II}$  corresponds to the load-bearing clamping length of the fastener in component II, if the load-bearing clamping length does not cover the entire component thickness.

# Subconstruction timber

## Clamping length $CL_{\text{timb}}$



### Fastener length selection

$$L \leq t_{\text{fix}} + t_{\text{timb}}$$

$$CL_{\text{timb, max}} \geq t_{\text{fix}} + l_{\text{ef}}$$

### Explanation and short cuts

$CL_{\text{timb}}$  Clamping length of the fastener

$L$  Length of the fastener

$l_{\text{ef}}/l_{\text{p}}$  Effective embedment depth in component II  
made of timber ( $l_{\text{ef}}$  without drill point) ( $l_{\text{p}}$  with drill point)

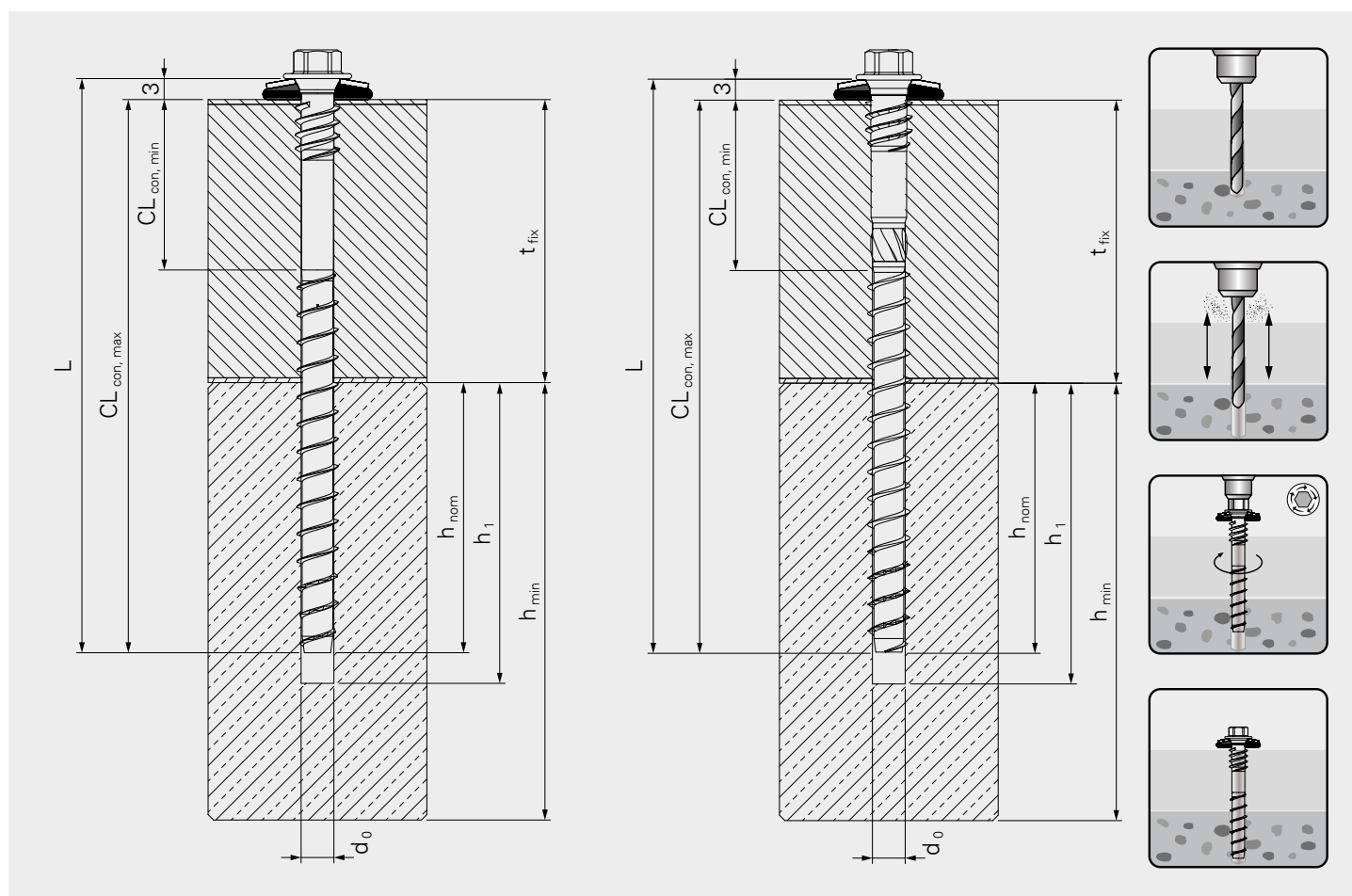
$t_{\text{fix}}$   $\Sigma$  of:  $t_i$ , sealing tape, insulation etc.

$t_i$  Thickness of component I

$t_{\text{timb}}$  Thickness of timber substructure

# Subconstruction concrete

## Clamping length $CL_{con}$



### Fastener length selection

$$CL_{con,max} \geq t_{fix} + h_{nom}$$

$$CL_{con,min} \leq t_{fix}$$

Note:

Minimum requirement  $h_{nom}$ ,  $h_1$  and  $h_{min}$  according to approvals.

### Explanation and short cuts

- CL** Clamping length of the fastener
- $h_{min}$**  Minimum thickness of concrete subconstruction
- $h_{nom}$**  Nominal anchor depth
- $h_1$**  Drill hole depth
- L** Length of the fastener
- $t_{fix}$**  Thickness of fixture

### Power output of the tangential impact wrench for use with MULTI-MONTI®

Diameter	MDC/MXC		MMS	MMS	MMS	MMS	MMS	MMS	MMS
	≤220	>220	Ø 6	Ø 7,5	Ø 10	Ø 12	Ø 14	Ø 16	Ø 20
Power output of battery impact driver*	max. 300Nm	max. 450Nm	ca. 100Nm	ca. 160Nm	ca. 250Nm	ca. 600Nm	ca. 600Nm	ca. 600Nm	ca. 800Nm

\*Recommended power output without guarantee

# Product codes Explanation

<b>S</b>	<b>X</b>	<b>C</b>		<b>5</b>	<b>-</b>	<b>L12</b>	<b>-</b>	<b>S19</b>	<b>-</b>	<b>6,3x80</b>	<b>-</b>	<b>A4</b>	<b>-</b>	<b>M</b>	<b>-</b>	<b>RAL9010</b>
<b>Fastener type</b>	<b>Fastener material</b>	<b>Fastener design</b>	<b>Market-specific</b>	<b>Drilling capacity</b>		<b>Head shape</b>		<b>Additional components</b>		<b>Dimension</b>		<b>Material quality &amp; surface coating</b>		<b>Collated (optional)</b>		<b>Painting (optional)</b>

## Fastener type

Self drilling fastener	Drill point	Onto steel or timber	<b>S</b>
	Thread point	Onto steel or timber	<b>C</b>
Self tapping fastener	Onto steel or timber		<b>T</b>
	Onto concrete		<b>M</b>

## Fastener material

Bimet	Standard	<b>X</b>
	MULTI-MONTI®	<b>MS</b>
Carbon steel, Austenitic stainless steel, Aluminium	Standard	<b>D</b>
	MULTI-MONTI®	<b>MS-plus</b>

## Fastener design

Self drilling fastener	Steel onto steel	Standard	<b>-</b>
		Sandwich panelcut-off	<b>C</b>
		Sandwich panelrun-out	<b>X</b>
		Fibre cement	<b>F</b>
	Steel onto timber	Standard	<b>W</b>
		Sandwich panel	<b>CW</b>
		Fibre cement	<b>FW</b>
	Overlap- thread free zone	Cut thread end	<b>L</b>
		Cut thread end onto steel and/or timber	<b>LW</b>
		Thread end run-out	<b>M</b>
	Distance connection	<b>-</b>	<b>D</b>
	Timber onto steel	Double thread	<b>U</b>
	Clip onto steel	Cone underneath head	<b>K</b>



<b>S</b>	<b>X</b>	<b>C</b>		<b>5</b>	-	<b>L12</b>	-	<b>S19</b>	-	<b>6,3x80</b>	-	<b>A4</b>	-	<b>M</b>	-	<b>RAL9010</b>
<b>Fastener type</b>	<b>Fastener material</b>	<b>Fastener design</b>	<b>Market-specific</b>	<b>Drilling capacity</b>		<b>Head shape</b>		<b>Additional components</b>		<b>Dimension</b>		<b>Material quality &amp; surface coating</b>		<b>Collated (optional)</b>		<b>Painting (optional)</b>

#### Fastener design

Self tapping fastener	Steel onto timber	Standard	<b>A</b>
	Steel onto steel	Standard	<b>B</b>
		Repair fastener	<b>C</b>
	Steel onto concrete	Standard	-
		Sandwich panel	<b>C</b>
	Structural connection	Standard	<b>N</b>
Thread free zone		<b>NL</b>	

#### Market-specific

Fance	Kaskinox head	<b>S</b>
	Zamac head	<b>Z</b>
CEE, UK	Plastic head	<b>P</b>

#### Drilling capacity

Max. capacity in mm	<b>e.g. 5</b>
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#### Clamping length CL

Min.–max. in mm	<b>e.g. 35–65</b>
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# Product codes Explanation

<b>S</b>	<b>X</b>	<b>C</b>		<b>5</b>	<b>-</b>	<b>L12</b>	<b>-</b>	<b>S19</b>	<b>-</b>	<b>6,3x80</b>	<b>-</b>	<b>A4</b>	<b>-</b>	<b>M</b>	<b>-</b>	<b>RAL9010</b>
<b>Fastener type</b>	<b>Fastener material</b>	<b>Fastener design</b>	<b>Market-specific</b>	<b>Drilling capacity</b>		<b>Head shape</b>		<b>Additional components</b>		<b>Dimension</b>		<b>Material quality &amp; surface coating</b>		<b>Collated (optional)</b>		<b>Painting (optional)</b>

## Fastener Head shape er type

Hexagon head	Standard (e.g. size 8, 13, 16)	-	-
	Low head high	-	<b>LH</b>
	Increased flange	Ø in mm	<b>H (mm)</b>
Counter sunk	-	Ø in mm	<b>C (mm)</b>
Pan head	-	Ø in mm	<b>D (mm)</b>
SFS head	irius®	Ø in mm	<b>L (mm)</b>
	SXK head	-	<b>K10</b>
Square head	Flat	-	<b>F</b>

## Additional components

Sealing washer	Austenitic stainless steel A2 or A4	Ø in mm	<b>S (mm)</b>
	Aluminium	Ø in mm	<b>A (mm)</b>
	Carbon steel galvanized	Ø in mm	<b>T (mm)</b>
Sealing element	-	-	<b>BAZ</b>
Cutting disc	Stainless steel A2	Ø in mm	<b>SC (mm)</b>
	Carbon steel galvanized	Ø in mm	<b>TC (mm)</b>
Curved disc	Stainless steel A2	Ø in mm	<b>SV (mm)</b>

## Dimension

Diameter x length in mm	e.g. <b>6,3x140</b>
-------------------------	---------------------

<b>S</b>	<b>X</b>	<b>C</b>		<b>5</b>	-	<b>L12</b>	-	<b>S19</b>	-	<b>6,3x80</b>	-	<b>A4</b>	-	<b>M</b>	-	<b>RAL9010</b>
<b>Fastener type</b>	<b>Fastener material</b>	<b>Fastener design</b>	<b>Market-specific</b>	<b>Drilling capacity</b>		<b>Head shape</b>		<b>Additional components</b>		<b>Dimension</b>		<b>Material quality &amp; surface coating</b>		<b>Collated (optional)</b>		<b>Painting (optional)</b>

#### Material quality and surface coating

Bimet/Austenitic stainless steel	A2	<b>A2</b>
	A4	<b>A4</b>
	1.4547	<b>R5</b>
Carbon steel	Bright zinc plated	-
	Durocoat® 480	-
	High protection (MMS, nonut®)	<b>HP</b>
	Zinc plated	-

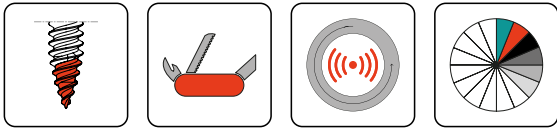
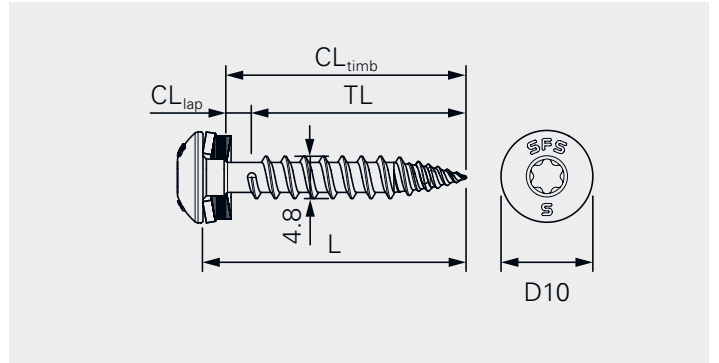
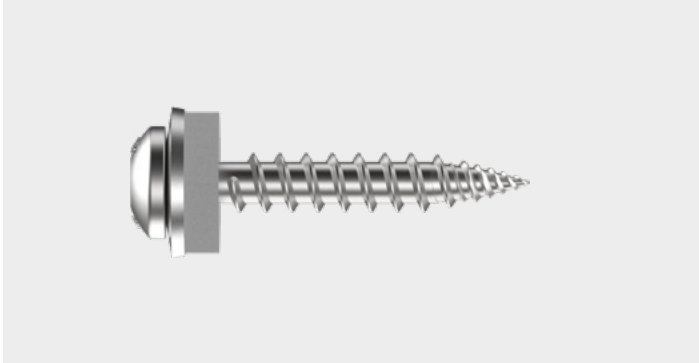
#### Collated

SFS setting tool	CF400, CF401	<b>M</b>
	Quik Drive®	<b>MQD</b>

#### Painting

RAL colour system	<b>RAL (no)</b>
NCS-S colour system	<b>NCS-S (no)</b>
BS colour system	<b>BS (no)</b>

# CXLW-4.8



## Application

Fastening of overlaps of profile sheets  
 Fastening of flashings onto sandwich panels  
 Fastening of metal profile sheets onto timber  
 Fastening of flashing onto profile sheets  
 Fastening of flashing onto sandwich panels

## Fastener material

Austenitic stainless steel A2/A4  
 Sealing washer: Aluminium, EPDM-seal

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	0.40–1.00	Steel	0.40–1.00	2.00
Steel	2×0.40–2×0.63	Steel	2×0.40–2×0.63	2.50
Steel	0.40–1.00	Timber	l <sub>ef</sub> ≥25.0	–

## Approvals

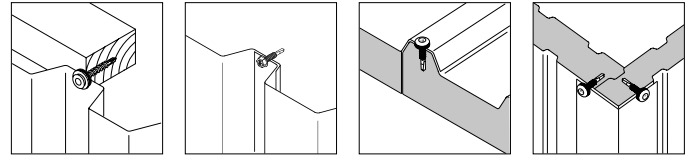
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## Features and Benefits

- Fast and chip-free installation thanks to the FastTip
- Self drilling fastener suitable for fastening of overlaps and flashings
- Hybrid fastener suitable for fastening onto metal and timber subconstruction
- No scratches on painted metal surfaces thanks to the sharp FastTip
- Secured against unwinding given by cut-off thread-end and free-spin zone
- No torque control required given by free-spin zone
- Cost saving installation due to pre-drilling of metal sheets no longer necessary
- High quality EPDM sealing washer for long-term weather sealing
- For roof applications with drill pressure of 300 N (30 kg) the new CXLW-4.8 can drill trough 2×1.25 mm steel sheets

## Documentation

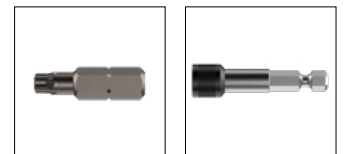
Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and timber

Product code	PU	L	CL <sub>lap</sub>	TL/CL <sub>timb</sub>	t <sub>fix, tim</sub>	A10
CXLW-D10-A10-4,8×28-A2	1000	28	0.40–2.50	0–25	0–1	1655713
CXLW-D10-A10-4,8×28-A2	250	28	0.40–2.50	0–25	0–1	1676175
CXLW-D10-A10-4,8×28-A2-RAL7024	250	28	0.40–2.50	0–25	0–1	1655745
CXLW-D10-A10-4,8×28-A2-RAL9006	250	35	0.40–2.50	0–25	0–1	1655748

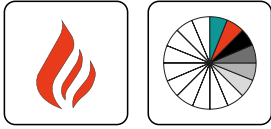
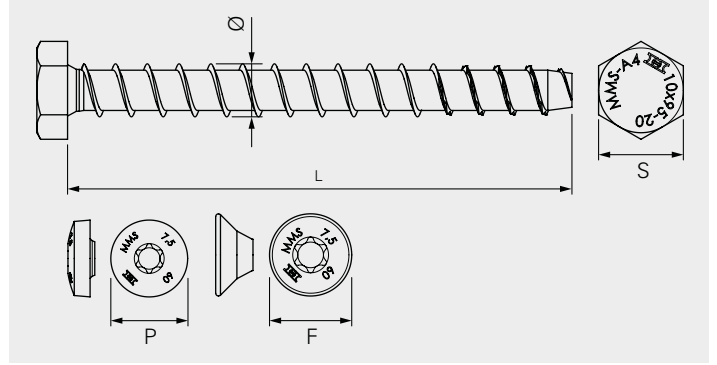
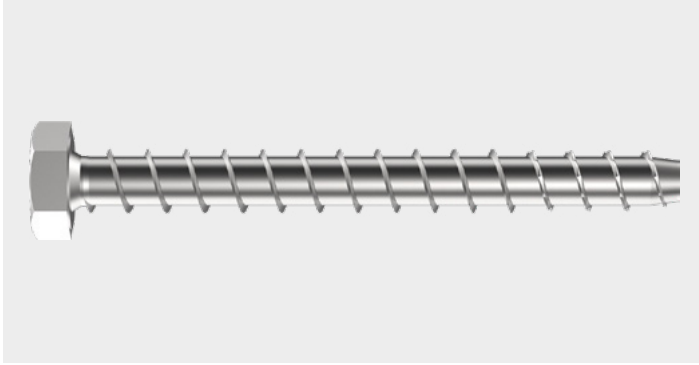
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T20W-25-HEX¼"	10	¼"	T25W	895280
Bit holder ZA¼"	1	¼"	¼"	1162306

# MMS-A4



## Application

Fastening of metal plates, profiles, brackets onto concrete  
 Fastening of metal decks, liner trays onto concrete  
 Fastening of timber battens onto concrete

## Fastener Ø

	7.50	10.0	12.0
Pre-drill Ø	6.0	8.0	10.0
Embedment depth	65	75	90

## Fastener material

Austenitic stainless steel A4, case hardened tip

## Approvals

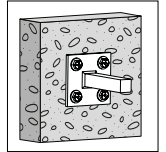


## Features and Benefits

- Self tapping fastener suitable for installation onto concrete
- Easy settable even in case of worn drills
- Settable by means of power-tools and immediately loadbearing
- Faster setting due to toothed functional tip
- Small spacing and edge distances thanks to no spreading effect

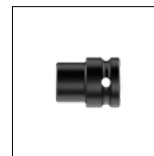
## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A4 onto concrete

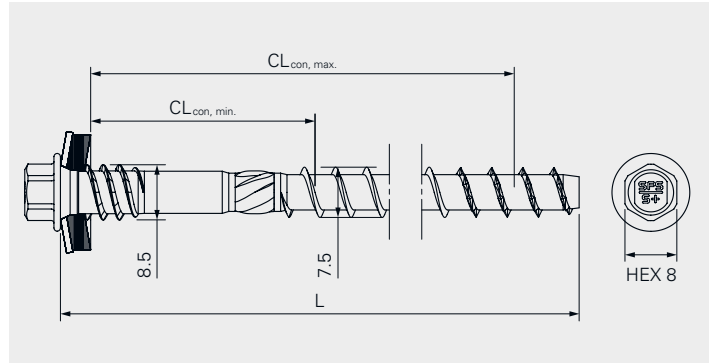
Product code	PU	L	t <sub>fix</sub>	Drive	
MMS-F-C14-7,5×75-A4	50	75	0-10	T30	1480027
MMS-F-C14-7,5×85-A4	50	85	0-20	T30	1480028
MMS-F-C14-7,5×95-A4	50	95	0-30	T30	1486553
MMS-F-C14-7,5×115-A4	50	115	0-50	T30	1486583
MMS-P-D14-7,5×75-A4	50	75	0-10	T30	1480029
MMS-P-D14-7,5×85-A4	50	85	0-20	T30	1480030
MMS-S-7,5×75-A4	50	75	0-10	HEX13	1479976
MMS-S-10×85-A4	25	85	0-10	HEX16	1480024
MMS-S-12×100-A4	25	100	0-10	HEX18	1480026



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	D	L	WL	FL	
SDS-6×210/150-4C	1	-	-	6	210	150	150	1487583
SDS-8×210/150-4C	1	-	-	8	210	150	150	1487585
SDS-10×210/150-4C	1	-	-	10	210	150	150	1487586
E313-¼"-50	1	¼"	HEX13	-	-	-	-	508029
E513-½"-78	1	½"	HEX13	-	-	-	-	1649258
E416-½"-38	1	½"	HEX16	-	-	-	-	1389740
T30-25-HEX¼"	10	¼"	T30	-	-	-	-	2401110
Bit holder ZA¼"	1	¼"	¼"	-	-	-	-	1162306

# MXC-7.5



## Application

Fastening of sandwich panels onto concrete  
Fastening of profile sheets onto concrete

## Fastener Ø

Fastener Ø	<b>7.50</b>		
Pre-drill Ø	6.0		
Embedment depth	65.0		

## Fastener material

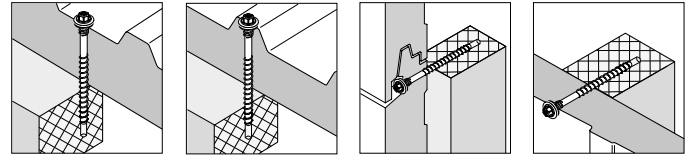
Austenitic stainless steel A4, case hardened tip  
Sealing washer: Austenitic stainless steel A4, EPDM-seal

## Approvals

## Features and Benefits

- Self tapping fastener suitable for installation of sandwich panels onto concrete
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- Optimized support function achieved by engineered double support thread
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- Easy insertion and high load capacities given by the ideal core-/thread geometry
- Reduced abrasion achieved by toothed functional tip



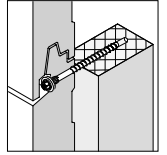


## Fastener in A4 onto concrete

Product code	PU	L	CL <sub>con</sub>	t <sub>fix, con</sub>	S16/A4	S19/A4	S22/A4
MXC-S19/A4-7,5×95-A4	100	95	20–92	20–27	1596755	1596762	1596768
MXC-S19/A4-7,5×115-A4	100	115	37–112	37–47	1596786	1596788	1596790
MXC-S19/A4-7,5×135-A4	100	135	57–132	57–67	1596802	1596806	1596807
MXC-S19/A4-7,5×155-A4	100	155	77–152	77–87	1596812	1596813	1596818
MXC-S19/A4-7,5×175-A4	100	175	97–172	97–107	1596862	1596866	1596868
MXC-S19/A4-7,5×195-A4	100	195	117–192	117–127	1596947	1596953	1596956
MXC-S19/A4-7,5×215-A4	100	215	137–212	137–147	1597023	1597024	1597025
MXC-S19/A4-7,5×235-A4	100	235	157–232	157–167	1597028	1598660	1598674
MXC-S19/A4-7,5×255-A4	100	255	177–252	177–187	1598678	1598686	1598715
MXC-S19/A4-7,5×275-A4	100	275	197–272	197–207	1598722	1598726	1598727
MXC-S19/A4-7,5×295-A4	100	295	217–292	217–227	1598733	1598735	1598791
MXC-S19/A4-7,5×315-A4	100	315	237–312	237–247	1598798	1598813	1598814
MXC-S19/A4-7,5×335-A4	100	335	257–332	257–267	1598917	1598932	1598970
MXC-S19/A4-7,5×355-A4	100	355	277–352	277–287	1598993	1599213	1599214
MXC-S19/A4-7,5×375-A4	100	375	297–372	297–307	1599216	1599217	1599218

t<sub>fix, con</sub>: CL<sub>con, min.</sub> – (CL<sub>met, max.</sub> – H<sub>nom, min.</sub>)

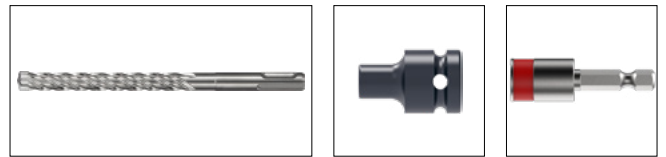
Without approval



## Fastener in A4 onto concrete

Product code	PU	L	CL <sub>con</sub>	t <sub>fix, con</sub>	No washer
MXC-7,5×95-A4	100	95	23-95	23-30	1596782
MXC-7,5×115-A4	100	115	40-115	40-50	1596801
MXC-7,5×135-A4	100	135	60-135	60-70	1596811
MXC-7,5×155-A4	100	155	80-155	80-90	1596820
MXC-7,5×175-A4	100	175	100-175	100-110	1596891
MXC-7,5×195-A4	100	195	120-195	120-130	1596957
MXC-7,5×215-A4	100	215	140-215	140-150	1597026
MXC-7,5×235-A4	100	235	160-235	160-170	1598675
MXC-7,5×255-A4	100	255	180-255	180-190	1598720
MXC-7,5×275-A4	100	275	200-275	200-210	1598728
MXC-7,5×295-A4	100	295	220-295	220-230	1598795
MXC-7,5×315-A4	100	315	240-315	240-250	1598816
MXC-7,5×335-A4	100	335	260-335	260-270	1598972
MXC-7,5×355-A4	100	355	280-355	280-290	1599215
MXC-7,5×375-A4	100	375	300-375	300-310	1599219

t<sub>fix, con</sub>: CL<sub>con, min.</sub> - (CL<sub>met, max.</sub> - h<sub>nom, min.</sub>)

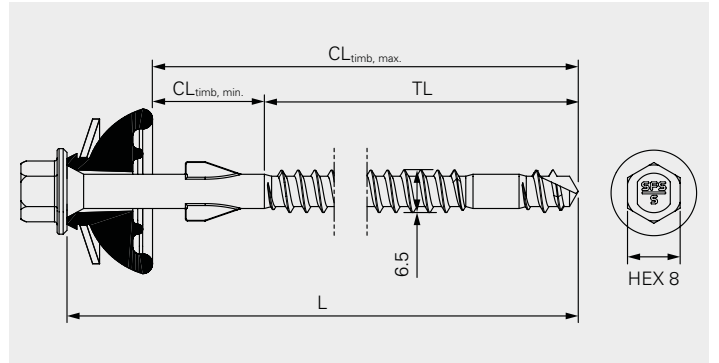


## Accessories/Ancillaries

Product code	Drive	Head drive	PU	D	L	WL	FL	
SDS-6x210/150-4C	-	-	1	6	210	150	150	1487583
SDS-6x310/250-4C	-	-	1	6	210	250	250	1487584
SDS-6x515/455-4C	-	-	1	6	515	455	200	1608141
E308-¼"-50	¼"	HEX8	1	-	-	-	-	1646160
E508-½"-40	½"	HEX8	1	-	-	-	-	1648380



# SCFW-S-6.5



## Application

Fastening of fibre cement boards onto timber

## Component 1 (t<sub>I</sub>)

Fibre cement 2x6.50

## Component 2 (t<sub>II</sub>)

Timber l<sub>ef</sub> ≥57.0

$\Sigma_{\max} t_I + t_{II}$

—

## Fastener material

Austenitic stainless steel A2

BAZ washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

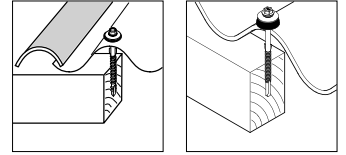


## Features and Benefits

- Self drilling fastener suitable for corrugated fibre cement boards
- High quality EPDM sealing element for long-term weather sealing
- Fast installation thanks to the threaded drill point
- No pre-drilling of fibre cement board required thanks to expanding wings

## Documentation

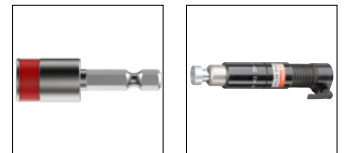
Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	
SCFW-S-BAZ-6,5×130	100	130	50	0-120	0-63	1627280

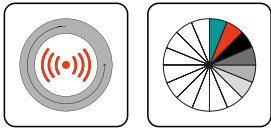
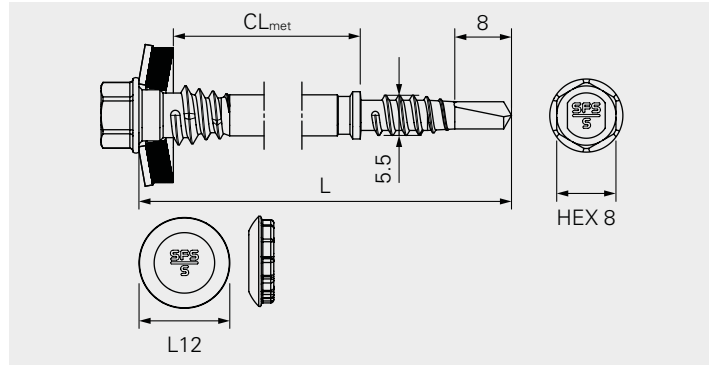
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
CF40-FEIN-ASCS6.3-BASIC	1	FEIN	-	1371950

# SDC2-S-5.5



## Application

Distance fastening of profile sheets onto liner trays

## Component 1 (t<sub>I</sub>)

Steel	0.50–2.0
Aluminium	0.80–2.0

## Component 2 (t<sub>II</sub>)

Steel	0.63–2×1.25
Steel	0.63–2×1.25

$\Sigma_{\max} t_I + t_{II}$

		4.50
		4.50

## Fastener material

Austenitic stainless steel A2, case hardened drill point  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

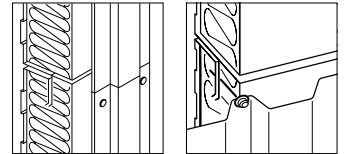


## Features and Benefits

- Self drilling fastener suitable for installation of metal profile sheets at a set distance from liner trays
- Perfect supporting of the metal sheet given by support thread with cut-off thread-end
- Precisely fastening distance given by the flange on the shank
- No torque control required given by free-spin zone
- High shear resistance achieved by optimized fastener geometry
- High bending capacity for absorption of thermal expansion of the profile sheet
- High quality EPDM sealing washer for long-term weather sealing
- Secured against unwinding given by cut-off thread-end

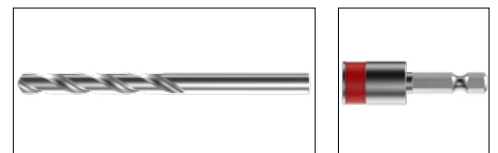
## Documentation

Installation instruction | Technical Data



## Fastener in A2 onto steel

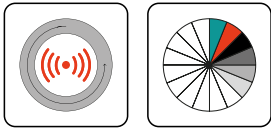
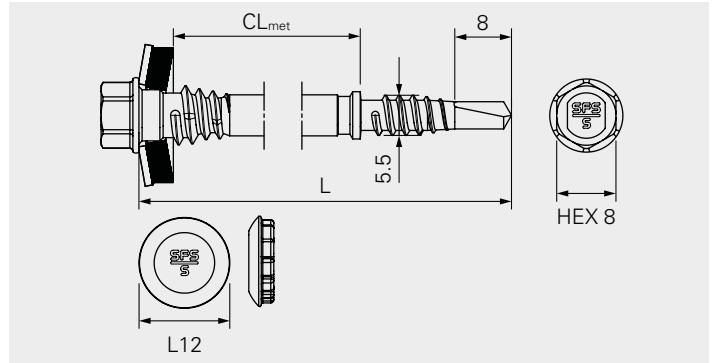
Product code	PU	L	CL <sub>met</sub> / Insulation	Liner tray (t <sub>l</sub> ) substructure	S16
SDC2-S-S16-5,5×64	100	64	40	0.63–2.50	1134176
SDC2-S-S16-5,5×104	250	104	80	0.63–2.50	1478861



## Accessories/Ancillaries

Product code	PU	L	Drive	Head drive	
Driller HSS-6,5	10	101/63	–	–	893457
E308-¼"-50	1		¼"	HEX8	1646160

# SDC3-S-5.5



## Application

Distance fastening of profile sheets onto liner trays

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		$\Sigma_{\max} t_I + t_{II}$
Steel	0.50–2.0	Steel	0.63–2×1.50	5.0
Aluminium	0.80–2.0	Steel	0.63–2×1.50	5.0

## Fastener material

Austenitic stainless steel A2, case hardened drill point  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals



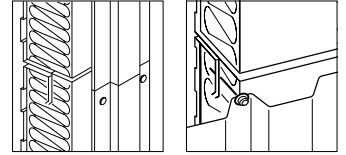
## Features and Benefits

- Self drilling fastener suitable for installation of metal profile sheets at a set distance from liner trays
- Perfect supporting of the metal sheet given by support thread with cut-off thread-end
- Precisely fastening distance given by the flange on the shank
- No torque control required given by free-spin zone
- High shear resistance achieved by optimized fastener geometry
- High bending capacity for absorption of thermal expansion of the profile sheet
- High quality EPDM sealing washer for long-term weather sealing
- Secured against unwinding given by cut-off thread-end

## Documentation

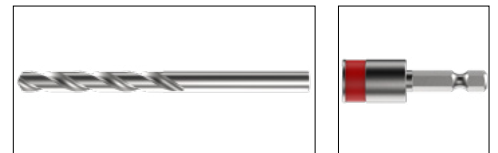
Installation instruction | Technical Data





## Fastener in A2 onto steel

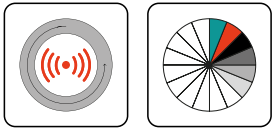
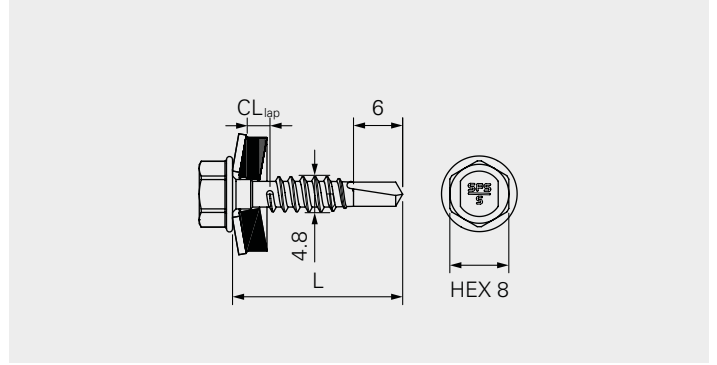
Product code	PU	L	CL <sub>met</sub> / Insulation	Liner tray (t <sub>l</sub> ) substructure	S16
SDC3-S-S16-5,5x64	100	64	40	0.63-3.0	1526645
SDC3-S-S16-5,5x104	250	104	80	0.63-3.0	1541205



## Accessories/Ancillaries

Product code	PU	L	Drive	Head drive	
Driller HSS-6,5	10	101/63	-	-	893457
E308-¼"-50	1		¼"	HEX8	1646160

# SL2-S-4.8



## Application

Fastening of overlaps of profile sheets  
 Fastening of overlaps of sandwich panels  
 Fastening of flashings onto sandwich panels  
 Fastening of flashings onto profile sheets

## Component 1 (t<sub>I</sub>)

Steel  
 Steel

0.40–1.50  
 2×0.63–0.88

## Component 2 (t<sub>II</sub>)

Steel  
 Steel

0.40–1.50  
 2×0.63–0.88

$\Sigma_{\max} t_I + t_{II}$

2.50  
 3.60

## Fastener material

Austenitic stainless steel A2, case hardened drill point  
 Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

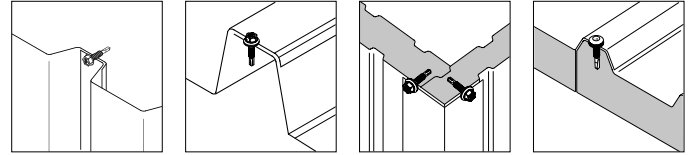
ETA-10/0198

## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps and flashings
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High quality EPDM sealing washer for long-term weather sealing

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel

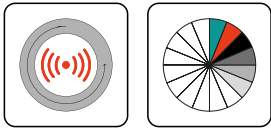
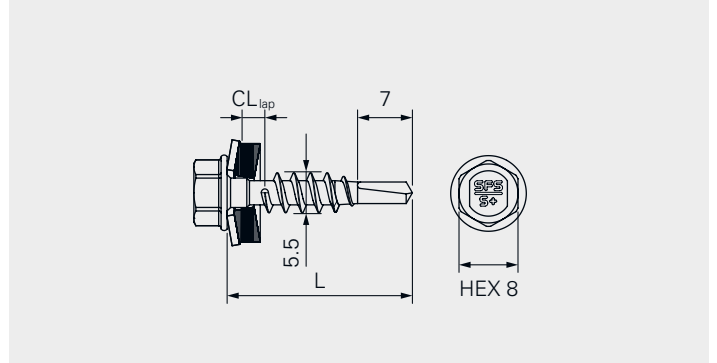
Product code	PU	L	CL <sub>lap</sub>	S14	S16
SL2-S-S14-4,8×22	250	22	0.80–2.50	1158560	1082912



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SL2-S-5.5



## Application

Fastening of overlaps of profile sheets  
 Fastening of overlaps of sandwich panels  
 Fastening of flashings onto sandwich panels  
 Fastening of flashings onto profile sheets

## Component 1 (t<sub>I</sub>)

Steel 0.40–1.50  
 Aluminium 0.50–1.50

## Component 2 (t<sub>II</sub>)

Steel 0.40–1.50  
 Aluminium 0.50–1.50

$\Sigma_{\max} t_I + t_{II}$

2.50  
 3.0

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
 Sealing washer: Austenitic stainless steel A4/A4 EPDM-seal

## Approvals

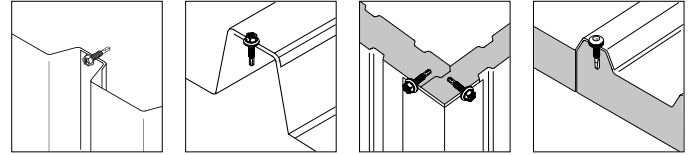
ETA-10/0198

## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps and flashings
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High quality EPDM sealing washer for long-term weather sealing

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and aluminium

Product code	PU	L	CL <sub>lap</sub>	S14	S16	S19
SL2-S-S14-5,5x25-A2	250	25	0.80-2.50	1486245	1659401	1133480

## Fastener in A4 onto steel and aluminium

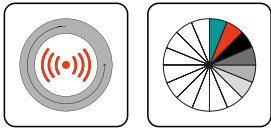
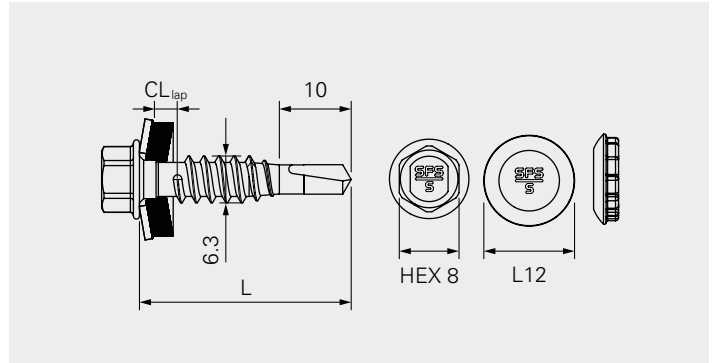
Product code	PU	L	CL <sub>lap</sub>	S14/A4	S16/A4	S19/A4
SL2-S-S14/A4-5,5x25-A4	250	25	0.80-2.50	1585156	1614748	1588962



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SL2-S-6.3



## Application

Fastening of overlaps of profile sheets  
 Fastening of overlaps of sandwich panels  
 Fastening of flashings onto sandwich panels  
 Fastening of flashings onto profile sheets

Component 1 ( $t_1$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_1 + t_{II}$
Steel	0.40–1.50	Steel	0.40–1.50	2.50
Aluminium	0.50–1.50	Aluminium	0.50–1.50	3.0

## Fastener material

Austenitic stainless steel A2, case hardened drill point  
 Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

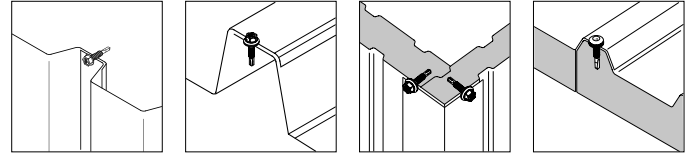
ETA-10/0198

## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps and flashings
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High quality EPDM sealing washer for long-term weather sealing

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and Aluminium

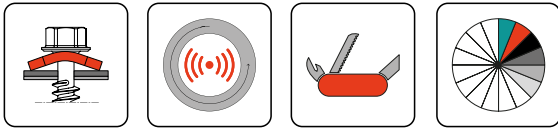
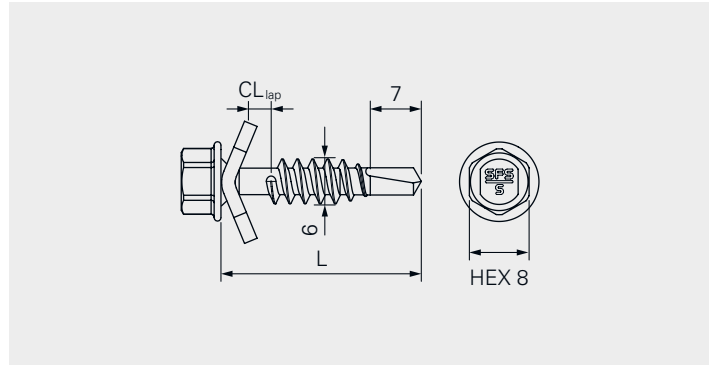
Product code	PU	L	CL <sub>lap</sub>	S14	S16	S19
SL2-S-S14-6,3×28	500	28	0.80–2.50	1210627	1133512	1133511
SL2-S-L12-S14-6,3×28	500	28	0.80–2.50	1135477	–	–



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SL3/2-5-S-6.0



## Application

Fastening of metal profiles onto sandwich panels  
 Fastening of metal profiles onto profile sheets  
 Fastening of metal profiles onto metal decks, liner trays

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
 Curved disc: Austenitic stainless steel A2/A4

## Component 1 (t<sub>I</sub>)

Steel 1.0–2.0  
 Aluminium 1.50–3.0

## Component 2 (t<sub>II</sub>)

Steel 0.63–2×0.90  
 Steel 0.63–2×0.90

$\Sigma_{\max} t_I + t_{II}$

3.80  
 4.80

## Approvals



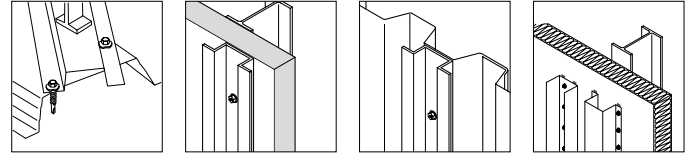
## Features and Benefits

- Self drilling fastener suitable for installation of metal profiles onto thin metal sheets
- High clamping range with clamping force independent of the clamping thickness given by the spring washer
- Secured against unwinding given by cut-off thread-end and free-spin zone
- No torque control required given by free-spin zone
- High tension and shear resistance achieved by optimized fastener geometry

## Documentation

Approval document (ETA) | Declaration of performance (DoP)





## Fastener in A2 onto steel and aluminium

Product code	PU	L	CL <sub>lap</sub>	SV16
SL3/2-5-S-SV16-6x27	500	27	1.90-4.80	1071554

## Fastener in A4 onto steel and aluminium

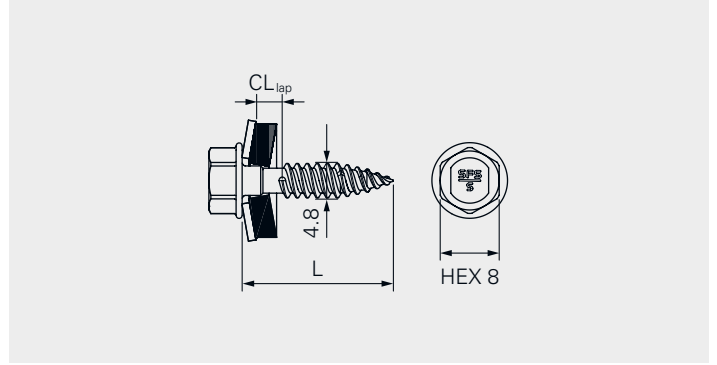
Product code	PU	L	CL <sub>lap</sub>	SV16/A4
SL3/2-5-S-SV16/A4-6x27-A4	500	27	1.90-4.80	1426185



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SLG-S-4.8



## Application

Fastening of overlaps of profile sheets  
 Fastening of overlaps of sandwich panels  
 Fastening of flashings onto sandwich panels  
 Fastening of flashings onto profile sheets

## Component 1 (t<sub>I</sub>)

Steel

0.40–1.0

## Component 2 (t<sub>II</sub>)

Steel

0.40–1.0

$\Sigma_{\max} t_I + t_{II}$

2.0

## Fastener material

Austenitic stainless steel A2, case hardened speed point  
 Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

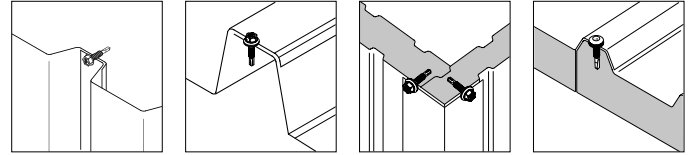


## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps and flashings
- Fast and chip-free installation thanks to the FastTip
- No scratches on painted metal surfaces thanks to the sharp FastTip
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- Cost saving installation due to post-cleaning of chips no longer necessary
- High quality EPDM sealing washer for long-term weather sealing
- High tension and shear resistance achieved by optimized fastener geometry

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel

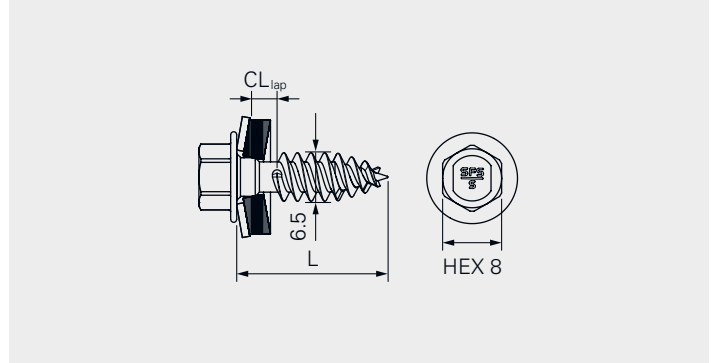
Product code	PU	L	CL <sub>lap</sub>	S14	S16	S19
SLG-S-S14-4,8x20	250	20	0.80-2.0	1351313	1378614	1378615



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SLG-S-6.5



## Application

Fastening of metal profiles onto sandwich panels  
Fastening of metal profiles onto profile sheets

## Component 1 (t<sub>I</sub>)

Steel predrilled	1.50–5.0
Alu predrilled	1.50–5.0
Steel	0.40–1.0

## Component 2 (t<sub>II</sub>)

Steel	0.50–2×1.0
Steel	0.50–2×1.0
Steel	0.40–1.0

$\Sigma_{\max} t_I + t_{II}$

6.0
6.0
2.0

## Fastener material

Austenitic stainless steel A2, case hardened speed point  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

CE<sub>19</sub>  
ETA-10/0198

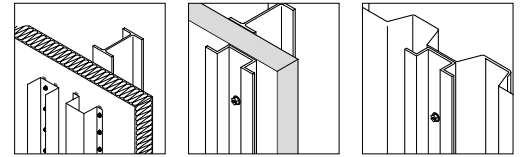


## Features and Benefits

- Self drilling fastener suitable for installation of pre-punched metal profiles onto thin metal sheets
- High quality EPDM sealing washer for long-term weather sealing
- Fast and chip-free installation thanks to the FastTip
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- Cost saving installation due to post-cleaning of chips no longer necessary
- High tension resistance achieved by optimized fastener geometry

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel

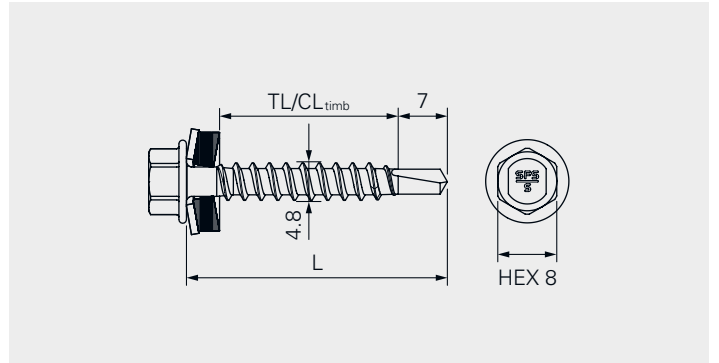
Product code	PU	L	CL <sub>lap</sub>	Pre-drill Ø	No washer	S14	S16
SLG/0-2-S-S14-6,5×20	250	20	0-2	-	-	1492629	-
SLG/4-6-S-S16-6,5×24	1000	24	4-6	6.50-7.20	-	-	1618935
SLG/2-5-S-6,5×20	250	20	2-5	6.50-7.20	1468117	-	-



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SW2-S-4.8



## Application

Fastening of profile sheets onto timber

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	0.50–1.50	Timber	l <sub>ef</sub> ≥25.0	–
Aluminium	0.50–1.50	–	–	–

## Fastener material

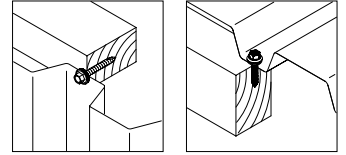
Austenitic stainless steel A2, case hardened drill point  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

–

## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- Reduced risks of timber splitting given by the drill point



## Fastener in A2 onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	S14
SW2-S-S14-4,8×35-A2	250	35	25	0-25	0-1	755834

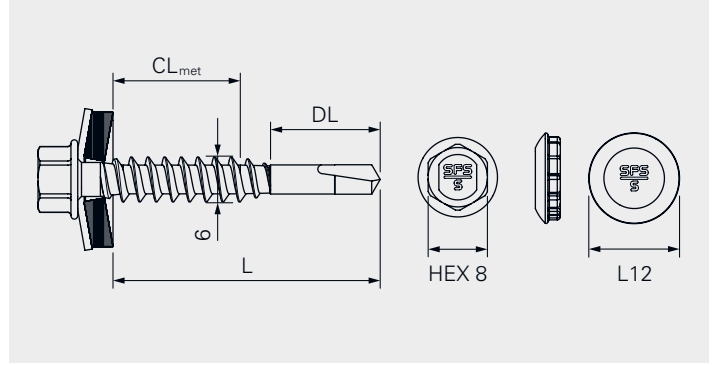
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SX3-6.0



## Application

Fastening of profile sheets onto metal profiles  
 Fastening of profile sheets onto metal decks, liner trays  
 Fastening of standing seam clips onto metal decks

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
 Sealing washer: Austenitic stainless steel A2/A4, EPDM-seal

## Component 1 (t<sub>I</sub>)

Steel 0.50–1.50  
 Aluminium 0.50–1.50  
 –  
 –

## Component 2 (t<sub>II</sub>)

Steel 0.63–2.50  
 Steel 2×0.63–1.50  
 Aluminium 1.0–2.50  
 Aluminium 2×1.0–1.50

## Σ<sub>max</sub> t<sub>I</sub>+t<sub>II</sub>

3.50  
 4.0  
 3.50  
 4.0

## Approvals



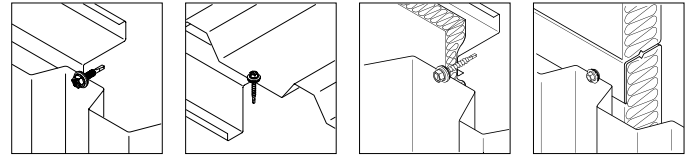
## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- Easy drilling through the whole clamping thickness (including insulation strip in between) given by the long drill point

## Documentation

Approval document (ETA) | Declaration of performance (DoP)





## Fastener in A2 onto steel and aluminium

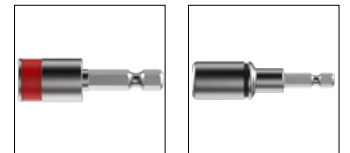
Product code	PU	L	CL <sub>met</sub>	DL	t <sub>fix, met</sub>	A12	S16	S19
SX3-S16-6×29-A2	500	29	0-9	9	0-6/8	-	1141978	1142000
SX3-S16-6×40-A2	500	40	0-15	15	0-12/14	-	1133237	1142008
SX3-S16-6×50-A2	250	50	0-20	20	0-17/19	-	1133239	1142063
SX3-L12-A12-6×29-A2	500	29	0-9	9	0-6/8	1142002	-	-

t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>tl, min.</sub>)

## Fastener in A4 onto steel and aluminium

Product code	PU	L	CL <sub>met</sub>	DL	t <sub>fix, met</sub>	S16/A4	S19/A4
SX3-S16/A4-6×29-A4	500	29	0-9	9	0-6/8	1479579	1614057
SX3-S16/A4-6×38-A4	500	38	0-18	9	0-15/17	1575772	1614745
SX3-S16/A4-6×48-A4	500	48	0-28	9	0-25/27	1575777	1614058

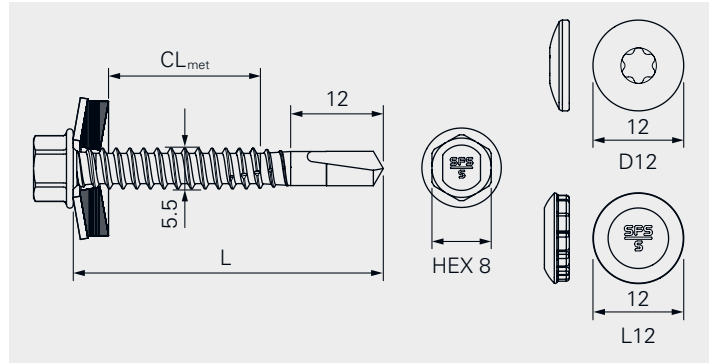
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>tl, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
E420-¼"-74	1	¼"	L12	973316

# SX5-5.5



## Application

Fastening of sandwich panels onto metal profiles (hidden fixing)  
 Fastening of profile sheets onto metal profiles  
 Fastening of profile sheets onto metal decks, liner trays  
 Fastening of standing seam clips onto metal profiles

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
 Sealing washer: Austenitic stainless steel A2/A4, EPDM-seal

Component 1 ( $t_I / t_{NII}$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_I + t_{II}$
Steel	0.50–1.50	Steel	1.50–4.0	5.0
Aluminium	0.50–1.50	Steel	2×1.50–2.50	6.0
Sandwich	–	Aluminium	1.50–4.0	5.0
–	–	Aluminium	2×1.50–2.50	6.0

## Approvals

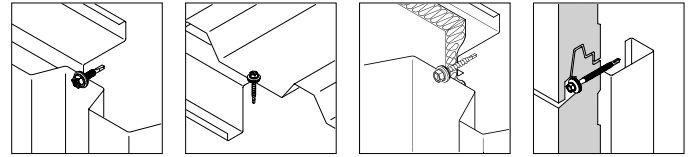
ETA-10/0198 ETA-13/0183

## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets and sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Easy drilling through overlapped metal profiles given by the long drill point

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and aluminium

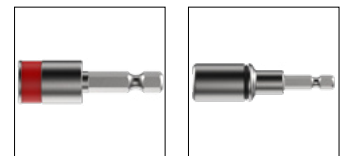
Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S12	S16	S19
SX5-S16-5,5×31-A2	500	31	0-8	0-3/6	-	1122767	1134299
SX5-S16-5,5×35-A2	500	35	0-12	0-7/10	-	1123168	1123167
SX5-S16-5,5×41-A2	500	41	0-18	0-13/16	-	1134477	1134476
SX5-S16-5,5×53-A2	250	53	20-30	20-25/28	-	1133684	1155085
SX5-S16-5,5×61-A2	250	61	0-38	0-33/36	-	1168765	1168767
SX5-S16-5,5×78-A2	250	78	8-55	0-50/52	-	1133330	1133331
SX5-L12-S16-5,5×31-A2	500	31	0-8	0-3/6	-	1134340	-
SX5-L12-S16-5,5×35-A2	500	35	0-12	0-7/10	-	1134352	-
SX5-L12-S16-5,5×41-A2	500	41	0-18	0-13/16	-	1135439	-

t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)

## Fastener in A4 onto steel and aluminium

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16/A4	S19/A4
SX5-S16/A4-5,5×31-A4	500	31	0-8	0-3/16	1614135	1588949
SX5-S16/A4-5,5×35-A4	500	35	0-12	0-7/10	1585655	1614137
SX5-S16/A4-5,5×61-A4	250	61	0-38	0-33/36	1585656	1614138

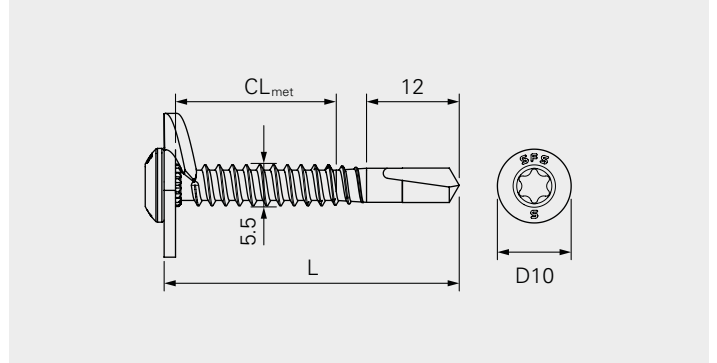
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
E420-¼"-74	1	¼"	L12	973316

# SX5-D10-5.5



## Application

Fastening of single-ply insulated roof panels onto metal profiles

## Component 1 (t<sub>I</sub>)

Single-ply panel

## Component 2 (t<sub>II</sub>)

Steel

$\Sigma_{\max} t_I + t_{II}$

1.5–4.0

5.0

## Fastener material

Austenitic stainless steel A2, case hardened drill point

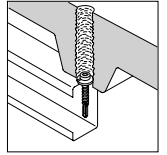
Cutting disc: Austenitic stainless steel A2

## Approvals

–

## Features and Benefits

- Self drilling fastener suitable for installation of single-ply insulated roof panels
- No pre-drilling of membrane and insulation required thanks to cutting-washer
- Easy drilling through overlapped metal profiles given by the long drill point
- Self coring fastener without disruption of the insulating material achieved by the cutting-washer



## Fastener in A2 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	SC
SX5-D10-S19/C9-5,5x39-A2	500	39	0-20	0-15/18	1122625

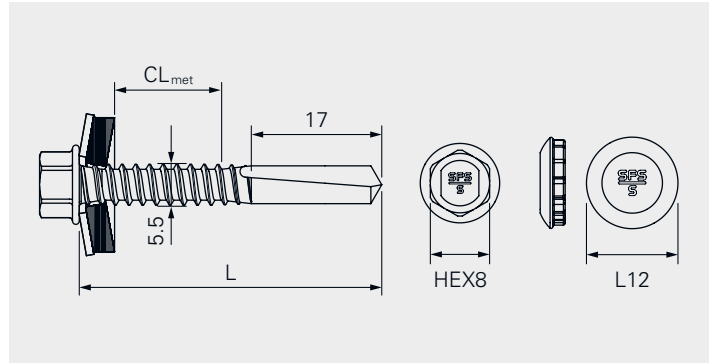
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>tl, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> - t<sub>tl, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T25W-175-HEX¼"	5	¼"	T25W	727979

# SX14-5.5



## Application

Fastening of profile sheets onto metal beams  
 Fastening of sandwich panels onto metal beams (hidden fixing)  
 Fastening of standing seam clips onto metal beams

Component 1 ( $t_I / t_{NII}$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_I + t_{II}$
Steel	0.50–1.50	Steel	4.0–12.0	13.50
Aluminium	0.50–1.50	–	–	–
Sandwich	–	–	–	–

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
 Sealing washer: Austenitic stainless steel A2/A4, EPDM-seal

## Approvals

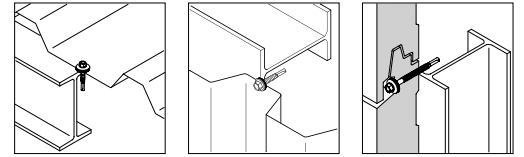
ETA-10/0198 ETA-13/0183

## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets and sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- High performance drill point for heavy steel beams

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel

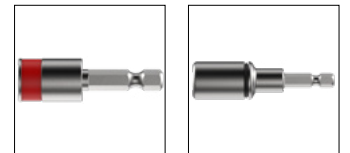
Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16	S19
SX14-S16-5,5×40-A2	500	40	0-12	0-1/8	770785	770796
SX14-S16-5,5×48-A2	500	48	0-20	0-8/16	773625	773626
SX14-S16-5,5×66-A2	250	66	0-38	0-26/34	770805	770807
SX14-S16-5,5×86-A2	250	86	0-58	0-46/54	523277	519419
SX14-L12-S16-5,5×40-A2	500	40	0-12	0-1/8	-	776328

t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)

## Fastener in A4 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16	S19
SX14-S16/A4-5,5×40-A4	500	40	0-12	0-1/8	1585191	1585192
SX14-S16/A4-5,5×55-A4	250	55	0-27	0-15/23	1585194	1614143

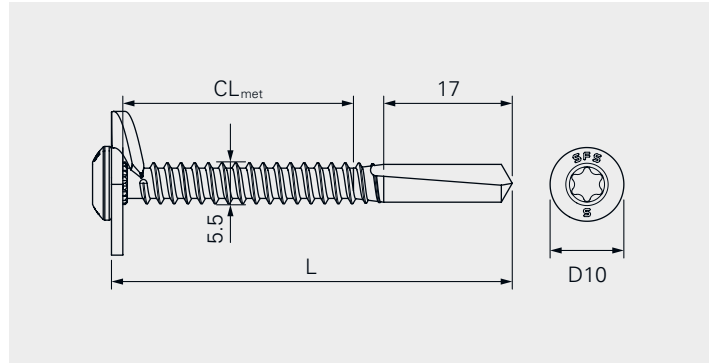
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
E420-¼"-74	1	¼"	L12	973316

# SX14-D10-5.5



## Application

Fastening of single-ply insulated roof panels onto metal beams

## Component 1 (t<sub>I</sub>)

Single-ply panel

## Component 2 (t<sub>II</sub>)

Steel

4.0–12.0

$\Sigma_{\max} t_I + t_{II}$

13.50

## Fastener material

Austenitic stainless steel A2, case hardened drill point

Cutting disc: Austenitic stainless steel A2

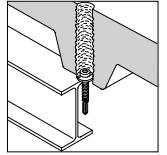
## Approvals

–

## Features and Benefits

- Self drilling fastener suitable for installation of single-ply insulated roof panels
- No pre-drilling of membrane and insulation required thanks to cutting-washer
- Self coring fastener without disruption of the insulating material achieved by the cutting-washer
- High performance drill point for heavy steel beams





## Fastener in A2 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	SC
SX14-D10-S19/C9-5,5×53-A2	500	53	0-28	0-16/24	1174930

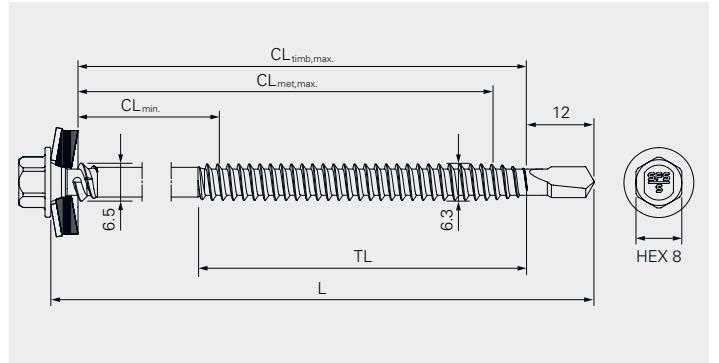
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T25W-175-HEX¼"	5	¼"	T25W	727979

# SXC5-6.3



## Application

Fastening of sandwich panels onto metal profiles  
 Fastening of sandwich panels onto timber  
 Fastening of profile sheets onto metal profiles  
 Fastening of profile sheets onto timber

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
 Sealing washer: Austenitic stainless steel A2/A4, EPDM-seal

## Component 1 ( $t_1 / t_{NII}$ )

Sandwich panel  $\geq 0.40$

## Component 2 ( $t_{II}$ )

Steel	1.0–4.0	5.0
Steel	2×0.75–2×2.70	6.50
Timber	$l_{ef} \geq 35$	–

$\Sigma_{max} t_1 + t_{II}$

## Approvals

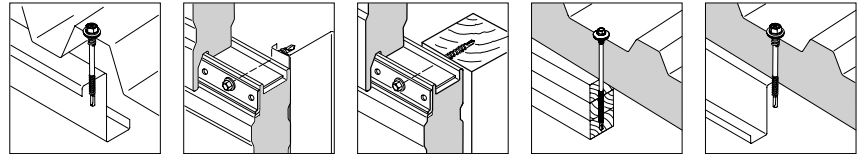


## Features and Benefits

- Self drilling fastener suitable for installation of sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- Optimized support function achieved by engineered double support thread
- Easy drilling through overlapped metal profiles given by the long drill point
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- High tension resistance achieved by optimized fastener geometry
- Economical benefits given by less fastener needed and installation time savings and / or optimized subconstruction

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and timber

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	CL <sub>timb</sub>	t <sub>fix, timb</sub>	TL	S16	S19	S22
SXC5-S19-6,3×65-A2	100	65	15–40	15–35/39	15–40	–	37	1683967	1684006	1684007
SXC5-S19-6,3×80-A2	100	80	30–55	30–50/54	30–65	–	37	1573397	1573583	1573732
SXC5-S19-6,3×100-A2	100	100	40–75	40–70/74	40–85	40–50	47	1573398	1573584	1573734
SXC5-S19-6,3×120-A2	100	120	50–95	50–90/94	50–105	50–70	57	1573400	1573585	1573736
SXC5-S19-6,3×140-A2	100	140	70–115	70–110/114	70–125	70–90	57	1573411	1573586	1573738
SXC5-S19-6,3×160-A2	100	160	90–135	90–130/134	90–145	90–110	57	1573414	1573587	1573740
SXC5-S19-6,3×190-A2	100	190	110–165	110–160/164	110–175	110–140	67	1573415	1573588	1573751
SXC5-S19-6,3×220-A2	100	220	140–195	140–190/194	140–205	140–170	67	1573416	1573590	1573762
SXC5-S19-6,3×250-A2	100	250	170–225	170–220/224	170–235	170–200	67	1573417	1573591	1573768
SXC5-S19-6,3×290-A2	100	290	210–265	210–260/264	210–275	210–240	67	1573418	1573592	1573773

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)

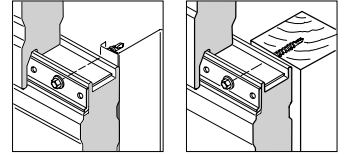
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – t<sub>ef, min.</sub>)

## Fastener in A4 onto steel and timber

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	CL <sub>timb</sub>	t <sub>fix, timb</sub>	TL	S16	S19	S22
SXC5-S19-6,3×80-A4	100	80	30–55	30–50/54	30–65	–	37	1599990	1600001	1600003
SXC5-S19-6,3×100-A4	100	100	40–75	40–70/74	40–85	40–50	47	1600005	1600007	1600009
SXC5-S19-6,3×120-A4	100	120	50–95	50–90/94	50–105	50–70	57	1600022	1600023	1600024
SXC5-S19-6,3×140-A4	100	140	70–115	70–110/114	70–125	70–90	57	1600026	1600027	1600028
SXC5-S19-6,3×160-A4	100	160	90–135	90–130/134	90–145	90–110	57	1600042	1600043	1600044
SXC5-S19-6,3×190-A4	100	190	110–165	110–160/164	110–175	110–140	67	1600047	1600049	1600051
SXC5-S19-6,3×220-A4	100	220	140–195	140–190/194	140–205	140–170	67	1600055	1600056	1600057
SXC5-S19-6,3×250-A4	100	250	170–225	170–220/224	170–235	170–200	67	1600059	1600064	1600071
SXC5-S19-6,3×290-A4	100	290	210–265	210–260/264	210–275	210–240	67	1600078	1600080	1600134
SXC5-S19-6,3×345-A4	100	345	265–320	265–315/319	265–330	265–295	67	1600140	1600161	1600166

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)

t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – t<sub>ef, min.</sub>)



## Fastener in A2 onto steel and timber

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	CL <sub>timb</sub>	t <sub>fix, timb</sub>	TL	No washer
SXC5-6,3×65-A2	100	65	18–43	18–38/42	18–53	–	37	1661978
SXC5-6,3×80-A2	100	80	33–58	33–53/57	33–68	–	37	1599843
SXC5-6,3×100-A2	100	100	43–78	43–73/77	43–88	43–53	47	1599844
SXC5-6,3×120-A2	100	120	53–98	53–93/97	53–108	53–73	57	1599847
SXC5-6,3×140-A2	100	140	73–118	73–113/117	73–128	73–93	57	1599848
SXC5-6,3×160-A2	100	160	93–138	93–133/137	93–148	93–113	57	1599851
SXC5-6,3×190-A2	100	190	113–168	113–163/167	113–178	113–143	67	1599857
SXC5-6,3×220-A2	100	220	143–198	143–193/197	143–208	143–173	67	1599859
SXC5-6,3×250-A2	100	250	173–228	173–223/227	173–238	173–203	67	1599860
SXC5-6,3×290-A2	100	290	213–268	213–263/267	213–278	213–243	67	1599871

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)

t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – t<sub>lef, min.</sub>)

## Fastener in A4 onto steel and timber

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	CL <sub>timb</sub>	t <sub>fix, timb</sub>	TL	No washer
SXC5-6,3×80-A4	100	80	33–58	33–53/57	33–68	–	37	1600004
SXC5-6,3×100-A4	100	100	43–78	43–73/77	43–88	43–53	47	1600010
SXC5-6,3×120-A4	100	120	53–98	53–93/97	53–108	53–73	57	1600025
SXC5-6,3×140-A4	100	140	73–118	73–113/117	73–128	73–93	57	1600029
SXC5-6,3×160-A4	100	160	93–138	93–133/137	93–148	93–113	57	1600045
SXC5-6,3×190-A4	100	190	113–168	113–163/167	113–178	113–143	67	1600052
SXC5-6,3×220-A4	100	220	143–198	143–193/197	143–208	143–173	67	1600058
SXC5-6,3×250-A4	100	250	173–228	173–223/227	173–238	173–203	67	1600073
SXC5-6,3×290-A4	100	290	213–268	213–263/267	213–278	113–243	67	1600137
SXC5-6,3×345-A4	100	345	268–323	268–318/322	268–333	268–298	67	1600185

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)

t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – t<sub>lef, min.</sub>)

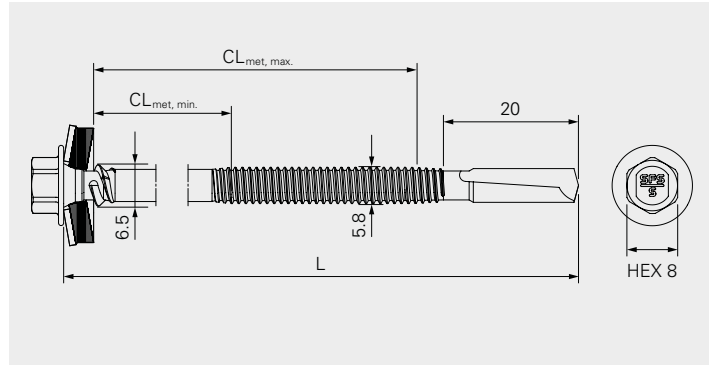
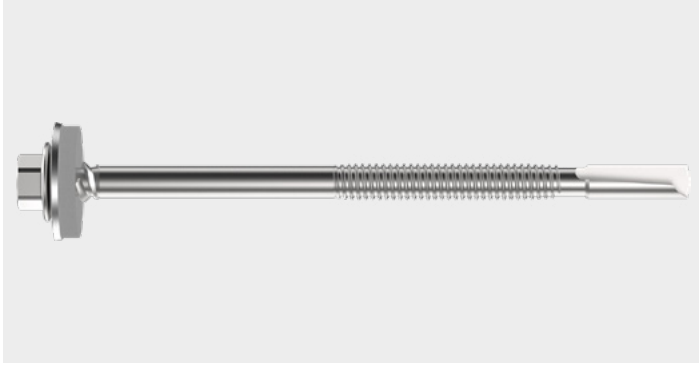


## Accessories/Ancillaries

Product code	PU	Drive	Head drive	No washer
E308-¼"-50	1	¼"	HEX8	1646160



# SXC16-5.8



## Application

Fastening of sandwich panels onto metal beams  
Fastening of profile sheets onto metal beams

Component 1 ( $t_I / t_{NII}$ )	Component 2 ( $t_{II}$ )	$\Sigma_{\max} t_I + t_{II}$
Sandwich panel $\geq 0.40$	Steel 3.0–14.0	16.0

## Fastener material

Austenitic stainless steel A2/A4, case hardened drill point  
Sealing washer: Austenitic stainless steel A2/A4, EPDM-seal

## Approvals

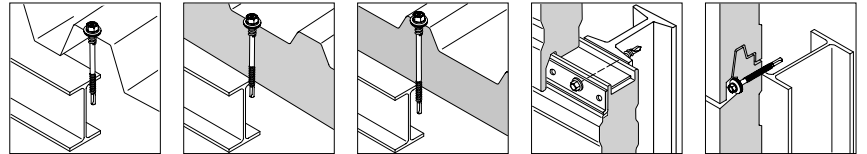
**CE**<sub>19</sub>  
ETA-13/0183

## Features and Benefits

- Self drilling fastener suitable for installation of sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- Optimized support function achieved by engineered double support thread
- High performance drill point for heavy steel beams
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- High tension resistance achieved by optimized fastener geometry
- Economical benefits given by less fastener needed and installation time savings

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel

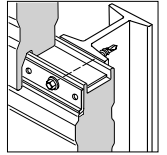
Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16	S19	S22
SXC16-S19-5,8×90-A2	100	90	30–58	30–44/55	1573419	1573595	1573774
SXC16-S19-5,8×110-A2	100	110	40–78	40–64/75	1573420	1573596	1573783
SXC16-S19-5,8×130-A2	100	130	50–98	50–84/95	1573441	1573597	1573789
SXC16-S19-5,8×150-A2	100	150	70–118	70–104/115	1573443	1573707	1573790
SXC16-S19-5,8×170-A2	100	170	90–138	90–124/135	1573445	1573709	1573859
SXC16-S19-5,8×200-A2	100	200	110–168	110–154/165	1573446	1573710	1573875
SXC16-S19-5,8×230-A2	100	230	140–198	140–184/195	1573447	1573712	1574011
SXC16-S19-5,8×260-A2	100	260	170–228	170–214/225	1573448	1573714	1574051
SXC16-S19-5,8×300-A2	100	300	210–268	210–254/265	1573450	1573715	1574054

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)

## Fastener in A4 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16	S19	S22
SXC16-S19/A4-5,8×90-A4	100	90	30–58	30–44/55	1613574	1613558	1613576
SXC16-S19/A4-5,8×110-A4	100	110	40–78	40–64/75	1613594	1613595	1613596
SXC16-S19/A4-5,8×130-A4	100	130	50–98	50–84/95	1613602	1613603	1613604
SXC16-S19/A4-5,8×150-A4	100	150	70–118	70–104/115	1613606	1613607	1613608
SXC16-S19/A4-5,8×170-A4	100	170	90–138	90–124/135	1613622	1613623	1613626
SXC16-S19/A4-5,8×200-A4	100	200	110–168	110–154/165	1613693	1613694	1613695
SXC16-S19/A4-5,8×230-A4	100	230	140–198	140–184/195	1613699	1613707	1613708
SXC16-S19/A4-5,8×260-A4	100	260	170–228	170–214/225	1613711	1613712	1613713
SXC16-S19/A4-5,8×300-A4	100	300	210–268	210–254/265	1613720	1614801	1614803
SXC16-S19/A4-5,8×355-A4	100	355	265–323	265–309/320	1614805	1606472	1606474

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)



## Fastener in A2 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	No washer
SXC16-5,8×90-A2	100	90	33–61	33–47/58	1615954
SXC16-5,8×110-A2	100	110	43–81	43–67/78	1615960
SXC16-5,8×130-A2	100	130	53–101	53–87/98	1615963
SXC16-5,8×150-A2	100	150	73–121	73–107/118	1615978
SXC16-5,8×170-A2	100	170	93–141	93–127/138	1616036
SXC16-5,8×200-A2	100	200	113–171	113–157/168	1616046
SXC16-5,8×230-A2	100	230	143–201	143–187/198	1616051
SXC16-5,8×260-A2	100	260	173–231	173–217/228	1616090
SXC16-5,8×300-A2	100	300	213–271	213–257/268	1616112

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)

## Fastener in A4 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	No washer
SXC16-5,8×90-A4	100	90	33–61	33–47/58	1613577
SXC16-5,8×110-A4	100	110	43–81	43–67/78	1613600
SXC16-5,8×130-A4	100	130	53–101	53–87/98	1613605
SXC16-5,8×150-A4	100	150	73–121	73–107/118	1613609
SXC16-5,8×170-A4	100	170	93–141	93–127/138	1613630
SXC16-5,8×200-A4	100	200	113–171	113–157/168	1613697
SXC16-5,8×230-A4	100	230	143–201	143–187/198	1613709
SXC16-5,8×260-A4	100	260	173–231	173–217/228	1613717
SXC16-5,8×300-A4	100	300	213–271	213–257/268	1614804
SXC16-5,8×355-A4	100	355	268–326	268–312/323	1606471

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)



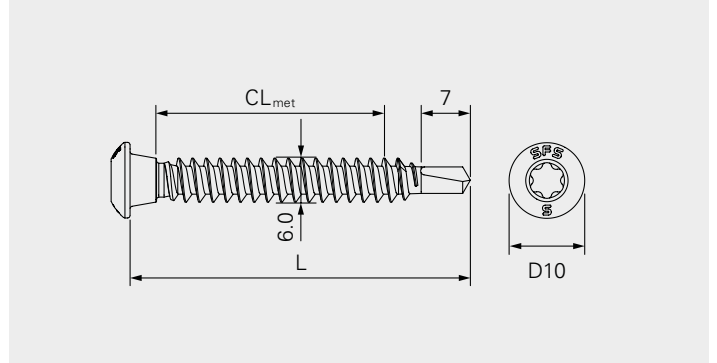
## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160





# SXK2-6.0



## Application

Fastening of standing seam clips onto metal decks

## Component 1 (t<sub>I</sub>)

Clip  
Clip

≥5.0  
≥5.0

## Component 2 (t<sub>II</sub>)

Steel  
Aluminium

0.75–1.25  
0.90–2.50

## Σ<sub>max</sub> t<sub>I</sub> + t<sub>II</sub>

–  
–

## Fastener material

Austenitic stainless steel A2, case hardened drill point

## Approvals

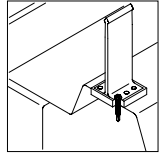
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## Features and Benefits

- Self drilling fastener suitable for installation of standing seam clips
- Reduced risks of over-driving and unwinding thanks to clamping-cone
- High tension resistance achieved by optimized fastener geometry

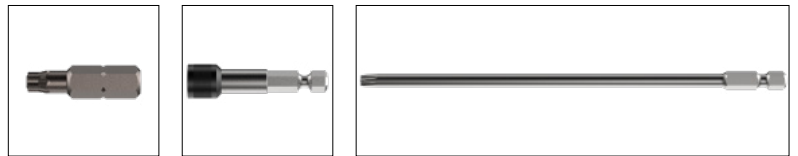
## Documentation

Installation instruction | Technical Data



## Fastener in A2 onto steel

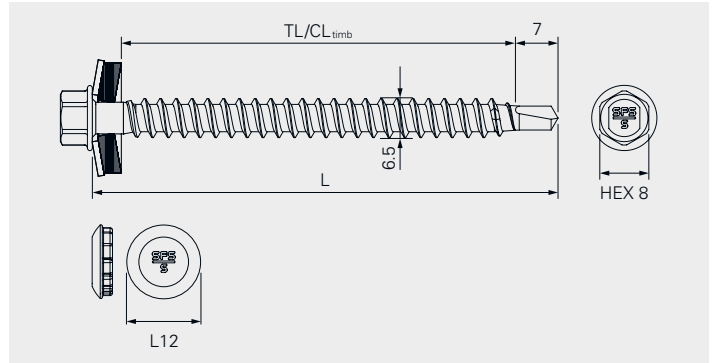
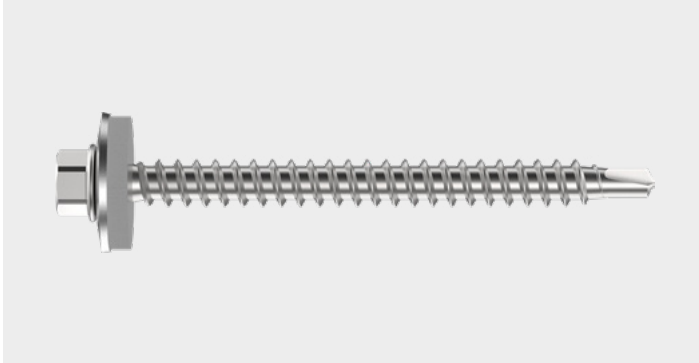
Product code	PU	L	CL / Clip onto steel	
SXK2-D10-6,0×35-A2	250	35	5-17	1615850
SXK2-D10-6,0×45-A2	250	45	5-27	1615848



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	L	
T25W-25-HEX ¼"	1	¼"	T25W	25	1337940
Bit holder ZA ¼"	10	¼"	¼"	58	1162306
T25W-175-HEX ¼"	5	¼"	T25W	175	727979

# SXW-6.5



## Application

Fastening of profile sheets onto timber  
Fastening of sandwich panels onto timber (hidden fixing)

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	0.50–1.50	Timber	l <sub>ef</sub> ≥35.0	–
Aluminium	0.50–1.50	–	–	–
Sandwich	–	–	–	–

## Fastener material

Austenitic stainless steel A2, case hardened drill point  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

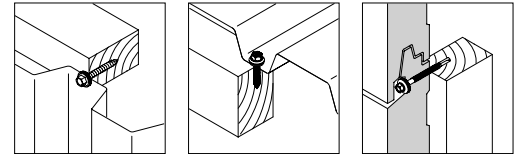
ETA-10/0198 ETA-13/0183

## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets and sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Reduced risks of wood splitting given by the drill point

## Documentation

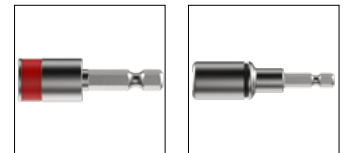
Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	S16	S19
SXW-S16-6,5×52-A2	250	52	40	2-42	2-5	1123138	1123139
SXW-S16-6,5×75-A2	250	75	63	2-65	2-30	1069319	1107866
SXW-S16-6,5×99-A2	250	99	78	11-89	11-54	1110537	1098610
SXW-L12-S16-6,5×52-A2	250	52	40	2-42	2-5	-	1133037

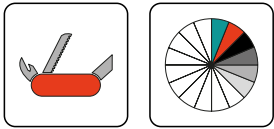
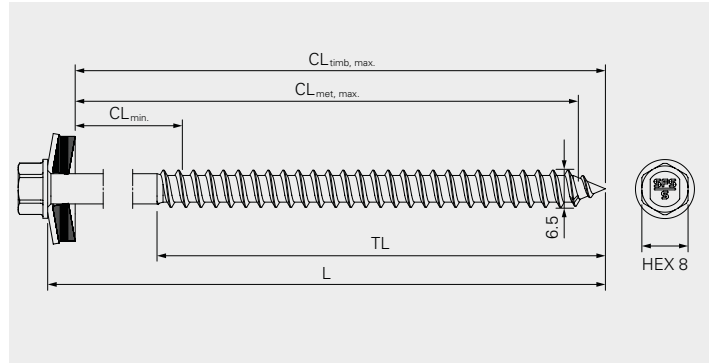
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
E420-¼"-74	1	¼"	L12	973316

# TDA-S-6.5



## Application

Fastening of sandwich panels onto metal profiles  
 Fastening of sandwich panels onto timber  
 Fastening of profile sheets onto metal profiles  
 Fastening of profile sheets onto timber  
 Fastening of profile sheets onto metal decks, liner trays

## Fastener material

Austenitic stainless steel A2  
 Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Features and Benefits

- Self tapping fastener suitable for installation of profile sheets and sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Multifunctional fastener for a variety of applicatons

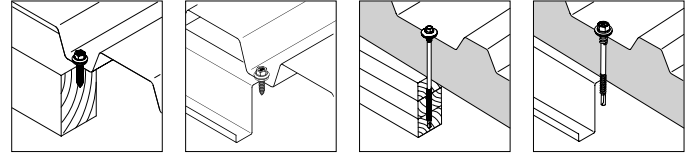
Component 1 (t <sub>I</sub> / t <sub>NII</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> + t <sub>II</sub>
Steel	≥0.40	Steel	0.63–3.0	4.50
Aluminium	0.50–1.50	Steel	2×0.75-2×1.50	4.50
–	–	Aluminium	1.0–3.0	4.50
–	–	Timber	l <sub>ef</sub> ≥35.0	–

## Approvals



## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel, timber and aluminium

Product code	PU	L	CL <sub>met</sub>	CL <sub>timb</sub>	t <sub>fix, met</sub>	t <sub>fix, timb</sub>	TL	S16	S19	S22
TDA-S-S16-6,5×20	500	20	0–10	–	0–7/9	–	20	1526324	1526378	1526739
TDA-S-S16-6,5×25	500	25	0–15	–	0–12/14	–	25	6760	6680	6713
TDA-S-S16-6,5×32	500	32	0–22	–	0–19/21	–	32	6761	6681	6714
TDA-S-S16-6,5×40	250	40	0–30	0–37	0–27/29	0–2	40	1526325	1526379	1526751
TDA-S-S16-6,5×50	250	50	0–40	0–47	0–37/39	0–12	50	6764	6684	6717
TDA-S-S16-6,5×60	250	60	0–50	0–57	0–47/49	0–22	60	1526326	1526391	1526752
TDA-S-S16-6,5×80	250	80	3–70	0–77	3–67/69	0–42	75	1526328	1526392	1526753
TDA-S-S16-6,5×100	100	100	23–90	0–97	23–87/89	0–62	75	6768	6688	6721
TDA-S-S16-6,5×120	100	120	43–110	43–117	43–107/109	43–82	75	1526330	1526393	1526754
TDA-S-S16-6,5×140	100	140	63–130	63–137	63–127/129	63–102	75	1526342	1526394	1526756
TDA-S-S16-6,5×160	100	160	83–150	83–157	83–147/149	83–122	75	1526344	1526395	1526758
TDA-S-S16-6,5×180	100	180	103–170	103–177	103–167/169	103–142	75	1526346	1526396	1526771
TDA-S-S16-6,5×200	100	200	123–190	123–197	123–187/189	123–162	75	1526347	1526397	1526774
TDA-S-S16-6,5×220	100	220	143–210	143–217	143–207/209	143–182	75	1526348	1526398	1526776
TDA-S-S16-6,5×260	100	260	183–250	183–257	183–247/249	183–222	75	1526349	1526399	1526779

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)

t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – l<sub>ef, min.</sub>)

## Pre-drill diameter

Application	Steel/Steel and Alu/Steel				Steel/Timber	Alu/Alu		
Component 1 (t <sub>1</sub> )	0.5–1.50				0.5–1.50	0.5–1.50		
Component 2 (t <sub>2</sub> )	0.63	0.75	0.88–1.25	1.50–3.0	≥35.0	1.0–1.50	2.0–2.50	3.0
		2×0.75–2×1.0	2×1.25–2×1.5					
	S280GD – S450GD (EN10346) HX300LAD to HX460LAD (EN10346)				Timber (EN14081)	Aluminium (EN573)		
<b>Pre-drill Ø</b>	<b>3.50</b>	<b>4.0</b>	<b>4.50</b>	<b>5.0</b>	<b>4.0</b>	<b>4.50</b>	<b>5.0</b>	<b>5.30</b>



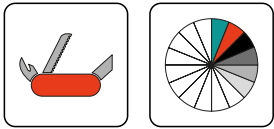
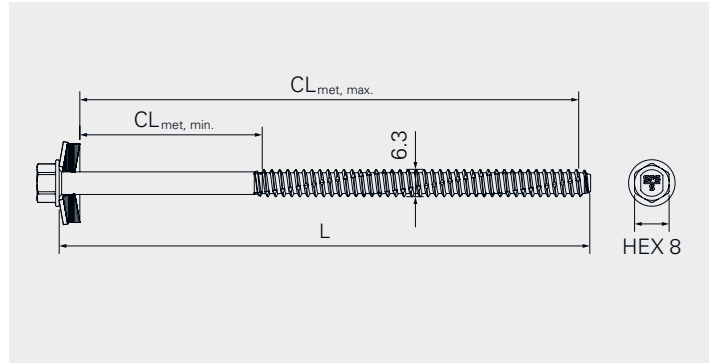
## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160





# TDB-S-6.3



## Application

Fastening of profile sheets onto metal profiles  
 Fastening of profile sheets onto metal beams  
 Fastening of sandwich panels onto metal profiles  
 Fastening of sandwich panels onto metal beams  
 Fastening of metal decks, liner trays onto metal beams

## Fastener material

Austenitic stainless steel A2/A4  
 Sealing washer: Austenitic stainless steel A2/A4, EPDM-seal

## Features and Benefits

- Self tapping fastener suitable for installation of profile sheets and sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Multifunctional fastener for a variety of applicatons

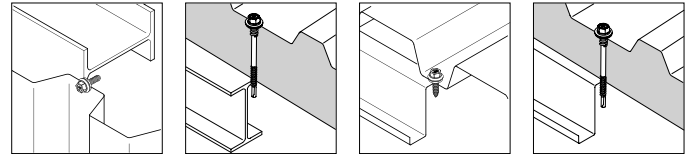
Component 1 ( $t_I / t_{NII}$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_I + t_{II}$
Steel	$\geq 0.40$	Steel	$\geq 1.25$	$\geq 1.65$
Aluminium	0.50–1.50	Aluminium	$\geq 1.50$	$\geq 2.0$

## Approvals



## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in A2 onto steel and aluminium

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16	S19	S22
TDB-S-S16-6,3×20	500	20	0–12	0–6/10	1526350	1526400	1526792
TDB-S-S16-6,3×25	500	25	0–17	0–11/15	1021650	1021647	1063057
TDB-S-S16-6,3×32	500	32	0–24	0–18/22	1021659	1063816	1045402
TDB-S-S16-6,3×40	250	40	0–32	0–26/30	1526352	1526401	1526781
TDB-S-S16-6,3×50	250	50	0–42	0–36/40	1022745	1022746	1045407
TDB-S-S16-6,3×60	250	60	0–52	0–46/50	1526353	1526402	1526783
TDB-S-S16-6,3×80	250	80	2–72	2–66/70	1526354	1526403	1526785
TDB-S-S16-6,3×100	100	100	22–92	22–86/90	1022759	1022758	1051692
TDB-S-S16-6,3×120	100	120	42–112	42–106/110	1526355	1526405	1526786
TDB-S-S16-6,3×140	100	140	62–132	62–126/130	1526356	1526406	1526787
TDB-S-S16-6,3×160	100	160	82–152	82–146/150	1526357	1526407	1526788
TDB-S-S16-6,3×180	100	180	102–172	102–166/170	1526359	1526408	1526789
TDB-S-S16-6,3×200	100	200	122–192	122–186/190	1270144	1191450	1284314
TDB-S-S16-6,3×220	100	220	142–212	142–206/210	1191440	1194640	1226649
TDB-S-S16-6,3×260	100	260	182–252	182–246/250	1526371	1526410	1526791

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)

## Fastener in A4 onto steel and aluminium

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	S16	S19	S22
TDB-S-S16-6,3×25-A4	500	25	0–17	0–11/15	–	1479523	1596647
TDB-S-S16-6,3×40-A4	250	40	0–32	0–26/30	–	1614055	1614052

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)

## Pre-drill diameter

Application	Steel/Steel and Alu/Steel					Alu/Alu			
Component 1 (t <sub>1</sub> )	0.5–1.50					0.5–1.50			
Component 2 (t <sub>2</sub> )	1.25–1.50	1.60–4.00	4.10–6.0	6.10–10.0	>10.0	1.50	2.0–3.0	4.0	≥6.0
	S235 - S355 (EN10025) S280GD - S450GD (EN10346) HX300LAD - HX460LAD (EN10346)					Aluminium (EN573)			
<b>Pre-drill Ø</b>	<b>5.0</b>	<b>5.3</b>	<b>5.50</b>	<b>5.70</b>	<b>5.80</b>	<b>4.50</b>	<b>5.0</b>	<b>5.30</b>	<b>5.50</b>

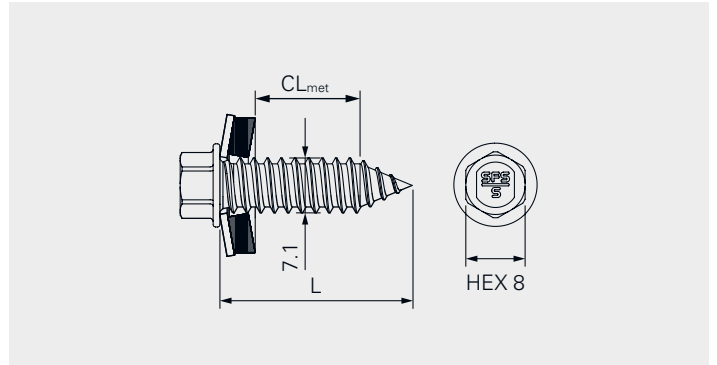


## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160



# TDC-S-7.1



## Application

Replacement of overdriven fastener in profile sheets, sandwich panels

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> + t <sub>II</sub>
Steel	0.50–1.50	Steel	0.63–3.0	4.50

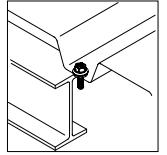
## Fastener material

Austenitic stainless steel A2  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

## Features and Benefits

- Self tapping fastener suitable as replacement of overdriven fastener
- High quality EPDM sealing washer for long-term weather sealing
- Applicable on profile sheets and sandwich panels



## Fastener in A2 onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	Pre-drill Ø	S19
TDC-S-S19-7,1x25	500	25	0-14	0-10/13	6.50	1066788

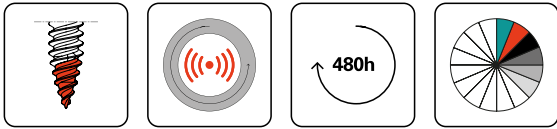
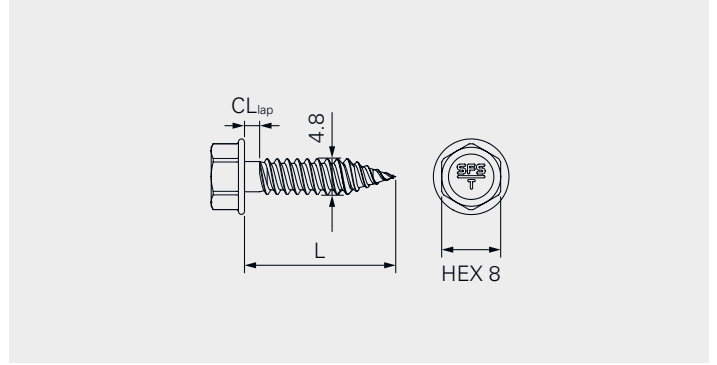
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>tl, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# CDM-4.8



## Application

Fastening of overlaps of metal decks and liner trays

## Component 1 (t<sub>I</sub>)

Steel

0.63–1.20

## Component 2 (t<sub>II</sub>)

Steel

0.63–1.20

$\Sigma_{\max} t_I + t_{II}$

2.00

Steel

2×0.63–0.88

Steel

2×0.63–0.88

3.60

## Fastener material

Carbon steel, Durocoat<sup>®</sup> 480

## Approvals



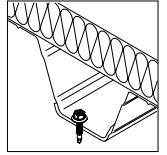
## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps
- Fast and chip-free installation thanks to the FastTip
- Cost saving installation due to post-cleaning of chips no longer necessary
- No torque control required given by free-spin zone
- Secured against unwinding given by free-spin zone
- High tension and shear resistance achieved by optimized fastener geometry
- Collated fastener available for installation with QuikDrive<sup>®</sup> setting tool
- High corrosion durability thanks to special galvanic zinc coating
- Perfect sit on the metal deck thanks to the head-undercut

## Documentation

Approval document (ETA) | Declaration of performance (DoP)





## Fastener in carbon steel onto steel

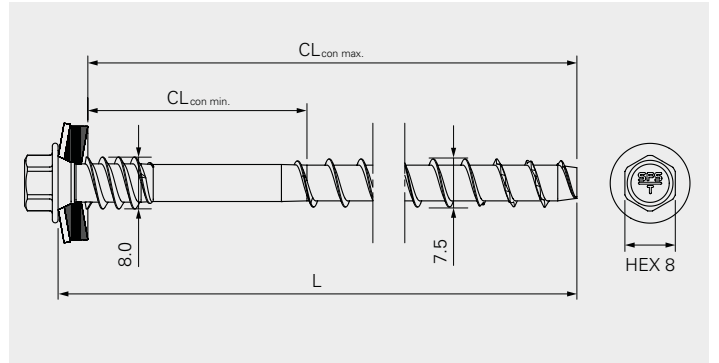
Product code	PU	L	CL <sub>lap</sub>	Collated	
CDM-4,8×20	1000	20	1.20-2.00	–	1476369
CDM-4,8×20-MQD	500	20	1.20-2.00	Yes	1476370



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
Quik Drive BGP75E	1	FEIN	–	1490366

# MDC-7.5



## Application

Fastening of sandwich panels onto concrete  
Fastening of profile sheets onto concrete

## Fastener Ø

Pre-drill Ø  
Embedment depth

**7.50**

6.0  
35/55

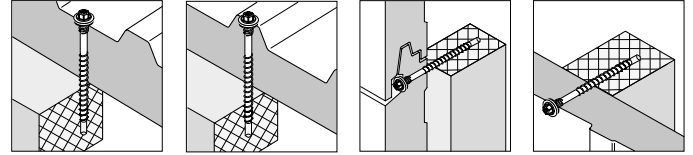
## Fastener material

Carbon steel, Durocoat® 480  
Sealing washer: Austenitic stainless steel A2, EPDM-seal

## Approvals

## Features and Benefits

- Self tapping fastener suitable for installation of sandwich panels onto concrete
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- Optimized support function achieved by patented double support thread
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- High corrosion durability thanks to special galvanic zinc coating
- Easy insertion and high load capacities given by the ideal core-/thread geometry
- Reduced abrasion achieved by toothed functional tip

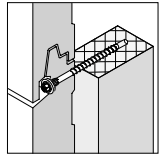


## Fastener in carbon steel onto concrete

Product code	PU	L	CL <sub>con</sub>	t <sub>fix, con</sub>	S16	S19	S22
MDC-S19-7,5×85	100	85	12–82	12–27/47	1574300	1562034	1562305
MDC-S19-7,5×105	100	105	32–102	32–47/67	1574321	1562228	1562331
MDC-S19-7,5×125	100	125	52–122	52–67/87	1574324	1562227	1562329
MDC-S19-7,5×145	100	145	72–142	72–87/107	1574326	1562225	1562328
MDC-S19-7,5×165	100	165	92–162	92–107/127	1574328	1562229	1562332
MDC-S19-7,5×185	100	185	112–182	112–127/147	1574329	1562224	1562327
MDC-S19-7,5×205	100	205	132–202	132–147/167	1574332	1562223	1562326
MDC-S19-7,5×225	100	225	152–222	152–167/187	1574334	1562222	1562325
MDC-S19-7,5×245	100	245	172–242	172–187/207	1574335	1562221	1562324
MDC-S19-7,5×265	100	265	192–262	192–207/227	1574340	1562210	1562323
MDC-S19-7,5×285	100	285	212–282	212–227/247	1574353	1562209	1562322
MDC-S19-7,5×305	100	305	232–302	232–247/267	1574355	1562208	1562309
MDC-S19-7,5×325	100	325	252–322	252–267/287	1574413	1562207	1562308
MDC-S19-7,5×345	100	345	272–342	272–287/307	1574416	1562206	1562307
MDC-S19-7,5×365	100	365	292–362	292–307/327	1574418	1562205	1562306

t<sub>fix, con</sub>: CL<sub>con, min.</sub> – (CL<sub>met, max.</sub> – h<sub>nom, min.</sub>)

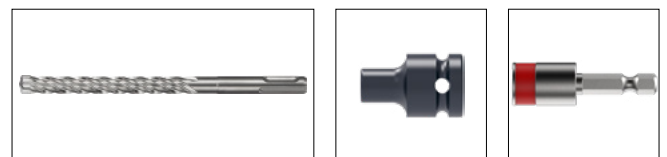
Without approval



## Fastener in carbon steel onto concrete

Product code	PU	L	CL <sub>con</sub>	t <sub>fix, con</sub>	No washer
MDC-7,5×85	100	85	15–85	15–30/50	1580854
MDC-7,5×105	100	105	35–105	35–50/70	1580856
MDC-7,5×125	100	125	55–125	55–70/90	1580857
MDC-7,5×145	100	145	75–145	75–90/110	1580862
MDC-7,5×165	100	165	95–165	95–110/130	1580864
MDC-7,5×185	100	185	115–185	115–130/150	1580870
MDC-7,5×205	100	205	135–205	135–150/170	1580874
MDC-7,5×225	100	225	155–225	155–170/190	1580912
MDC-7,5×245	100	245	175–245	175–190/210	1580913
MDC-7,5×265	100	265	195–265	195–210/230	1580919
MDC-7,5×285	100	285	215–285	215–230/250	1580931
MDC-7,5×305	100	305	235–305	235–250/270	1580933
MDC-7,5×325	100	325	255–325	255–270/290	1580951
MDC-7,5×345	100	345	275–345	275–290/310	1580953
MDC-7,5×365	100	365	295–365	295–310/330	1590960

t<sub>fix, con</sub>: CL<sub>con, min.</sub> – (CL<sub>met, max.</sub> – h<sub>nom, min.</sub>)

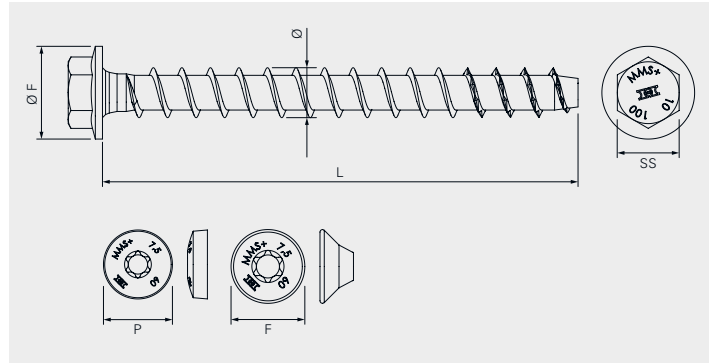
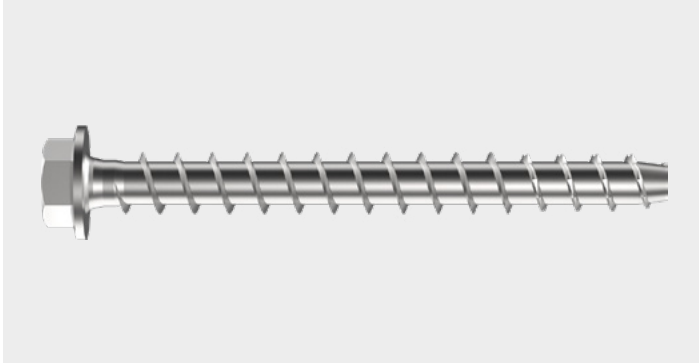


## Accessories/Ancillaries

Product code	Drive	Head drive	PU	D	L	WL	FL	
SDS-6x210/150-4C	–	–	1	6	210	150	150	1487583
SDS-6x310/250-4C	–	–	1	6	210	250	250	1487584
SDS-6x515/455-4C	–	–	1	6	515	455	200	1608141
E308-¼"-50	¼"	HEX8	1	–	–	–	–	1646160
E508-½"-40	½"	HEX8	1	–	–	–	–	1648380



# MMS-plus



## Application

Fastening of metal plates, profiles, brackets onto concrete  
 Fastening of metal decks, liner trays onto concrete  
 Fastening of timber battens onto concrete

## Fastener Ø

	7.50	10.0	12.0
Pre-drill Ø	6.0	8.0	10.0
Embedment depth	35/55	50/65	75/90
Seismic approved	–	yes	yes

## Fastener material

Carbon steel, bright zinc plated

## Approvals

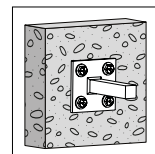


## Features and Benefits

- Self tapping fastener suitable for installation onto concrete
- Easy settable even in case of worn drills
- More flexibility given by two embedment depths
- Settable by means of power-tools and immediately loadbearing
- Seismic approved from diameter 10 mm
- Highest demands and economical fixations given by reduced clearance hole displacements
- Faster setting due to toothed functional tip
- Multiple use in temporary fixations from diameter 10 mm
- Small spacing and edge distances thanks to no spreading effect

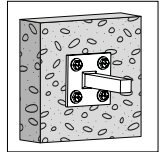
## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto concrete

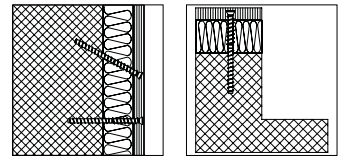
Product code	PU	L	t <sub>fix</sub>	Ø F	Drive	
MMS-plus-F-C16-7,5×50	100	50	0–15	–	T40	1480036
MMS-plus-F-C16-7,5×60	50	60	0–5/25	–	T40	1480037
MMS-plus-F-C16-7,5×70	50	70	0–15/35	–	T40	1564084
MMS-plus-F-C16-7,5×80	50	80	0–25/45	–	T40	1503577
MMS-plus-F-C16-7,5×100	50	100	0–45/65	–	T40	1486584
MMS-plus-F-C16-7,5×120	50	120	0–65/85	–	T40	1564086
MMS-plus-F-C16-7,5×140	50	140	0–85/105	–	T40	1564087
MMS-plus-F-C16-7,5×160	50	160	0–105/125	–	T40	1486585
MMS-plus-F-C20-10×60	25	60	0–10	–	T45	1503581
MMS-plus-F-C20-10×70	25	70	0–5/20	–	T45	1480038
MMS-plus-F-C20-10×80	25	80	0–15/30	–	T45	1503583
MMS-plus-F-C24-12×90	25	90	0–1/15	22	T50	1480039
MMS-plus-F-C24-12×100	25	100	0–10/25	22	T50	1503584
MMS-plus-F-C24-12×120	25	120	0–30/45	22	T50	1564088
MMS-plus-P-D15-7,5×40	100	40	0–5	–	T30	1480040
MMS-plus-P-D15-7,5×50	100	50	0–15	–	T30	1480041
MMS-plus-P-D15-7,5×60	50	60	0–5/25	–	T30	1480042
MMS-plus-SS-7,5×40	100	40	0–5	14	HEX10	1480031
MMS-plus-SS-7,5×50	50	50	0–15	14	HEX10	1480032
MMS-plus-SS-7,5×60	50	60	0–5/25	14	HEX10	1480033
MMS-plus-SS-7,5×70	50	70	0–15/35	14	HEX10	1503514
MMS-plus-SS-7,5×80	50	80	0–25/45	14	HEX10	1507359
MMS-plus-SS-7,5×100	50	100	0–45/65	14	HEX10	1515810
MMS-plus-SS-7,5×120	50	120	0–65/85	14	HEX10	1563777
MMS-plus-SS-7,5×140	50	140	0–85/105	14	HEX10	1563779
MMS-plus-SS-10×60	25	60	0–10	19	HEX13	1503515
MMS-plus-SS-10×70	25	70	0–5/20	19	HEX13	1480034
MMS-plus-SS-10×80	25	80	0–15/30	19	HEX13	1491708
MMS-plus-SS-10×90	25	90	0–25/40	19	HEX13	1563780
MMS-plus-SS-10×100	25	100	0–35/50	19	HEX13	1547793
MMS-plus-SS-10×120	25	120	0–55/70	19	HEX13	1563781
MMS-plus-SS-10×140	25	140	0–75/90	19	HEX13	1522355
MMS-plus-SS-10×160	25	160	0–95/110	19	HEX13	1563782



## Fastener in carbon steel onto concrete

Product code	PU	L	t <sub>fix</sub>	Ø F	Drive	
MMS-plus-SS-12×60	25	60	0-5	22	HEX15	1599840
MMS-plus-SS-12×80	25	80	0-5	22	HEX15	1516300
MMS-plus-SS-12×90	25	90	0-1/15	-	HEX15	1480035
MMS-plus-SS-12×100	25	100	0-10/25	-	HEX15	1503516
MMS-plus-SS-12×120	25	120	0-30/45	-	HEX15	1503517
MMS-plus-SS-12×140	25	140	0-50/65	22	HEX15	1516202
MMS-plus-SS-12×160	25	160	0-70/85	22	HEX15	1516203

t<sub>fix</sub> Calculated with two different embedment depths



## Fastener in carbon steel onto concrete

Product code	PU	L	t <sub>fix</sub> 0°	t <sub>fix</sub> 30°	Drive	
MMS-DT-C15-7,5×200-HP	50	200	0-145/165	0-125/142	T40	1598480
MMS-DT-C15-7,5×250-HP	50	250	0-195/215	0-168/185	T40	1525948
MMS-DT-C15-7,5×300-HP	50	300	0-245/265	0-212/229	T40	1525949
MMS-DT-C15-7,5×350-HP	50	350	0-295/315	0-255/272	T40	1525950
MMS-DT-C15-7,5×400-HP	50	400	0-345/365	0-299/316	T40	1598486

t<sub>fix</sub> Calculated with two different embedment depths

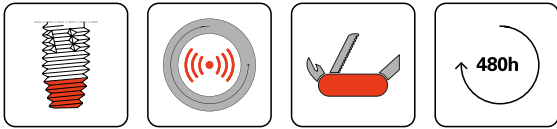
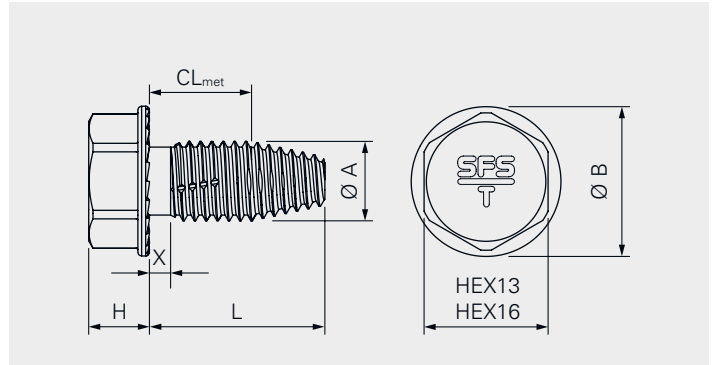


## Accessories/Ancillaries



Product code	PU	Drive	Head Drive	D	L	WL	FL	
SDS-6×210/150-4C	1	–	–	6	210	150	150	1487583
SDS-8×210/150-4C	1	–	–	8	210	150	150	1487585
SDS-10×210/150-4C	1	–	–	10	210	150	150	1487586
E313-¼"-50	1	¼"	HEX13	–	–	–	–	508029
E513-½"-78	1	½"	HEX13	–	–	–	–	1649258
E416-½"-38	1	½"	HEX16	–	–	–	–	1389740
T30-25-HEX¼"	10	¼"	T30	–	–	–	–	2401110
T40-25-HEX¼"	10	¼"	T40	–	–	–	–	769474
Bit holder ZA¼"	1	¼"	¼"	–	–	–	–	1162306
T30-40-½"	10	½"	T30	–	–	–	–	1489154
T40-40-½"	10	½"	T40	–	–	–	–	1489155
T45-40-½"	10	½"	T45	–	–	–	–	1489157
T50-40-½"	10	½"	T50	–	–	–	–	1489158

# nonut<sup>®</sup>



## Application

Structural connections of metal profiles

## Component 1 (t<sub>I</sub>)

Steel

## Component 2 (t<sub>II</sub>)

Steel

$\Sigma_{\max} t_I + t_{II}$

–

## Fastener material

Carbon steel, Durocoat<sup>®</sup> 480

## Approvals

CE<sub>11</sub>  
ETA-11/0191

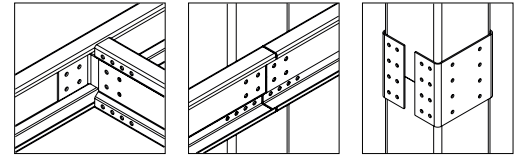


## Features and Benefits

- Self tapping fastener suitable for structural connections
- Blind fastening – simple one side installation compared to nut and bolt
- Fast and user friendly installation with impact wrench
- Centering of the pre-punched metal profiles thanks to conical thread start
- Patented thread design for optimized thread forming capability
- High tension and shear resistance achieved by optimized fastener geometry
- Highest safety regarding over-winding and self-loosening

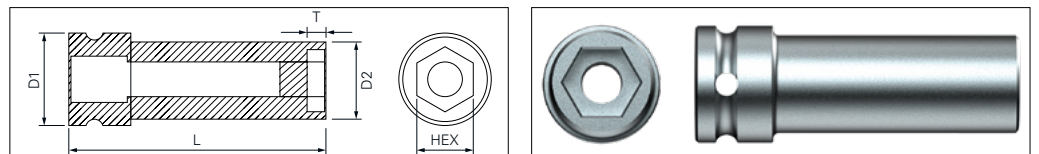
## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

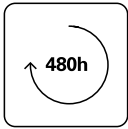
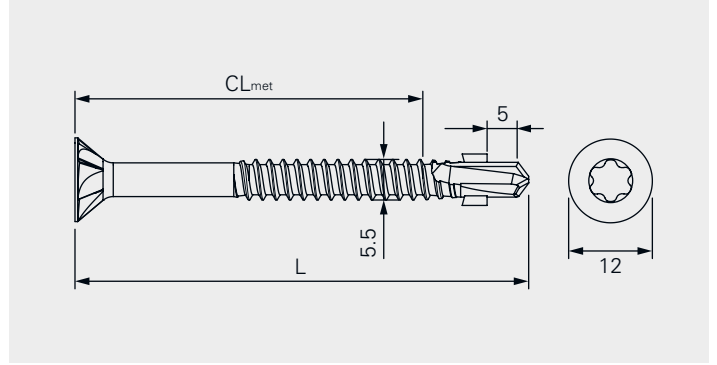
Product code	PU	L	CL <sub>met</sub>	Head	Ø A	Ø B	x	H	
nonut®-TDBL-T-8,6×16	200	16	0-9	HEX13	8.60	16.0	2.0	7	1542214
nonut®-TDBLF-T-F-8,6×16	200	16	0-9	HEX13	8.60	16.0	<1.0	4.7	1541860
nonut®-TDBL-T-8,6×50	100	50	23-43	HEX16	8.60	16.0	20.0	7	1607124
nonut®-TDBL-T-10,6×23	100	23	0-13	HEX16	10.60	20.0	3.0	8	1542223
nonut®-TDBLF-T-10,6×23	100	23	0-13	HEX16	10.60	20.0	<1.50	8	1542229
nonut®-TDBL-T-10,6×30	100	30	0-20	HEX16	10.60	20.0	3.0	8	1542217
nonut®-TDBL-T-10,6×50	100	50	0-40	HEX16	10.60	20.0	3.0	8	1561761
nonut®-TDBLF-T-13,4×20	100	20	0-10	HEX16	13.40	20.0	<2.0	8	1542470
nonut®-TDBL-T-13,4×30	100	30	0-20	HEX16	13.40	20.0	3.0	8	1542212



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	L	T	D1	D2	
E313-¼"-50	1	¼"	HEX13	50	6	-	20	508029
E513-½"-78	1	½"	HEX13	78	6	25	21	1649258
E416-½"-40	1	½"	HEX16	40	7	30	24	1389740
E516-½"-78 red.	1	½"	HEX16	78	8	22	22	1649257
E516-½"-78	1	½"	HEX16	78	8	30	25	1649256

# SC5-5.5



## Application

Fastening of timber boards onto supporting steel structures

## Component 1 (t<sub>I</sub>)

Timber

## Component 2 (t<sub>II</sub>)

Steel

2.0–5.0

$\Sigma_{\max} t_{II}$

5.0

## Fastener material

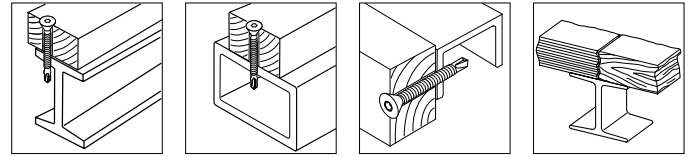
Carbon steel, Durocoat® 480

## Approvals

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## Features and Benefits

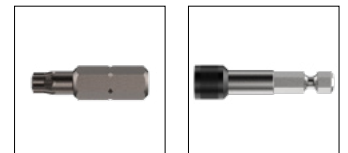
- Flush-mounted installation without damaging the timber surface given by the milling grooves
- Ergonomical setting tool available



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	
SC5/46-12CC-5,5x60	1000	60	29-45	29-40/43	1580102

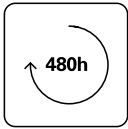
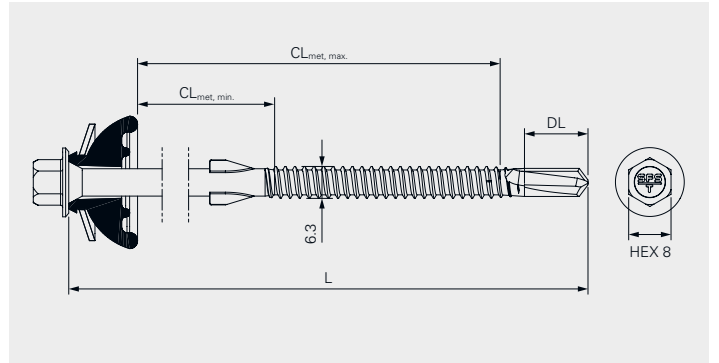
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T30-25-HEX 1/4"	1	1/4"	T30	24010
Bit holder ZA 1/4"	10	1/4"	1/4"	1162306

# SCF-6.3



## Application

Fastening of fibre cement boards onto metal profiles (SCF3)  
Fastening of fibre cement boards onto metal beams (SCF12)

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Fibre cement	2×6.50	Steel (SCF3)	1.50–3.0	
		Steel (SCF12)	3.0–12.0	25.0

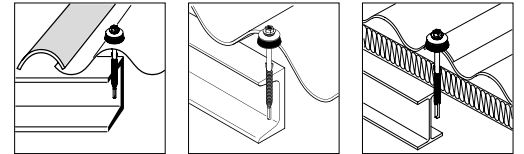
## Fastener material

Carbon steel, Durocoat® 480  
BAZ sealing element: Austenitic stainless steel A2, EPDM-seal

## Approvals

## Features and Benefits

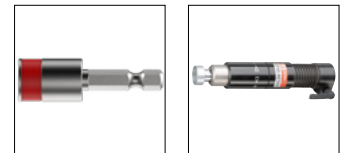
- Self drilling fastener suitable for corrugated fibre cement boards
- High quality EPDM sealing element for long-term weather sealing
- No pre-drilling of fibre cement board required thanks to expanding wings
- High corrosion durability thanks to special galvanic zinc coating



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	DL	
SCF3-BAZ-6,3×115	100	115	53–93	53–90/91	12	1664091
SCF12-BAZ-6,3×120	100	120	50–93	53–81/90	17	1664093

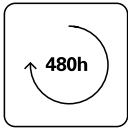
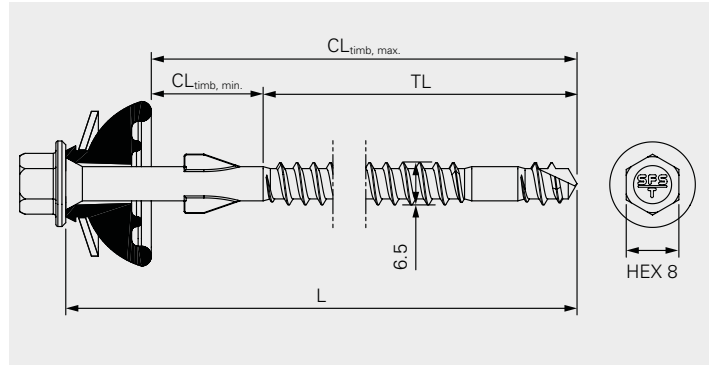
t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼ "	HEX8	1646160
CF40-FEIN-ASCS6.3-BASIC	1	FEIN	–	1371950

# SCFW-6.5



## Application

Fastening of fibre cement boards onto timber

## Component 1 (t<sub>I</sub>)

Fibre cement 2x6.50

## Component 2 (t<sub>II</sub>)

Timber l<sub>ef</sub> ≥57.0

$\Sigma_{\max} t_I + t_{II}$

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## Fastener material

Carbon steel, Durocoat® 480

BAZ sealing element: Austenitic stainless steel A2, EPDM-seal

## Approvals



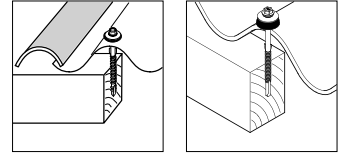
## Features and Benefits

- Self drilling fastener suitable for corrugated fibre cement boards
- High quality EPDM sealing element for long-term weather sealing
- Fast installation thanks to the threaded drill point
- No pre-drilling of fibre cement board required thanks to expanding wings
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)

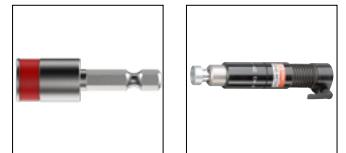




## Fastener in carbon steel onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	
SCFW-BAZ-6,5×95	100	95	50	0-85	0-28	1664073
SCFW-BAZ-6,5×130	100	130	50	0-120	0-63	1506552

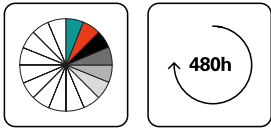
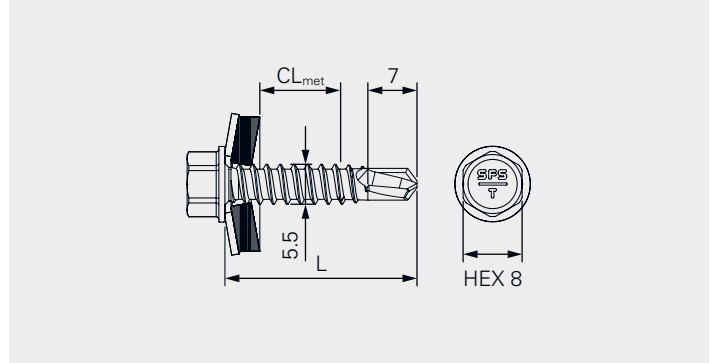
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
CF40-FEIN-ASCS6.3-BASIC	1	FEIN	-	1371950

# SD3-5.5



## Application

Fastening of profile sheets onto metal profiles  
Fastening of profile sheets onto metal decks, liner trays

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		$\Sigma_{\max} t_I + t_{II}$
Steel	0.50–1.50	Steel	1.25–3.0	4.0
		Steel	2×0.63–2×2.0	5.0

## Fastener material

Carbon steel, Durocoat® 480  
Sealing washer: Carbon steel galvanized, EPDM-seal

## Approvals

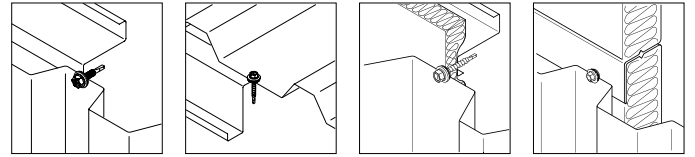


## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	T16
SD3-T16-5,5×25	500	25	0-11	0-7/10	1506612
SD3-T16-5,5×45	500	45	0-31	0-27/31	1506617

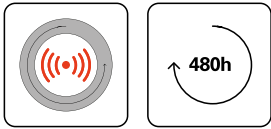
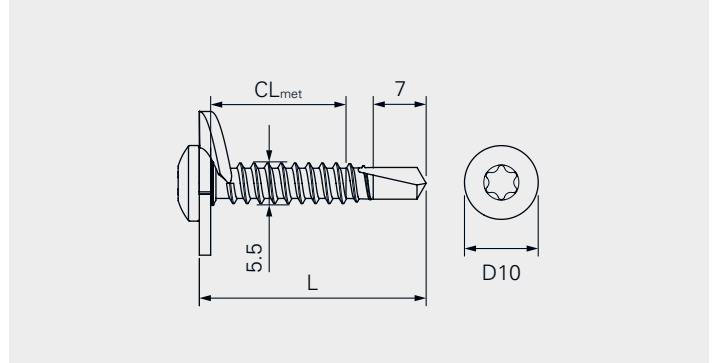
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>l, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>l, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SD3-D10-5.5



## Application

Fastening of single-ply insulated roof panels onto metal profiles

## Component 1 (t<sub>I</sub>)

Single-ply panel

## Component 2 (t<sub>II</sub>)

Steel

$\Sigma_{\max} t_I + t_{II}$

1.25–3.0

4.0

## Fastener material

Carbon steel, Durocoat® 480

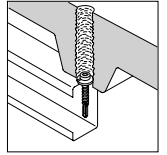
Cutting disc: Carbon steel

## Approvals

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## Features and Benefits

- Self drilling fastener suitable for installation of single-ply insulated roof panels
- No pre-drilling of membrane and insulation required thanks to cutting-washer
- High corrosion durability thanks to special galvanic zinc coating
- Self coring fastener without disruption of the insulation material achieved by the cutting-washer



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	TC
SD3-D10-T19/C9-5,5x30	500	30	0-16	0-13/15	1645611

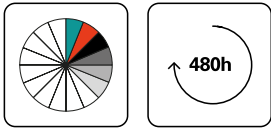
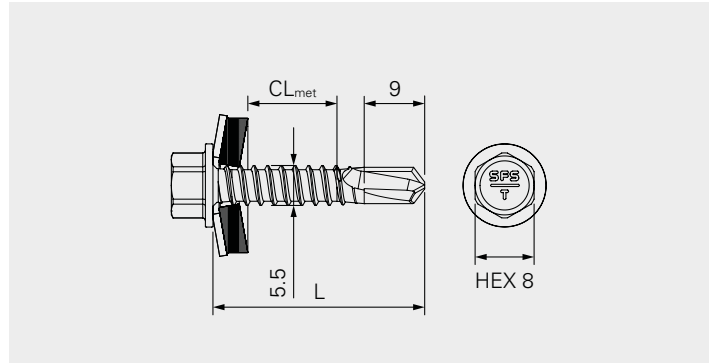
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T25W-175-HEX¼"	5	¼"	T25W	727979

# SD6-5.5



## Application

Fastening of profile sheets onto metal profiles  
Fastening of profile sheets onto metal decks, liner trays

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		$\Sigma_{\max} t_I + t_{II}$
Steel	0.50–1.50	Steel	1.50–5.0	6.0
–	–	Steel	2×1.0–2×3.0	7.0

## Fastener material

Carbon steel, Durocoat® 480  
Sealing washer: Carbon steel galvanized, EPDM-seal

## Approvals

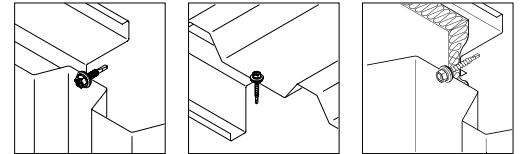


## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	T16
SD6-T16-5,5×28	100	28	0-13	0-10/11	1423085
SD6-T16-5,5×28	500	28	0-13	0-10/11	1423084
SD6-T16-5,5×38	500	38	0-23	0-20/21	1423700

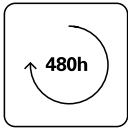
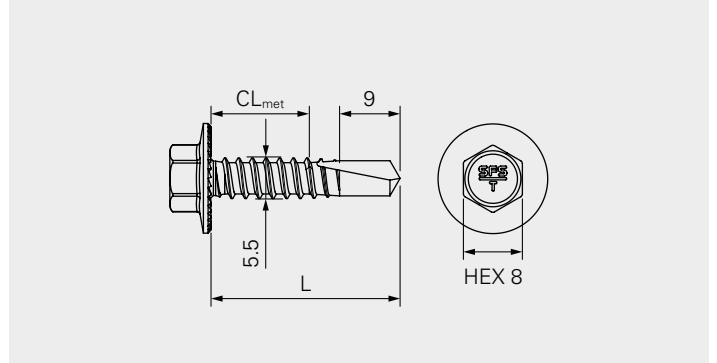
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SD6-H15-5.5



## Application

Fastening of metal decks, liner trays onto metal profiles

## Component 1 (t<sub>I</sub>)

Steel

0.50–1.50

## Component 2 (t<sub>II</sub>)

Steel

1.50–5.0

$\Sigma_{\max} t_I + t_{II}$

6.0

–

–

Steel

2×1.50–3.0

7.0

## Fastener material

Carbon steel, Durocoat® 480

## Approvals



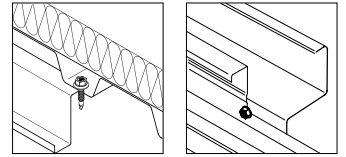
## Features and Benefits

- Self drilling fastener suitable for installation of metal decks and liner trays
- Reduced risks of over driving and unwinding achieved by locking ribs
- High shear resistance achieved by optimized fastener geometry
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)





## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	T16
SD6-H15-5,5×22	500	22	0-9	0-6/7	1422763

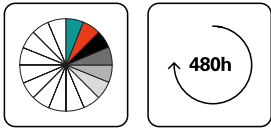
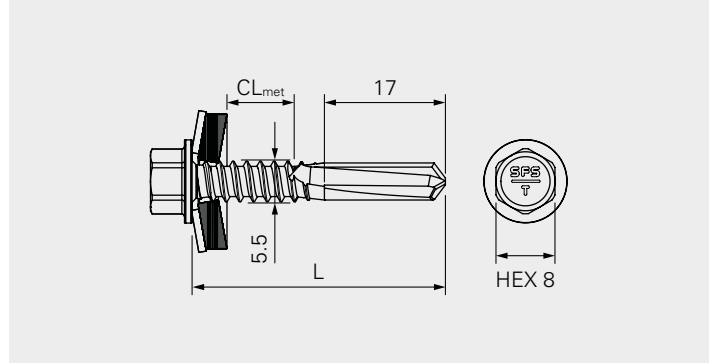
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
Drive shaft H15 head	5	¼"	H15	1517546

# SD14-5.5



## Application

Fastening of profile sheets onto metal beams

## Component 1 (t<sub>I</sub>)

Steel

0.50–1.50

## Component 2 (t<sub>II</sub>)

Steel

4.0–12.0

$\Sigma_{\max} t_I + t_{II}$

13.50

## Fastener material

Carbon steel, Durocoat® 480

Sealing washer: Carbon steel galvanized, EPDM-seal

## Approvals

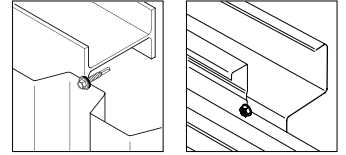


## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- High performance drill point for heavy steel beams
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	T16
SD14-T16-5,5×34	500	25	0-10	0-1/6	1423111
SD14-T16-5,5×48	500	48	0-24	0-12/20	1423120
SD14-T16-5,5×58	250	58	0-34	0-22/30	1423121

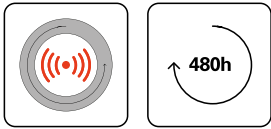
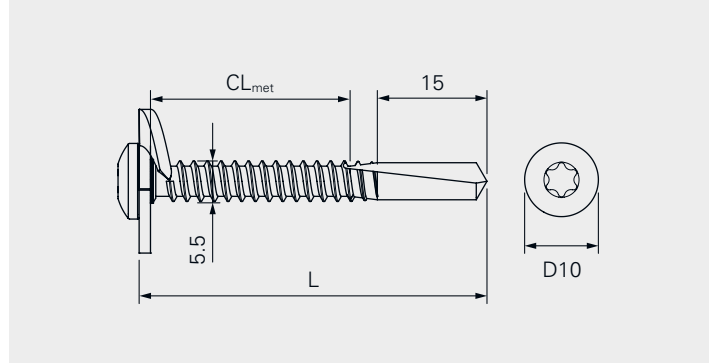
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>tl, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SD14-D10-5.5



## Application

Fastening of single-ply insulated roof panels onto metal beams

## Component 1 (t<sub>I</sub>)

Single-ply panel

## Component 2 (t<sub>II</sub>)

Steel

4.0–12.0

$\Sigma_{\max} t_I + t_{II}$

13.50

## Fastener material

Carbon steel, Durocoat® 480

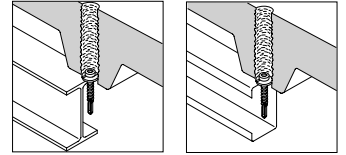
Cutting disc: Carbon steel

## Approvals

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## Features and Benefits

- Self drilling fastener suitable for installation of single-ply insulated roof panels
- No pre-drilling of membrane and insulation required thanks to cutting-washer
- High performance drill point for heavy steel beams
- High corrosion durability thanks to special galvanic zinc coating
- Self coring fastener without disruption of the insulating material achieved by the cutting washer



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	TC
SD14-D10-T19/C9-5,5×46	500	46	0-25	0-13/21	1645606

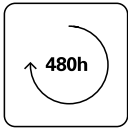
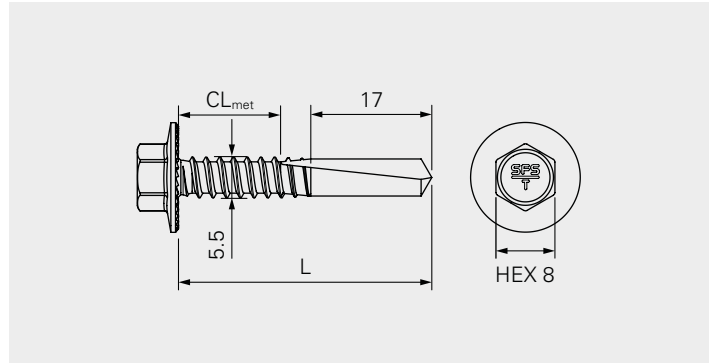
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>l, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>l, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T25W-175-HEX¼"	5	¼"	T25W	727979

# SD14-H15-5.5



## Application

Fastening of metal decks, liner trays onto metal beams

Component 1 ( $t_1$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_1 + t_{II}$
Steel	0.50–1.50	Steel	4.0–12.0	13.50

## Fastener material

Carbon steel, Durocoat® 480

## Approvals

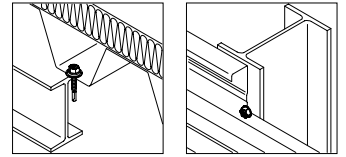


## Features and Benefits

- Self drilling fastener suitable for installation of metal decks and liner trays
- Reduced risks of over driving and unwinding achieved by locking ribs
- High shear resistance achieved by optimized fastener geometry
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	
SD14-H15-5,5x34	500	34	0-23	0-11/19	1420173

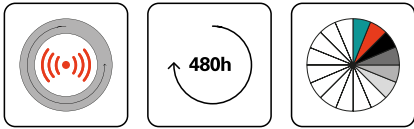
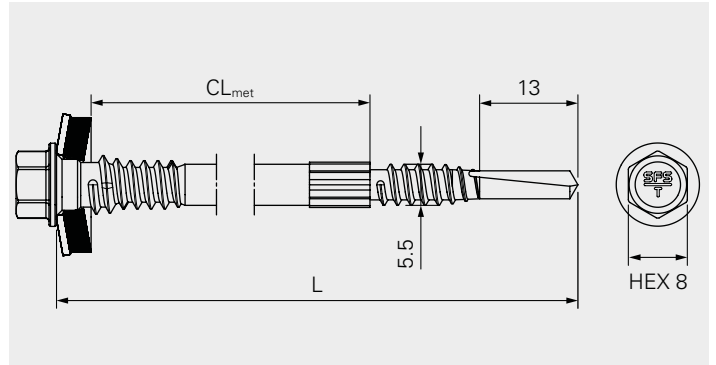
t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA) / (CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
Drive shaft H15 head	5	¼"	H15	1517546

# SDRT2-5.5



## Application

Distance fastening of profile sheets onto liner trays

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	0.50–1.50	Steel	0.75–2×1.50	4.50
Aluminium	0.80–1.50	Steel	0.75–2×1.50	4.50

## Fastener material

Carbon steel, Durocoat® 480

Sealing washer: Carbon steel galvanized, EPDM-seal

## Approvals



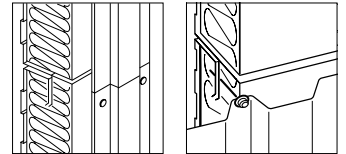
## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets at a set distance from liner trays
- No pre-drilling of metal sheet required thanks to the knurl on the shank
- Perfect supporting of the metal sheet given by support thread with cut-off thread-end
- Precisely fastening distance given by the knurl on the shank
- No torque control required given by free-spin zone
- High corrosion durability thanks to special galvanic zinc coating
- High quality EPDM sealing washer for long-term weather sealing
- Secured against unwinding given by cut-off thread-end
- High shear resistance achieved by optimized fastener geometry
- Cost saving installation due to pre-drilling of profile sheets no longer necessary

## Documentation

Installation instruction | Technical Data





## Fastener in carbon steel onto steel

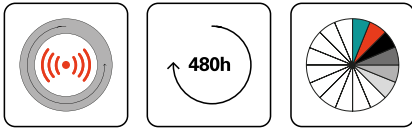
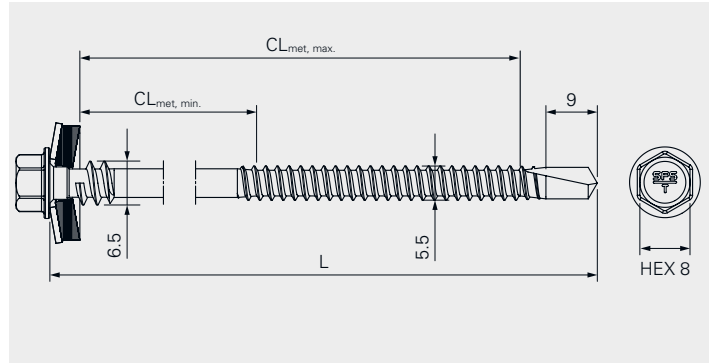
Product code	PU	L	CL <sub>met</sub> / Insulation	Liner tray (t <sub>tr</sub> ) substructure	T16
SDRT2-T16-5,5×69	250	69	40	0.63–3.0	1580868
SDRT2-T16-5,5×89	100	89	60	0.63–3.0	1576185
SDRT2-T16-5,5×109	100	109	80	0.63–3.0	1524405



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SDT5-5.5



## Application

Fastening of sandwich panels onto metal profiles  
Fastening of profile sheets onto metal profiles

Component 1 ( $t_I / t_{NII}$ )	Component 2 ( $t_{II}$ )	$\Sigma_{\max} t_I + t_{II}$
Sandwich panel $\geq 0.40$	Steel 1.50–4.0	5.0

## Fastener material

Carbon steel, Durocoat® 480  
Sealing washer: Aluminium, EPDM-seal

## Approvals

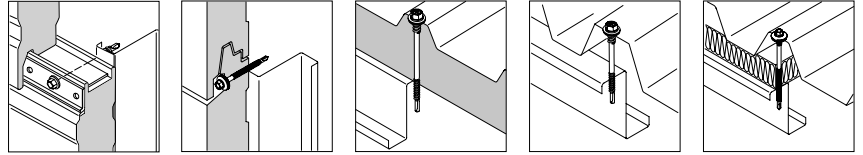


## Features and Benefits

- Self drilling fastener suitable for installation of sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

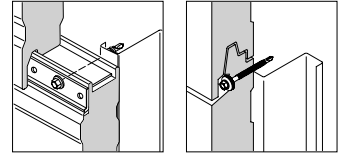
Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	A19
SDT5-A19-5,5×68	100	68	30–51	30–47/49	1423940
SDT5-A19-5,5×88	100	88	40–71	40–67/69	1423943
SDT5-A19-5,5×108	100	108	50–91	50–87/89	1423950
SDT5-A19-5,5×128	100	128	70–111	70–107/109	1423954
SDT5-A19-5,5×148	100	148	90–131	90–127/129	1423960
SDT5-A19-5,5×178	100	178	110–161	110–157/159	1424449
SDT5-A19-5,5×208	100	208	140–191	140–187/189	1424466
SDT5-A19-5,5×238	100	238	170–221	170–217/219	1424468
SDT5-A19-5,5×278	100	278	210–261	210–257/259	1424469

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>II, min.</sub>)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	No washer
SDT5-5,5×68	100	68	33-54	33-50/52	1423939
SDT5-5,5×88	100	88	43-74	43-70/72	1423941
SDT5-5,5×108	100	108	53-94	53-90/92	1423949
SDT5-5,5×128	100	128	73-114	73-110/112	1423955
SDT5-5,5×148	100	148	93-134	93-130/132	1423957
SDT5-5,5×178	100	178	113-164	113-160/162	1525261
SDT5-5,5×208	100	208	143-194	143-190/192	1525262
SDT5-5,5×238	100	238	173-224	173-220/222	1525263
SDT5-5,5×278	100	278	213-264	213-260/262	1466263

t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)

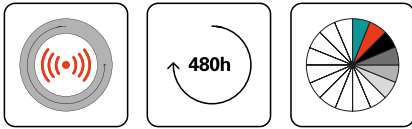
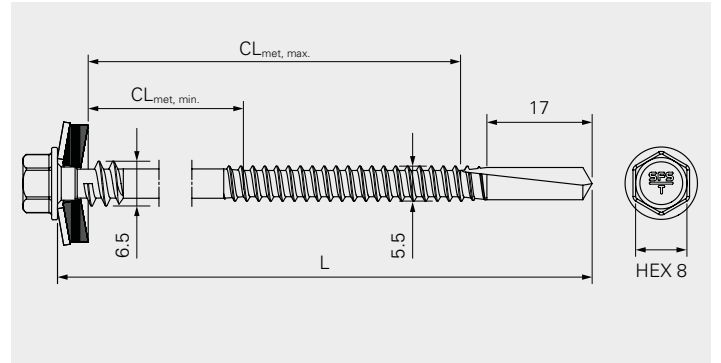


## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160



# SDT14-5.5



## Application

Fastening of sandwich panels onto steel beams  
Fastening of profile sheets onto steel beams

Component 1 ( $t_I / t_{NII}$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_I + t_{II}$
Sandwich panel	$\geq 0.40$	Steel	4.0–12.0	14.0

## Fastener material

Carbon steel, Durocoat® 480  
Sealing washer: Aluminium, EPDM-seal

## Approvals

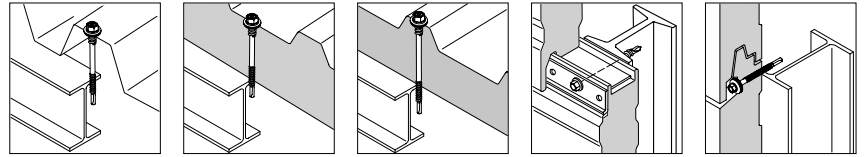


## Features and Benefits

- Self drilling fastener suitable for installation of sandwich panels
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- High performance drill point for heavy steel beams
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

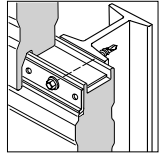
Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	A19
SDT14-A19-5,5×78	100	78	30–53	30–41/49	1422750
SDT14-A19-5,5×98	100	98	40–73	40–61/69	1423712
SDT14-A19-5,5×118	100	118	50–93	50–81/89	1423880
SDT14-A19-5,5×138	100	138	70–113	70–101/109	1423882
SDT14-A19-5,5×158	100	158	90–133	90–121/129	1423884
SDT14-A19-5,5×188	100	188	110–163	110–151/159	1424470
SDT14-A19-5,5×218	100	218	140–193	140–181/189	1424471
SDT14-A19-5,5×248	100	248	170–223	170–221/229	1424472
SDT14-A19-5,5×288	100	288	210–263	210–251/259	1424498
SDT14-A19-5,5×348	100	348	270–323	270–311/319	1465147

t<sub>fix, met</sub>: CL<sub>met, min.</sub> – (CL<sub>met, max.</sub> – t<sub>tl, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> – t<sub>tl, min.</sub>)



## Fastener in carbon steel onto steel

Product code	PU	L	CL <sub>met</sub>	t <sub>fix, met</sub>	No washer
SDT14-5,5×78	100	78	33-56	33-44/52	1422748
SDT14-5,5×98	100	98	43-76	43-64/72	1423711
SDT14-5,5×118	100	118	53-96	53-84/92	1423879
SDT14-5,5×138	100	138	73-116	73-104/112	1423881
SDT14-5,5×158	100	158	93-136	93-124/132	1423883
SDT14-5,5×188	100	188	113-166	113-154/162	1491055
SDT14-5,5×218	100	218	143-196	143-184/192	1491056
SDT14-5,5×248	100	248	173-226	173-214/222	1491057
SDT14-5,5×288	100	288	213-266	213-254/262	1491059
SDT14-5,5×348	100	348	273-326	273-314/322	1476752

t<sub>fix, met</sub>: CL<sub>met, min.</sub> - (CL<sub>met, max.</sub> - t<sub>II, max.</sub> or load-bearing clamping length according ETA)/(CL<sub>met, max.</sub> - t<sub>II, min.</sub>)



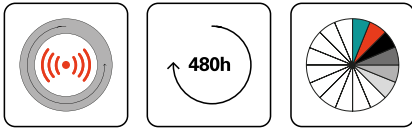
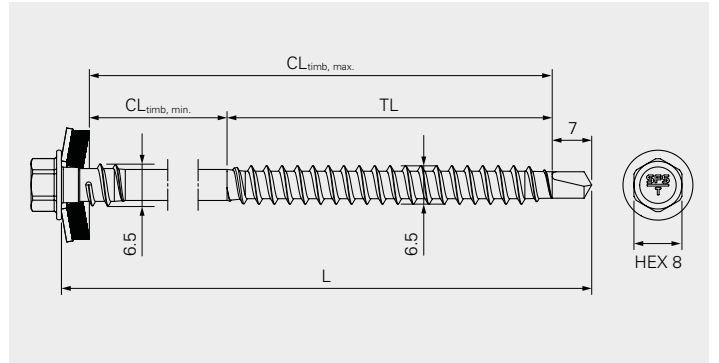
## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160





# SDTW-6.5



## Application

Fastening of sandwich panels onto timber  
Fastening of profile sheets onto timber

Component 1 ( $t_1 / t_{NII}$ )		Component 2 ( $t_{II}$ )		$\Sigma_{\max} t_1 + t_{II}$
Sandwich panel	$\geq 0.40$	Timber	$l_{ef} \geq 35.0$	–

## Fastener material

Carbon steel, Durocoat® 480  
Sealing washer: Aluminium, EPDM-seal

## Approvals

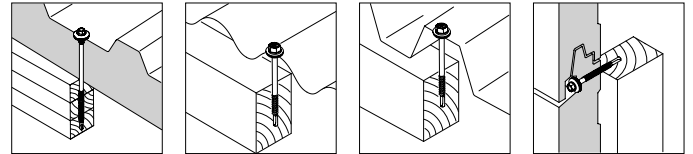


## Features and Benefits

- Self drilling fastener suitable for installation of sandwich panels onto timber
- High quality EPDM sealing washer for long-term weather sealing
- Perfect supporting of the sandwich panel outer-skin given by support thread with cut-off thread-end
- Reduced risks of timber splitting given by the drill point
- High bending capacity for absorption of thermal expansion of the sandwich panel outer-skin
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

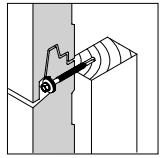
Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	A19
SDTW-A19-6,5×75	100	75	50	17–65	17–30	937840
SDTW-A19-6,5×115	100	115	65	42–105	42–70	911329
SDTW-A19-6,5×125	100	125	65	52–115	52–80	937842
SDTW-A19-6,5×135	100	135	65	62–125	62–90	937845
SDTW-A19-6,5×150	100	150	65	77–140	77–105	1222803

t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – l<sub>ef, min.</sub>)



## Fastener in carbon steel onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	No washer
SDTW-6,5×75	100	75	50	20–68	20–33	743764
SDTW-6,5×115	100	115	65	45–108	45–73	1047815
SDTW-6,5×125	100	125	65	55–118	55–83	1346440
SDTW-6,5×135	100	135	65	65–128	65–93	701545
SDTW-6,5×150	100	150	65	80–143	80–108	1237209

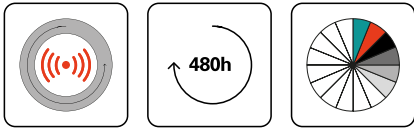
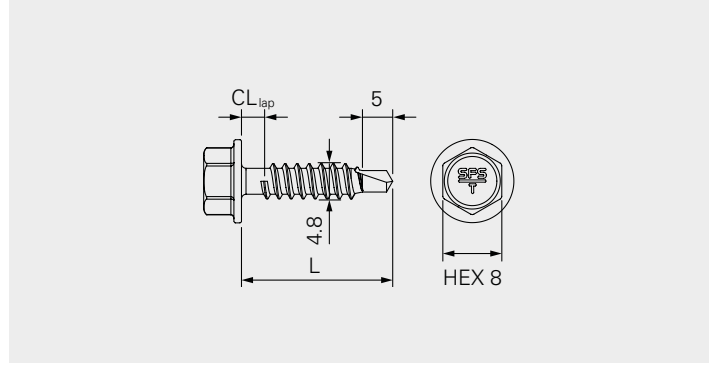
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> – (CL<sub>timb, max.</sub> – l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SL2-4.8



## Application

Fastening of overlaps of metal decks, liner trays

## Component 1 (t<sub>I</sub>)

Steel

0.63–1.50

## Component 2 (t<sub>II</sub>)

Steel

0.63–1.50

$\Sigma_{\max} t_I + t_{II}$

2.50

## Fastener material

Carbon steel, Durocoat® 480

## Approvals

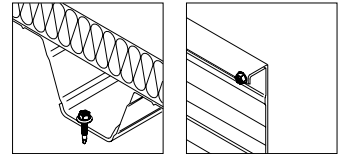
**CE**<sub>19</sub>  
ETA-10/0198

## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

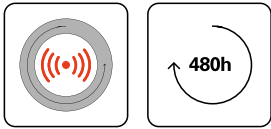
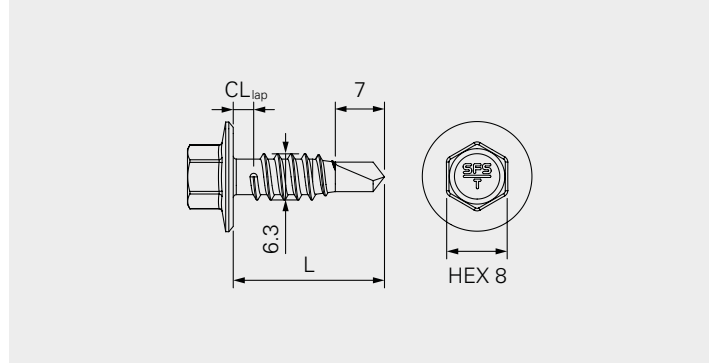
Product code	PU	L	CL <sub>lap</sub>	
SL2-4,8×20	1000	20	1.20-2.50	482671



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SL2-H15-6.3



## Application

Fastening of overlaps of metal decks, liner trays

## Component 1 (t<sub>I</sub>)

Steel 0.63–1.50

## Component 2 (t<sub>II</sub>)

Steel 0.63–1.50

$\Sigma_{\max} t_I + t_{II}$

2.50

## Fastener material

Carbon steel, Durocoat® 480

## Approvals

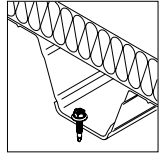


## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High tension and shear resistance achieved by optimized fastener geometry
- High corrosion durability thanks to special galvanic zinc coating

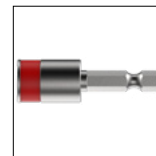
## Documentation

Approval document (ETA) | Declaration of performance (DoP)



**Fastener in carbon steel onto steel**

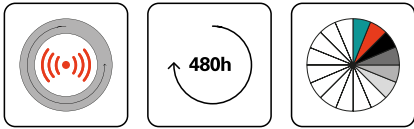
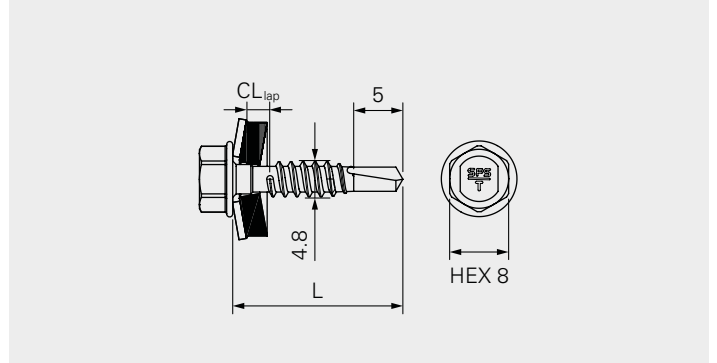
Product code	PU	L	CL <sub>lap</sub>	
SL2-H15-6,3x20	500	32	1.20-2.50	943791



**Accessories/Ancillaries**

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
Drive shaft H15 head	5	¼"	H15	1517546

# SL2-T-4.8



## Application

Fastening of overlaps of profile sheets  
 Fastening of overlaps of sandwich panels  
 Fastening of flashings onto sandwich panels  
 Fastening of flashings onto profile sheets

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	0.40–1.50	Steel	0.40–1.50	2.50

## Fastener material

Carbon steel, Durocoat® 480  
 Sealing washer: Aluminium, EPDM-seal

## Approvals



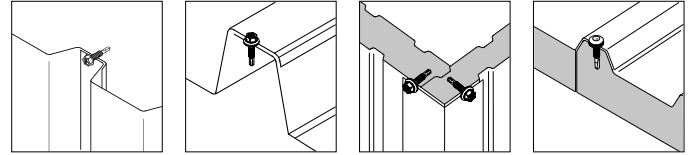
## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps and flashings
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High corrosion durability thanks to special galvanic zinc coating
- High quality EPDM sealing washer for long-term weather sealing

## Documentation

Approval document (ETA) | Declaration of performance (DoP)





## Fastener in carbon steel onto steel

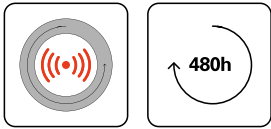
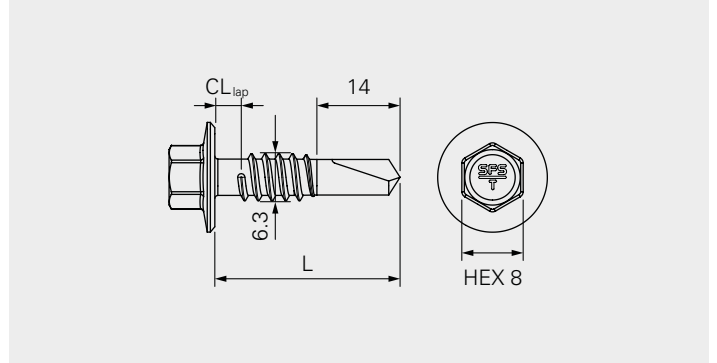
Product code	PU	L	CL <sub>lap</sub>	A14
SL2-T-A14-4,8x20	250	20	0.80-2.50	3041



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SL3-H15-6.3



## Application

Fastening of overlaps of metal decks, liner trays  
Fastening of metal profiles onto profile sheets

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	1.0–2.0	Steel	1.0–2.0	3.50

## Fastener material

Carbon steel, Durocoat® 480

## Approvals

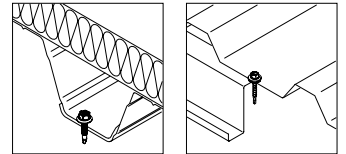


## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- High tension and shear resistance achieved by optimized fastener geometry
- High corrosion durability thanks to special galvanic zinc coating

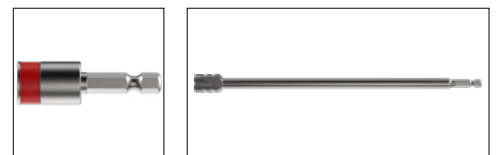
## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

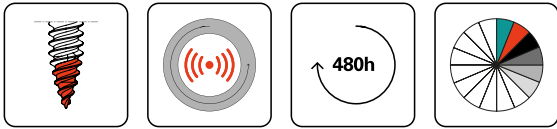
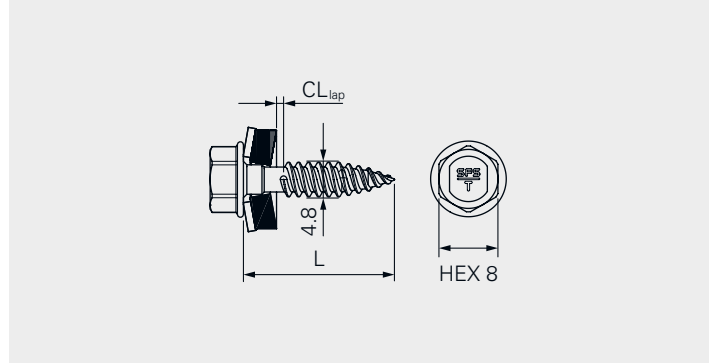
Product code	PU	L	CL <sub>lap</sub>	
SL3-H15-6,3×24	500	24	2.0-3.50	984607
SL3-H15-6,3×32	500	32	2.0-3.50	3615



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160
Drive shaft H15 head	5	¼"	H15	1517546

# SLG-T-4.8



## Application

Fastening of overlaps of profile sheets  
 Fastening of overlaps of sandwich panels  
 Fastening of flashings onto sandwich panels  
 Fastening of flashings onto profile sheets

## Component 1 (t<sub>1</sub>)

Steel

0.40–1.0

## Component 2 (t<sub>II</sub>)

Steel

0.40–1.0

$\Sigma_{\max} t_1 + t_{II}$

2.0

## Fastener material

Carbon steel, Durocoat® 480  
 Sealing washer: Aluminium, EPDM-seal

## Approvals

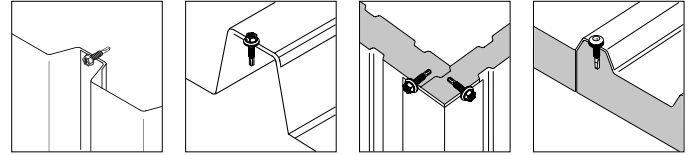


## Features and Benefits

- Self drilling fastener suitable for fastening of overlaps and flashings
- Fast and chip-free installation thanks to the FastTip
- No scratches on painted metal surfaces thanks to the sharp FastTip
- No torque control required given by free-spin zone
- Secured against unwinding given by cut-off thread-end and free-spin zone
- Cost saving installation due to post-cleaning of chips no longer necessary
- High quality EPDM sealing washer for long-term weather sealing
- High corrosion durability thanks to special zinc coating
- High tension and shear resistance achieved by optimized fastener geometry

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto steel

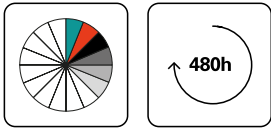
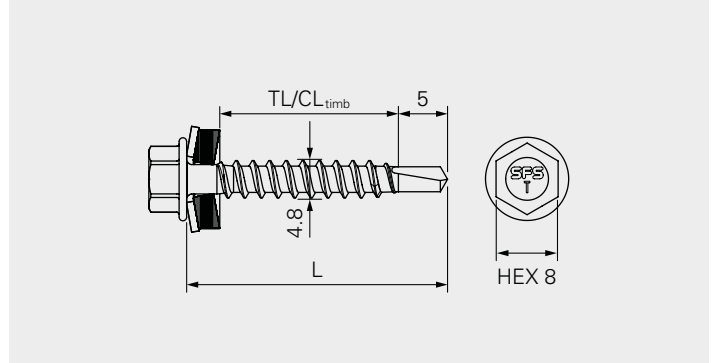
Product code	PU	L	CL <sub>lap</sub>	A14
SLG-T-A14-4,8x20	250	20	0.80-2.0	1385274



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SW-T-4.8



## Application

Fastening of profile sheets onto timber

## Component 1 (t<sub>I</sub>)

Steel 0.50–1.50

## Component 2 (t<sub>II</sub>)

Timber  $l_{ef} \geq 25.0$

$\Sigma_{max} t_I + t_{II}$

–

## Fastener material

Carbon steel with Durocoat® 480

Sealing washer: Aluminium, EPDM-seal

## Approvals

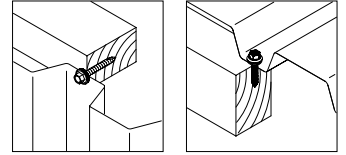


## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- Reduced risks of timber splitting given by the drill point
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	A14
SW-T-A14-4,8×35	250	35	25	0-25	0-1	856490
SW-T-A14-4,8×51	250	51	41	0-41	0-16	16576

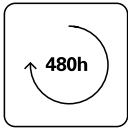
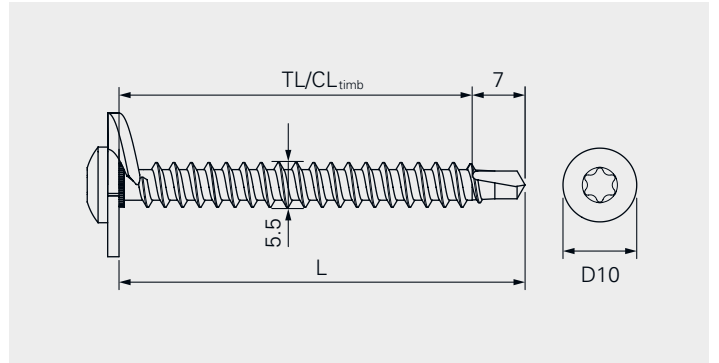
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# SW2-T-D10-5.5



## Application

Fastening of single-ply insulated roof panels onto timber

## Component 1 (t<sub>I</sub>)

Single-ply panel

## Component 2 (t<sub>II</sub>)

Timber

$\Sigma_{\max} t_I + t_{II}$

$l_{ef} \geq 25.0$

–

## Fastener material

Carbon steel, Durocoat® 480

Cutting disc: Carbon steel

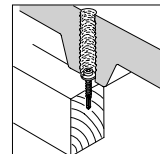
## Approvals

–

## Features and Benefits

- Self drilling fastener suitable for installation of single-ply insulated roof panels
- No pre-drilling of membrane and insulation required thanks to cutting-washer
- Reduced risks of timber splitting given by the drill point
- High corrosion durability thanks to special galvanic zinc coating
- Self coring fastener without disruption of the insulating material achieved by the cutting-washer

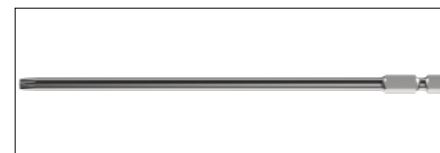




## Fastener in carbon steel onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	
SW2-T-D10-T19/C9-5,5x55	500	55	47	0-47	0-22	1178371

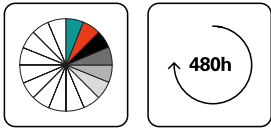
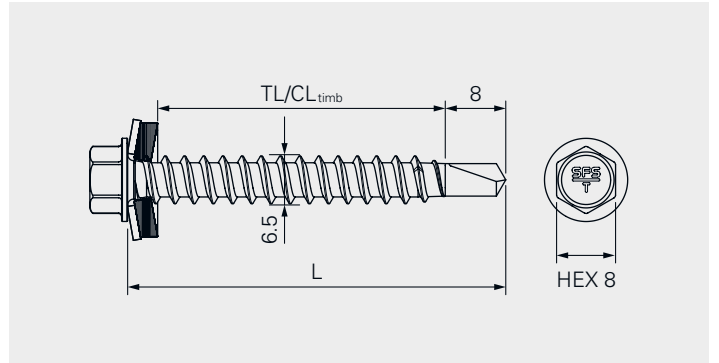
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
T25W-175-HEX¼"	5	¼"	T25W	727979

# SW3-T-6.5



## Application

Fastening of profile sheets onto timber

Component 1 (t <sub>I</sub> )		Component 2 (t <sub>II</sub> )		Σ <sub>max</sub> t <sub>I</sub> +t <sub>II</sub>
Steel	0.50–1.50	Timber	l <sub>ef</sub> ≥35.0	–

## Fastener material

Carbon steel with Durocoat® 480

Sealing washer: Carbon steel galvanized, EPDM-seal

## Approvals

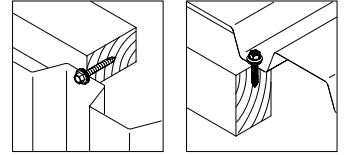


## Features and Benefits

- Self drilling fastener suitable for installation of profile sheets
- High quality EPDM sealing washer for long-term weather sealing
- Reduced risks of timber splitting given by the drill point
- High corrosion durability thanks to special galvanic zinc coating

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto timber

Product code	PU	L	TL	CL <sub>timb</sub>	t <sub>fix, timb</sub>	T16
SW3-T-T16-6,5x50	250	50	39	0-39	0-4	71056

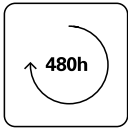
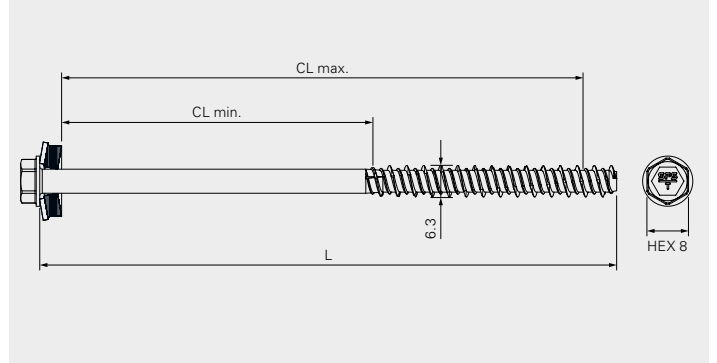
t<sub>fix, timb</sub>: CL<sub>timb, min.</sub> - (CL<sub>timb, max.</sub> - l<sub>ef, min.</sub>)



## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
E308-¼"-50	1	¼"	HEX8	1646160

# TI-6.3



## Application

Fastening of sandwich panels onto concrete  
 Fastening of profile sheets onto concrete  
 Fastening of metal decks, liner trays onto concrete  
 Fastening of metal plates, profiles, brackets onto concrete

## Fastener Ø

Pre-drill Ø	5.00
Embedment depth	≥20

**6.30**

## Fastener material

Carbon steel, Durocoat® 480  
 Sealing washer: Carbon steel galvanized, EPDM-seal

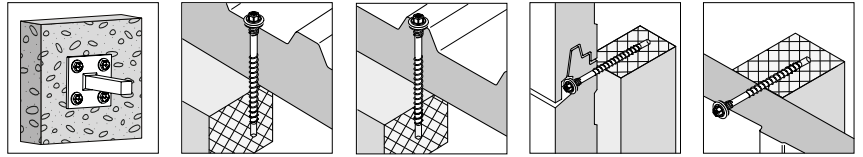
## Approvals

## Features and Benefits

- Self tapping fastener suitable for installation onto concrete
- High quality EPDM sealing washer for long-term weather sealing
- High corrosion durability thanks to special galvanic zinc coating

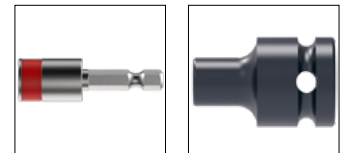
## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Fastener in carbon steel onto concrete

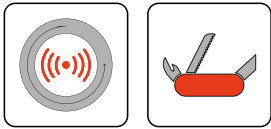
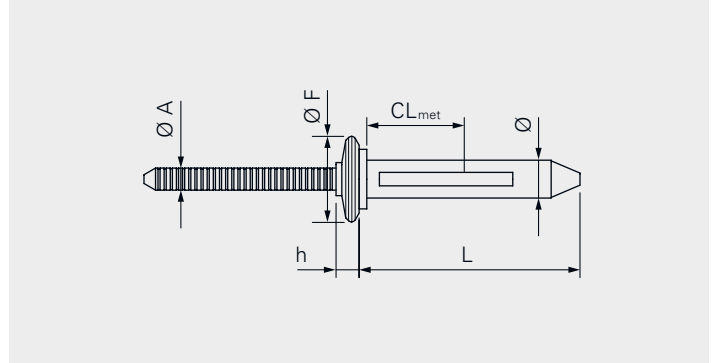
Product code	PU	L	t <sub>fix</sub>	T16
TI-T16-6,3×32	250	32	1-7	894465
TI-T16-6,3×55	250	55	1-30	920454
TI-T16-6,3×75	250	75	20-50	920455
TI-T16-6,3×95	250	95	40-70	920467
TI-T16-6,3×115	250	115	60-90	1021896
TI-T16-6,3×135	100	135	80-110	1292166
TI-T16-6,3×155	100	155	100-130	764398
TI-T16-6,3×175	100	175	120-150	1065070
TI-T16-6,3×195	100	195	140-170	1643911
TI-T16-6,3×215	100	215	160-190	1659859
TI-T16-6,3×235	100	235	180-210	1659860
TI-T16-6,3×255	100	255	200-230	1659862
TI-T16-6,3×275	100	275	220-250	1659863



## Accessories/Ancillaries

Product code	PU	
E308-¼"-50	1	1646160
E508-½"-40	1	1648380

# BULB-TITE®



## Application

Fastening of metal profiles onto profile sheets  
 Fastening of overlaps of profile sheets  
 Fastening of metal profiles onto metal decks and liner trays  
 Fastening of metal profiles onto sandwich panels

## Fastener material

Aluminium 5056 (EN573)  
 Sealing washer: EPDM

## Component 1 (t<sub>I</sub>)

Steel            ≥0.40  
 Aluminium    ≥0.50  
 Aluminium    ≥0.50

## Component 2 (t<sub>II</sub>)

Steel            ≥0.40  
 Aluminium    ≥0.50  
 Steel            ≥0.50

$\Sigma_{\max} t_I + t_{II}$

–  
 –  
 –

## Approvals

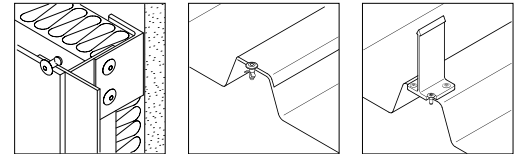


## Features and Benefits

- Multifunctional blind rivet for a variety of applications
- High clamping range with clamping force independent of the clamping thickness
- High quality Neoprene sealing washer for long-term weather sealing
- Non-detachable and vibration-resistant connection given by the locking ribs
- Save setting given by the three load bearing legs

## Documentation

Approval document (ETA) | Declaration of performance (DoP)



## Rivets in aluminium onto steel and aluminium

Product code	PU	Ø	L	CL <sub>met</sub>	Pre-drill Ø	Ø A	Ø F	h	
RV6604/6/3W-BULB-TITE	1000	5.20	17.50	1.30–4.80	5.30–5.50	2.90	11.60	3.40	1570655
RV6604/6/4W-BULB-TITE	1000	5.20	19.10	1.60–6.40	5.30–5.50	2.90	11.60	3.40	1570656
RV6604/6/6W-BULB-TITE	1000	5.20	22.20	4.70–9.50	5.30–5.50	2.90	11.60	3.40	1570658
RV6604/6/8W-BULB-TITE	1000	5.20	25.40	7.90–12.70	5.30–5.50	2.90	11.60	3.40	1570659
RV6604/6/10W-BULB-TITE	1000	5.20	28.60	11.10–15.90	5.30–5.50	2.90	11.60	3.40	1570629
RV6604/6/12W-BULB-TITE	1000	5.20	31.80	14.30–19.10	5.30–5.50	2.90	11.60	3.40	1570652
RV6603/9/6W-BULB-TITE	1000	7.70	27.70	1.00–9.50	7.80–8.20	4.50	15.90	4.80	1570647
RV6605/9/6W-BULB-TITE	1000	7.70	28.20	1.10–8.30	7.80–8.20	4.50	19.40	5.30	1570660
RV6603/9/10W-BULB-TITE	1000	7.70	34.50	6.40–15.90	7.80–8.20	4.50	15.90	4.80	1570649





# Anci llaries



# Flashing Combo All in one

**Current state of the art**

When retrofitting is required just cut and apply clips for ease of application—Clips included in purchase.

**Larger square base will cover a larger opening**

So more forgiving for penetration openings and allows for steeper roof pitch.

**Unique cone design**

Provides 10 mm continuous contact with flashed pipe providing a watertight seal.

**Clear markings in metric and imperial measurements**

Makes for easier cutting to pipe size.

**Available for different temperature ranges**

Black EPDM (–50 °C up to +115 °C/intermittently up to +150 °C)

Red silicone (–50 °C up to +200 °C/intermittently up to +250 °C)



# Sealing tapes How to choose

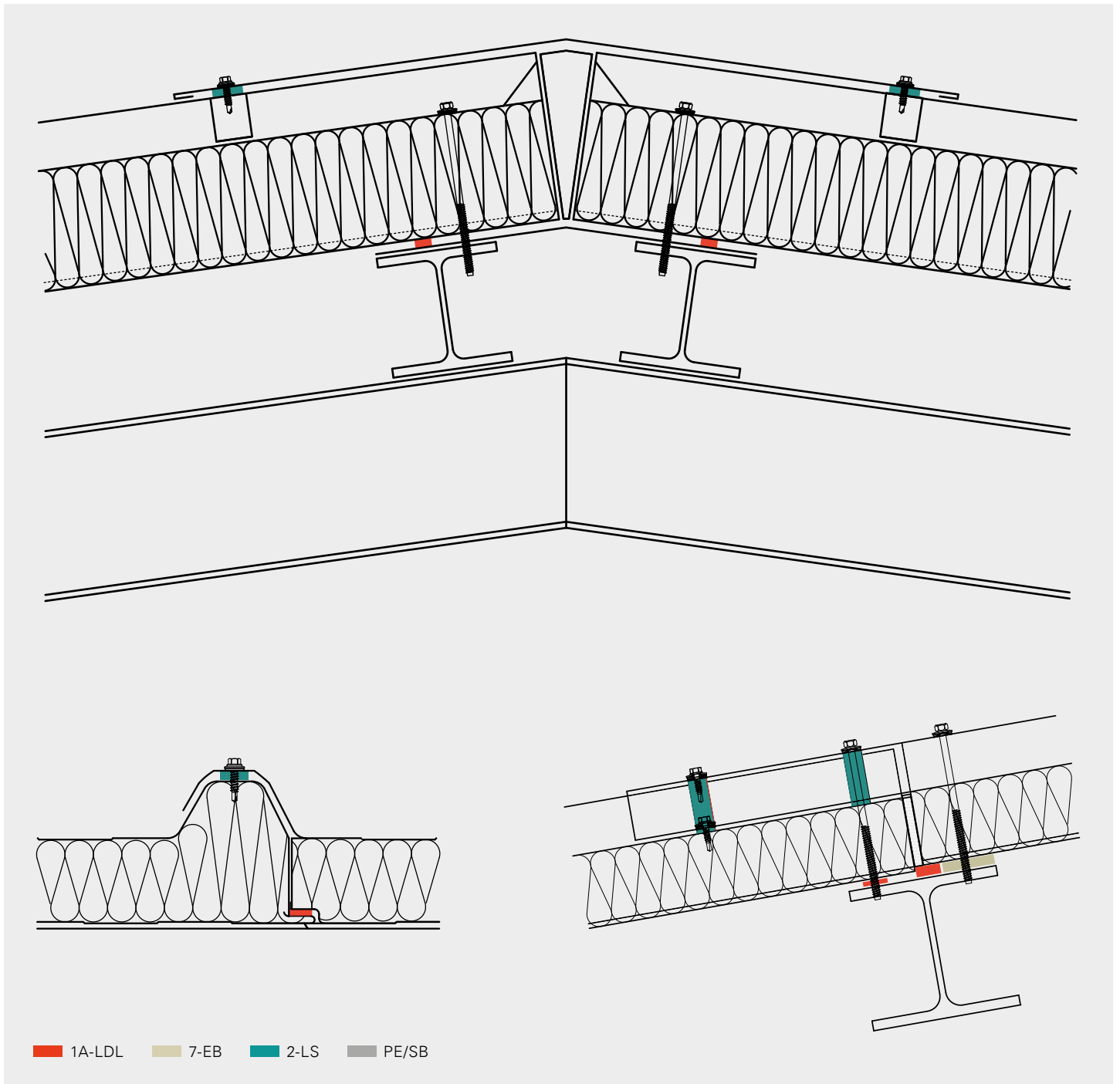
**Main Features**

	<b>I Air-tight sealing</b>	<b>II Tight against dust and driving rain</b>	<b>III Sealing of vapour barrier</b>	<b>IV Thermal break</b>
Type	1A	2	3	7
Tape type	LDL	LS	BB	EB, PE*, PE-SB*
Description	Sealing tape for sandwich panels, liner try, and inside flashing Page 174	Sealing tape for overlaps and outside flashings Page 176	Sealing tape between overlaps of fastener connections Page 170	Sealing tape for thermal breaks Page 172

\*If there are no special requirements regarding thermal bridges

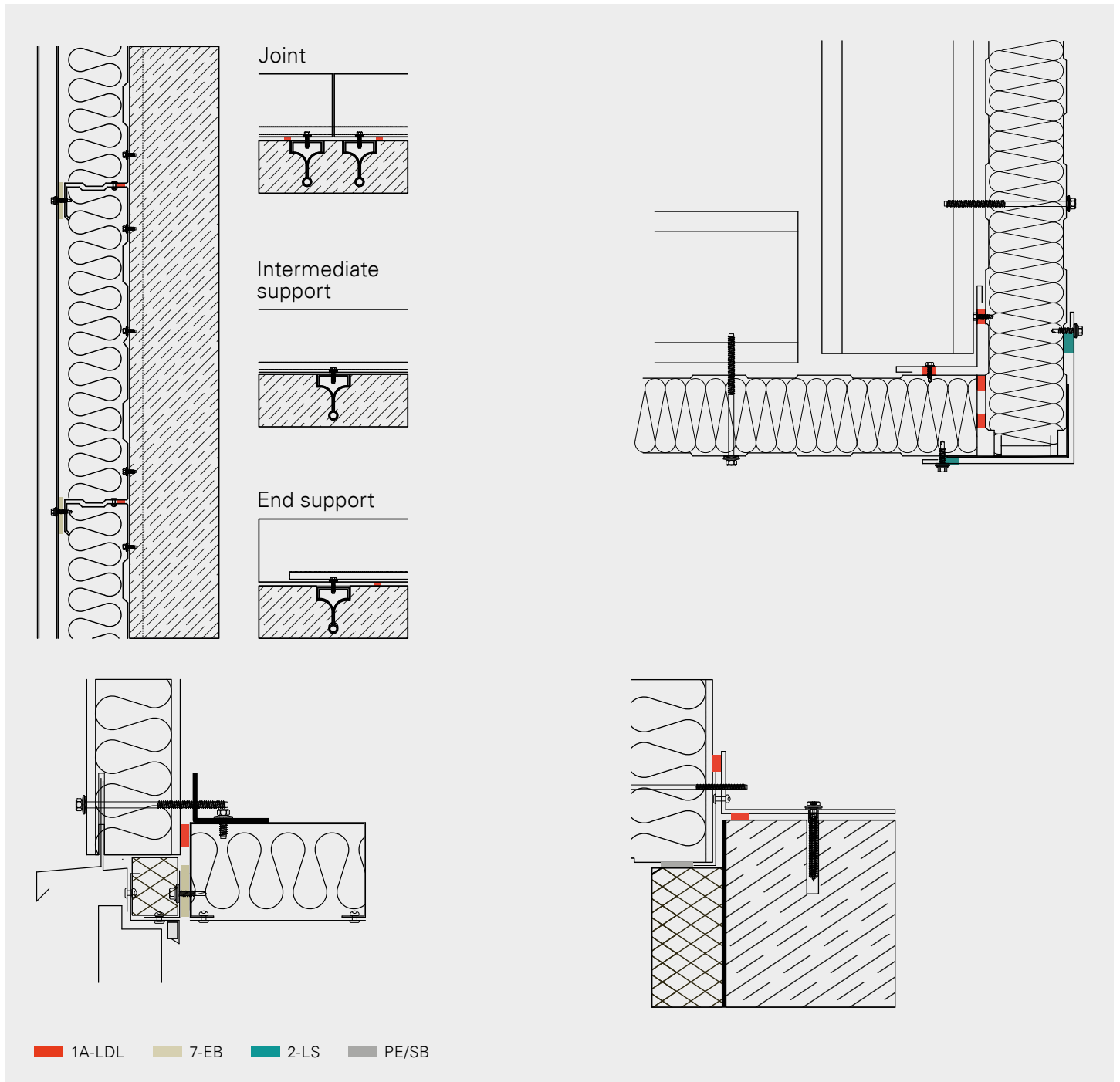
# Application Sealing tapes

Examples roof



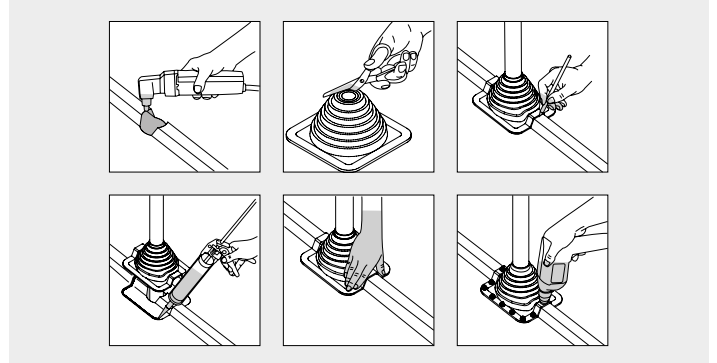
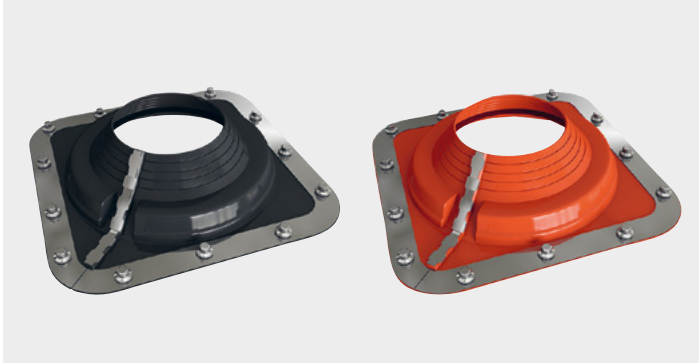
# Application Sealing tapes

## Examples wall





# Flashing Combo



## Application

Adaptable pipe flashing for all sheet metal roof profiles  
 To provide a permanently leakproof, vibration-proof  
 Heatproof and weatherproof pipe penetration  
 The specifications of DIN EN 1090 part 4 and 5 «Openings in roofs» must be complied with when using the pipe sleeves  
 For standard and retrofit application

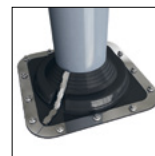
## Approvals

## Material

EPDM black (–50°C up to +115°C/intermittently up to +150°C)  
 Silicone red (–50°C up to +200°C/intermittently up to +250°C)

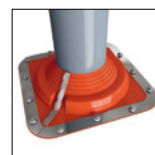
## Features and Benefits

- Perfect sealing of pipe outlets on walls and facades
- The soft embedded aluminium frame conforms easily the most metal roof profiles
- Sleeve exibility accommodates vibration and pipe movement caused by expansion/contraction
- For standard and retrofit application
- 20 years warranty



## Flashing Combo EPDM black

Product code	PU	Ø min.	Ø max.	Base	Required fixing kit	
Flashing Combo N°1 5-60-BLACK	15	5	60	139	Set N°1	1541691
Flashing Combo N°3 5-127-BLACK	15	5	127	218	Set N°2	1541692
Flashing Combo N°4 75-175-BLACK	10	75	175	285	Set N°2	1522467
Flashing Combo N°5 108-190-BLACK	10	108	190	365	Set N°2	1550019
Flashing Combo N°6 125-230-BLACK	10	125	230	365	Set N°2	1522473
Flashing Combo N°7 150-280-BLACK	10	150	280	454	Set N°2	1550021
Flashing Combo N°8 175-330-BLACK	5	175	330	454	Set N°3	1522474
Flashing Combo N°9 240-503-BLACK	5	240	503	685	Set N°3	1541693
Flashing Combo N°10 400-750-BLACK	1	350	760	1000×1045	Set N°4	1541694



## Flashing Combo Silicone red

Product code	PU	Ø min.	Ø max.	Base	Required fixing kit	
Flashing Combo N°1 5-60-RED	15	5	60	139	Set N°1	1565212
Flashing Combo N°3 5-127-RED	15	5	127	218	Set N°2	1565213
Flashing Combo N°4 75-175-RED	10	75	175	285	Set N°2	1565218
Flashing Combo N°5 108-190-RED	10	108	190	365	Set N°2	1565232
Flashing Combo N°6 125-230-RED	10	125	230	365	Set N°2	1565233
Flashing Combo N°7 150-280-RED	10	150	280	454	Set N°2	1565234
Flashing Combo N°8 175-330-RED	5	175	330	454	Set N°3	1565235
Flashing Combo N°9 240-503-RED	5	240	503	685	Set N°3	1565236

## Fixing kit onto metal sheets

Product code	PU	Coltogum transparent	Fastener SX3/9-A12-6,0x29	
MF-SET-1-SX3	1	1 pcs.	12 pcs.	1019634
MF-SET-2-SX3	1	1 pcs.	24 pcs.	1019635
MF-SET-3-SX3	1	1 pcs.	36 pcs.	1019637
MF-SET-4-SX3	1	1 pcs.	48 pcs.	1019638

## Fixing kit onto aluminium sheets

Product code	PU	Coltogum transparent	Rivet RV6604	
MF-SET-1-RV6604	1	1 pcs.	12 pcs.	1019640
MF-SET-2-RV6604	1	1 pcs.	24 pcs.	1019651
MF-SET-3-RV6604	1	1 pcs.	36 pcs.	1019652

## Single components

Product code	PU	
SX3/9-A12-6x29	500	1141972
RV6604/6/4W-BULB-TITE	1000	1570656
Coltogum sealing compound	1	588087





# Butyl tape BB



## Technical characteristics

Building material class DIN 4102	B2 (normal flammable)
Temperature resistance	-40°C up to +130°C
Storage temperature	+10°C up to +25°C
Storage time	at +20°C unlimited

## Application

Between overlaps of fastener connections in facade and roof construction

## Approvals

-

## Product description

Volume-resistant, solvent-free butyl rubber sealing tape  
 Double sided self-adhesive  
 Flame retardant

## Features and Benefits

- Water repellent
- Does not corrode
- Solvent free
- Bitumen-free and bitumen-compatible
- Aging, weathering and UV resistant
- Volume resistant
- Immediately functional
- Permanent adhesive
- Simple processing
- Conforms to the requirements of IVD leaflet No. 5

## Documentation

Approval document (ETA) | Declaration of performance (DoP)

## Butyl tape BB

Product code	PU	Wide tape (mm)	Wide joint (mm)	Roll length (m)	
BB-10×1,5	22	10	1.5	25	1163572

# Sealing tape EB



## Technical characteristics

Building material class DIN 4102	B2 (normal flammable)
Thermal conductivity EN ISO 12572	0.042 W/m x K
Temperature resistance	-30°C up to +130°C
Building material compatibility DIN 18542	passed
Storage temperature	+1°C up to +20°C
Storage time	2 years
Processing temperature	+5°C up to +50°C

## Application

Between sandwich panels and steel beams  
Between metal profiles onto liner trays

## Approvals

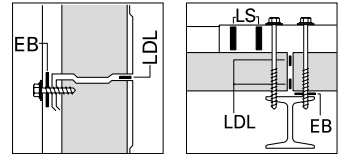
National technical approval P-NDS04-535

## Product description

Polypropylen foam with selfadhesive singleside and foil liner impregnated  
Decoupling tape for thermal breaks

## Features and Benefits

- Complies with the requirements of the current energy-saving regulation (EnEV)
- High compression resistance
- Closed-cell with smooth surface
- Water-resistant
- Optimises thermal bridges
- High ageing resistance
- Environmentally friendly – chemically neutral
- Permanent adhesive
- Simple processing
- Conforms to the requirements of the new IFBS-guideline for joint tightness and lightweight steel constructions



## Sealing tape EB

Product code	PU	wide tape (mm)	wide joint (mm)	roll length (m)	
EB-15×3-SK	48	15	3	30	1211739
EB-30×3-SK	24	30	3	30	1163565
EB-40×3-SK	18	40	3	30	1163566
EB-50×3-SK	14	50	3	30	1163567
EB-60×3-SK	12	60	3	30	1163568
EB-80×3-SK	9	80	3	30	1163570
EB-90×3-SK	8	90	3	30	1385482

# Sealing tape LDL



## Technical characteristics

Building material class DIN 4102	B1 (flame retardant)
Vapour diffusion resistance factor	$\mu < 100$
Temperature resistance	-30°C up to +90°C
Air tightness DIN 18542	BGR
Joint permeability DIN 18542	BG1
Driving rain resistance DIN 18542	600 Pa
Weather resistant DIN 18542	passed
Compatibility with construction materials DIN 18542	passed
Storage temperature	+1°C up to +20°C
Storage time	9 months
Processing temperature	>5°C

## Application

Between sandwich panels or overlaps of sandwich panels  
 Between sandwich panels and inside flashings  
 Between sandwich panels and wall construction  
 Between liner trays  
 Between liner trays and concrete

## Product description

Open-cell polyurethane soft foam, impregnated  
 One-sided self-adhesive  
 Halogen-free, solvent-free

## Features and Benefits

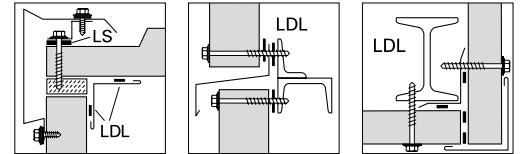
- Seals against wind, dust and splashwater
- Continually expands and contracts to accommodate movement whilst still sealing the joints
- Breathable – for vapour diffusion
- High adhesive strength during fitting
- Acoustic and thermal insulation properties
- Monitored by external institutes
- Constant quality, conforms to DIN standards and is regularly tested by external institutes (can be represented by icons)
- External monitoring by ift Rosenheim GmbH: Resistance to driving rain and joint air permeability coefficient (a-value)

## Approvals

National technical approval P-NDS04-1044

## Documentation

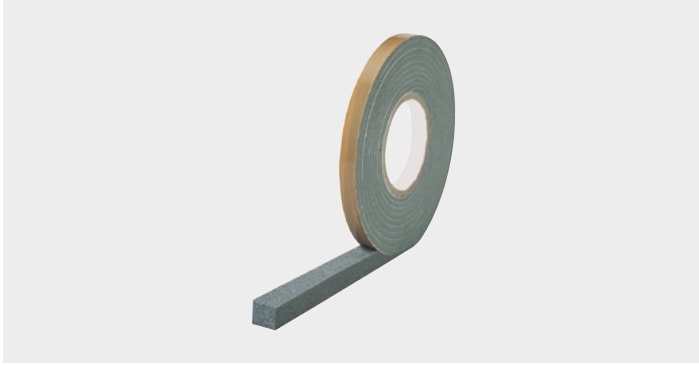
Approval document (ETA) | Declaration of performance (DoP)



## Sealing tape LDL

Product code	PU	wide tape (mm)	wide joint (mm)		roll length (m)	
			BG1	BGR		
LDL-10/2-4	8	10	2-4	2-3	22	1467478
LDL-14/2-4	11	14	2-4	2-3	22	1467490
LDL-14/2-6	11	14	2-6	2-4	18	1467491
LDL-14/3-9	11	14	3-9	3-5	12	1467492
LDL-19/7-15	8	19	7-15	7-8	6	1524572
LDL-30/7-15	5	30	7-15	7-8	6	1525296

# Sealing tape LS



## Technical characteristics

Building material class DIN 4102	B2 (normal flammability)
Vapour diffusion resistance factor	$\mu < 100$
Temperature resistance	-30°C up to +90°C
Joint permeability DIN 18542	BG2
Driving rain resistance DIN 18542	300 Pa
Weather resistant DIN 18542	passed
Compatibility with construction materials DIN 18542	passed
Storage temperature	+1°C up to +20°C
Storage time	1 year

## Application

Between overlaps of sandwich panels  
Between sandwich panels and outside flashings

## Approvals

National technical approval P-NDS04-534

## Product description

Open-cell polyurethane soft foam, impregnated  
One-sided self-adhesive  
Halogen-free, solvent-free

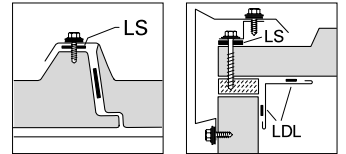
## Features and Benefits

- Seals against dust and driving rain
- Continually expands and contracts to accommodate movement whilst still sealing the joints
- Breathable – for vapour diffusion
- High adhesive strength of the self-adhesive on standard building substrates
- Acoustic and thermal insulation properties
- Solvent free
- Constant quality control to DIN EN ISO 9001 and DIN standards

## Documentation

Approval document (ETA) | Declaration of performance (DoP)

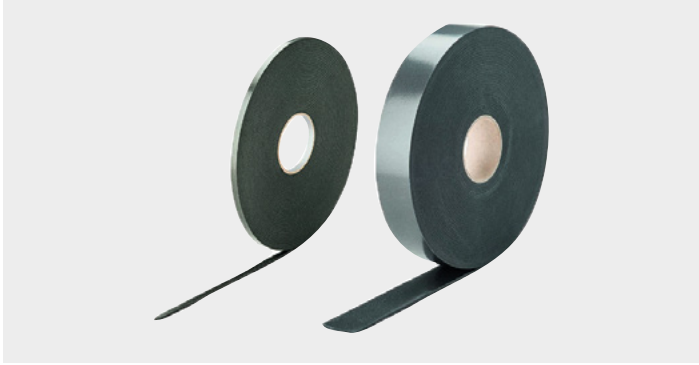




## Sealing tape LS

Product code	PU	wide tape (mm)	wide joint (mm)	roll length (m)	
LS-10/1,5-2	11	10	1.50–2.0	25	1163529
LS-10/3-5,5	11	10	3.0–5.50	13	1163530
LS-15/1,5-2	7	15	1.50–2.0	25	1163532
LS-15/3-4	7	15	3.0–4.0	18	1163535
LS-15/3-5,5	7	15	3.0–5.50	13	1163537
LS-20/3-4	5	20	3.0–4.0	18	1224066
LS-20/5-8	5	20	5.0–8.0	7	1163539
LS-20/8-12	5	20	8.0–12.0	5	1224068
LS-30/1,5-2	3	30	1.50–2.0	25	1163540
LS-30/3-5,5	3	30	3.0–5.50	13	1163551

# Sealing tape PE



## Technical characteristics

Building material class DIN 4102	B2 (normal flammability)
Thermal conductivity EN ISO 12572	0,055 W/m x K
Vapour diffusion resistance factor	$\mu < 100$
Temperature resistance	-80°C up to +100°C
Weather resistant DIN 18542	passed
Compatibility with construction materials DIN 18542	passed
Storage temperature	+1°C up to +20°C
Storage time	1 year

## Application

Between sandwich panels and steel beams  
 Between metal profiles onto liner trays

## Approvals

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## Product description

Polyethylen foam  
 Softener-free, elastic and self-adhesive on one side

## Features and Benefits

- High adhesive strength
- Easy and quick to apply
- Suitable as nail sealing tape
- For airtight sealing of tolerance-free and uniform wide joints
- High ageing resistance
- Environmentally friendly – chemically neutral

## Sealing tape PE

Product code	PU	Wide tape (mm)	Wide joint (mm)	Roll length (m)	
PE-15×2	60	15	2	30	1163556
PE-15×3	60	15	3	30	1163558
PE-25×2	38	25	2	30	1163559
PE-40×4	24	40	4	20	1163561
PE-60×5	5	60	5	20	1324731
PE-SB-50/6	1	50	6	50	1507257
PE-SB-90/6	1	90	6	50	1187232
PE-SB-115/6	1	115	6	50	1187233
PE-SB-140/6	1	140	6	50	1187234
PE-SB-165/6	1	165	6	50	1187236
PE-SB-190/6	1	190	6	50	1187237
PE-SB-220/6	1	220	6	50	1214554



# Setting tools Accessories



# Tools, Setting tools and Consumables

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## You can Rely on FEIN

FEIN power tools are subject to tough practical testing before they are launched. Customers in various sectors worldwide benefit from these state-of-the-art tools. Not only does this make us proud, we also firmly believe that FEIN products give users reliable power tools that they will continue to use for years to come.

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## 3 Year FEIN PLUS warranty

FEIN products meet the most exact quality standards, so FEIN provides customers with a three-year warranty for free. Customers only have to register their FEIN product.

### Taking out the 3-year FEIN PLUS:

- Register the new FEIN power tool (including Li-ion batteries and chargers) online within six weeks of purchase on [www.fein.com/warranty](http://www.fein.com/warranty) →
- FEIN immediately provides with a warranty certificate which confirms the 3-year FEIN PLUS warranty

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## Repairs and spare parts service

Should anything go wrong, FEIN provides a central partner to provide competent and rapid assistance:

- Pick up the devices at a time to suit
- Short throughput times
- Binding quotations provided
- Functional and electrical safety check
- On request, inspection plates in accordance with DGUV specification 3
- Repair work is guaranteed for twelve months
- Spare parts are available for at least eight years after the end of production



# FEIN cordless Power System Simple – Efficient – Safe

## Simple and flexible

100% compatibility between FEIN Li-ion batteries, machine and charger – allows for flexibility to combine all FEIN cordless products as required.

## Powerful and efficient

Thanks to the perfect combination of top-quality components, FEIN cordless tools are just as powerful as mains-powered tools. FEIN Li-ion batteries together with brushless FEIN PowerDrive Motor, gearboxes and electronics ensure the same level of efficiency. In this respect, FEIN cordless tools are the best on the market.

## For extra safety

The FEIN SafetyCell Technology reliably protects the tool and battery against overload, overheating and total discharge, therefore ensuring a long service life. FEIN Li-ion batteries have also been protected from dust.

## Clever purchases

Flexibility with FEIN already starts with the purchase: thanks to the compatibility of batteries and machines within the 18V category it is possible to combine individually and as required – consequently you create countless variation options. Simply purchase what you need and when you need it without increased costs as part of additional purchases.

## Cordless FEIN Select<sup>+</sup> power system @SFS

			
ABH 18	ABLK 18-1.6E	ABSS 18-1.6E	AFSC 18 QSL
			
ASCD 18-300 W2	ASCM 18 QM	ASCM 18-6.3	CGG 18-125

# FEIN-ABH 18 Select<sup>+</sup>

1649548



## Application

Extremely compact and powerful cordless rotary hammer drill with an impact energy of 2 J for drilling up to 20 mm in concrete.

## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	18 V
Motor	brushless
Speed, no loaded	0–1200 rpm
Impacts	0–4400 rpm
Impact energy	2 J
Tool holder	SDS-plus
Hole-Ø concrete	20 mm
Hole-Ø masonry	68 mm
Hole-Ø steel	13 mm
Hole-Ø wood	22 mm
Weight without battery	2,30 kg

## Scope of delivery





- 1× ABH 18
- 1× Handle
- 1× Depth stop
- 1× Plastic carrying case

## Features and Benefits

- 100 holes (10×75 mm into concrete) with one battery charge (6 Ah)
- Battery charge can be read off the battery
- Rapid work progress thanks to brushless motor with high impact energy
- FEIN PowerDrive motor with 30% higher efficiency and long service life
- Fatigue-free working thanks to compact design and few vibrations
- Protection for the user and tool by means of safety clutch and overload protection
- Combination hammer with three functions: hammer drilling, drilling and chiselling
- The optional drilling dust nozzle means that little dust is produced
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge



# Accessories

Product code	PU		
FEIN-Battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Akku Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-ABLK 18-1.6E Select<sup>+</sup>

1354488



## Application

Compact and curve-compatible nibbler for roof and façade construction. Precise cuts in trapezoid and corrugated sheet metals and profiles.

## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	18 V
Motor	brushless
Stroke	800–1 300 1 rpm
Cutting speed	1,50 m/min
Steel up to 400 N/mm <sup>2</sup>	1,60 mm
Steel up to 600 N/mm <sup>2</sup>	1,0 mm
Steel up 800 N/mm <sup>2</sup>	0,70 mm
Non-ferrous metals up to 250 N/mm <sup>2</sup>	2,50 mm
Cutting width	5,0 mm
Immersion-Ø with die	22,0 mm
Radius of smallest curve (inside/outside)	30/35 mm
Weight without battery	1,65 kg











## Scope of delivery

- 1× ABLK 18 1.6 E
- 1× Die holder
- 1× Die
- 1× Punch
- 1× Plastic carrying case

## Features and Benefits

- 45 m of cutting (in 0.8 mm metal sheet) with one battery (6 Ah)
- Battery charge can be read off the battery
- Proven MultiMaster motor with outstanding performance and stability
- 1.5 m/min cutting speed for excellent work progress
- Variable cutting speed due to electronically adjustable speed control
- Brief overlapping area up to 2.6 mm
- Convenient QuickIN quick clamping system
- Rotating punch for a service life which is now up to 30% longer
- Low operating costs. Punch and die are replaced independently of one another
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge

# Accessories

Product code	PU		
FEIN-Battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	
FEIN-ABLK-Punch	5	1653791	
FEIN-ABLK-Die	5	1653792	
FEIN-ABLK-Die Holder	1	1653793	
FEIN-ABLK--Profile set 160	1	1654453	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-ABSS 18-1.6E Select<sup>+</sup>

1649556



## Application

Easy-to-use, curve-compatible cordless slitting shears for distortion-free cuts and cut-outs in sheet metal up to 1.6 mm.

## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	MultiVolt
Motor	brushless
Stroke	2000–3500 1/min
Cutting speed	5–8 mm
Steel up to 400 N/mm <sup>2</sup>	1,60 mm
Steel up to 600 N/mm <sup>2</sup>	1,20 mm
Steel up 800 N/mm <sup>2</sup>	0,80 mm
Non-ferrous metals up to 250 N/mm <sup>2</sup>	2,0 mm
Cutting width	5,0 mm
Radius of smallest curve	90 (30) <sup>1</sup> mm
Immersion-Ø	15 (8) <sup>1</sup> mm
Weight without battery	1,20 kg










## Scope of delivery

- 1× ABSS 18 1.6E
- 1× Knife, straight, up to 1.6 mm
- 1× Pair of cutting bars
- 1× Key
- 1× Plastic carrying case

## Features and Benefits

- 140 m of cutting (in 0.8 mm metal sheet) with one battery (6 Ah)
- Battery charge can be read off the battery
- Proven MultiMaster motor with outstanding performance and stability
- Rapid work progress due to excellent view of the cutting line through the openfronted cutting head
- Left and right curve cuts and distortion-free cutting possible with just one continuous chip
- Convenient QuickIN quick clamping system
- Cutting blade with excellent tool life
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge

# Accessories

Product code	PU		
FEIN-Battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	
FEIN-ABSS-Cutting blade	1	1653770	
FEIN-ABSS-Blade for curves	1	1654450	
FEIN-ABSS-Cutting bars	1	1653768	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-AFSC 18 QSL Select<sup>+</sup>

1649551



## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	MultiVolt
Motor	brushless
Oscillations	10'000–19'500 1/min
Tool holder	StarlockMax
Tool change	QuickIN
Amplitude	2×2,0°
Weight without battery	1,10 kg

## Application

The most powerful cordless oscillator with rapid clamping system for interior work and renovation.

## Scope of delivery

- 1× SuperCut AFSC 18 QSL
- 1× Plastic carrying case

## Features and Benefits

- Battery charge can be read off the battery
- FEIN PowerDrive motor with 30% higher efficiency and long service life
- FEIN Anti-vibration system. Up to 70% less vibration due to complete decoupling of the outer motor housing. For permanently safe working
- Convenient QuickIN quick clamping system
- Metal gear unit. High load capacity and maximum service life
- Largest range of accessories with Starlock, StarlockPlus and StarlockMax mounts in FEIN quality
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge

# Accessories

Product code	PU		
FEIN-Battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	
FEIN-HSS-Saw blade circular	1	1650198	
FEIN-BIM-Saw blade circular	1	1650199	
FEIN-Cutting paste	1	1650200	
FEIN-BIM-Saw blade E-Cut 30x10	1	1650201	
FEIN-BIM-Saw blade E-Cut 50x35	1	1650209	
FEIN-BIM-Saw blade E-Cut 50x65	1	1650211	
FEIN-BIM-Saw blade E-Cut 78x42	1	1650212	
FEIN-BIM-Saw blade E-Cut 90x32	1	1650213	
FEIN-Carbide Pro-Saw blade E-Cut 45x35	1	1650214	
FEIN-Carbide Pro-Saw blade E-Cut 60x32	1	1650215	
FEIN-Carbide Pro-Saw blade E-Cut 75x32	1	1650216	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-ASCD 18-300 W2 Select<sup>+</sup> 1603594



## Application

Cordless impact wrench/driver with brushless motor and 6-stage torque setting. For metric screwdriving applications up to M18.

## Scope of delivery

- 1× ASCD 18-300 W2
- 1× Belt clip
- 1× Bit holder
- 1× Plastic carrying case

## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	MultiVolt
Motor	brushless
Speed, no load	0–1700 rpm
Impacts	0–3400 rpm
max. torque	290 Nm
Torque levels	6
Tool holder	1/2" Outer square
max. metric screw	M18 (8.8)
max. Ø wood screw	8×300 mm
Weight without battery	1,0 kg

## Recommendation of torque level







Level	M <sub>max</sub> Nm
1	25
2	50
3	85
4	135
5	210
6	290

## Features and Benefits

- 600 connections (M18) with one battery (6 Ah)
- Battery charge can be read off the battery
- FEIN PowerDrive motor with 30% higher efficiency and long service life
- Electronic 6-stage torque setting prevents screw heads from being torn off
- 10% more torque in reverse running to loosen screws which are extremely tight
- 1/2" in square for holding sockets
- Bright working area thanks to integrated LED light
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge



# Accessories

Product code	PU		
FEIN-battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-ASCM 18 QM Select<sup>+</sup>

1649550



## Application

4-speed cordless drill/driver with brushless motor and QuickIN MAX interface. No compromise on performance for drilling and tapping up to 12 mm and drilling with carbide hole saws.

## Scope of delivery

- 1× ASCM 18 QM
- 1× Handle
- 1× Belt clip
- 1× Bit holder
- 1× QuickIN drill chuck (120 Nm)
- 1× Plastic carrying case

## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	18 V
Motor	brushless
Gearbox	4-speed
Interface	QuickIN
Speed, no load	400/800/1950/3850 rpm
Impacts	0–3400 rpm
max. torque (hard/soft)	90/45 Nm
Torque levels	15+1
Drill chuck clamping width	1,5–13 mm
Fastening	10×400 mm
Capacity in wood Ø	50 mm
Tapping	M12
Weight without battery	1,50 kg

## Features and Benefits

- 2.500 connections (5×40 mm into wood) with one battery charge (6 Ah)
- Battery charge can be read off the battery
- FEIN PowerDrive motor with 30% higher efficiency and long service life
- 4-speed solid metal gearbox. Optimum cutting speeds for drilling in metal and self-drilling screwdriving
- Convenient QuickIN quick clamping system
- Electronic torque setting
- Bright working area thanks to integrated LED light
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge

# Accessories

Product code	PU		
FEIN-Battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	
FEIN-QuickIN Angled head	1	1649590	
FEIN-QuickIN drill chuck 120 Nm	1	1650164	
FEIN-QuickIN Hole saw adapter	1	1650195	
FEIN-QuickIN Tapping adapter	1	1650196	
FEIN-QuickIN Bit holder 1/4"	1	1565197	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-ASCS 18-6.3 Select<sup>+</sup>

1486715



## Technical datas

Battery voltage 18 V	18 V
Battery compatibility	Li-Ionen
Battery interface	18 V
Motor	brushless
Speed, full load	0–1500 rpm
Speed, no load	0–1700 rpm
max. torque (hard/soft)	30/10 Nm
max. screw-Ø	6,3 mm
Rapid change chuck	1/4" inner square
Weight without battery	1,10 kg

## Application

Speed-optimised cordless drill/driver for screw connections in metal up to a diameter of 6.3 mm.










## Scope of delivery

- 1× ASCS 6.3
- 1× Depth stop
- 1× Insert for hexagon bolts SW8
- 1× Plastic carrying case

## Features and Benefits

- 180 connections (in metal sheet) with one battery charge (6 Ah)
- Battery charge can be read off the battery
- FEIN PowerDrive motor with 30% higher efficiency and long service life
- Electronic torque shut-off for precise results even without a depth stop
- Tested for more than 1 million screw connections
- Powerful up to 30 Nm
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge

# Accessories

Product code	PU		
FEIN-Battery-Starter-Set 18V/3.0Ah	1	1649558	
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-Li-Ion Battery Pack 18V/3.0Ah	1	1367517	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	
FEIN-depth stop Ø 20 mm	1	1511699	
FEIN-depth stop Ø 28 mm	1	1486868	
CF40-FEIN-ASCS6.3-Basic	1	1371950	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# FEIN-CCG 18-125 BL Select<sup>+</sup>

1649545



## Technical datas

Battery voltage	18 V
Battery compatibility	Li-Ionen
Battery interface	MultiVolt
Motor	brushless
Speed, no load	2500–8500 rpm
Grinding disc-Ø	125 mm
Elast. Backing pad-Ø	125 mm
Flange	M14
Weight without battery	1,95 kg

## Application

Dust-resistant and powerful, compact cordless angle grinder for effective cutting, grinding and deburring work in assembly jobs.





## Scope of delivery

- 1× CCG 18-125 BL
- 1× Wheel guard
- 1× Tool-free quick-clamping nut
- 1× Anti-vibration handle
- 1× Plastic carrying case

## Features and Benefits

- Battery charge can be read off the battery
- FEIN PowerDrive motor with 30% higher efficiency than comparable universal motors with a rated output of 1100 W and long service life
- Very smooth running and low-vibration working thanks to motor being decoupled from the housing and mounted separately and four additional vibration dampers
- Extensive user protection features include soft start, restart protection, electronic overload protection and brake
- Separate motor electronics with dust guard in handle area
- Bright working area thanks to integrated LED light
- Safety hood, which can be adjusted without the use of tools, and quick-clamping nuts make for short setup times
- FEIN SafetyCell technology. Protects the battery and tool from overload, overheating and total discharge

# Accessories

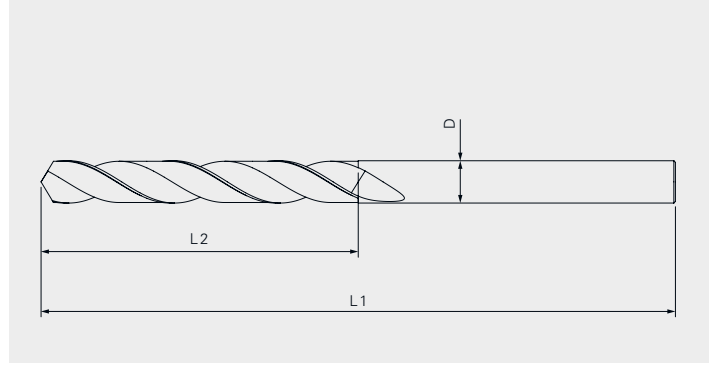
Product code	PU		
FEIN-HighPower Battery-Starter-Set 18V/5.2Ah	1	1640507	
FEIN-HighPower Li-Ion Battery Pack 18V/5.2Ah	1	1649587	
FEIN-Quick charger ALG 80	1	1649582	
FEIN-ALED 12-18V	1	1649554	

## Warranty

- 3-year FEIN PLUS warranty including battery and charger

# HSS drill bits

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**Application**

Drilling in construction steel and timber

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**Approvals**

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**Material**

HSS high speed steel

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**Features and Benefits**

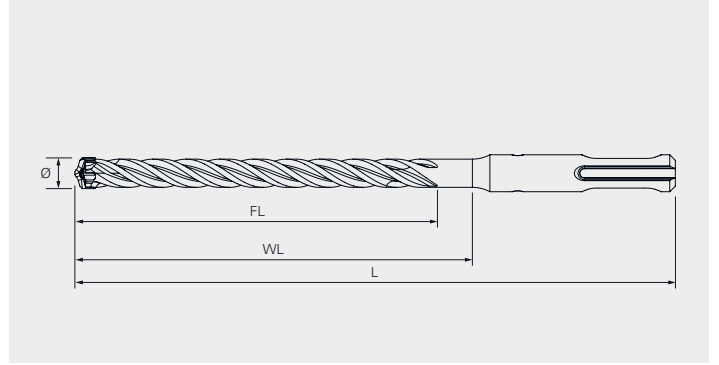
- For construction steel and timber
  - Short spiral groove for better stability
  - Insert ends: smooth shank
-



## HSS drill bits

Product code	PU	D	L1	L2	
HSS-4,9×62/26	10	4.90	62	26	69585
HSS-5,0×60/31	10	5.0	60	31	1046721
HSS-5,0×90/31	10	5.0	90	31	1046723
HSS-5,0×125/31	10	5.0	125	31	1046724
HSS-5,0×175/31	5	5.0	175	31	1206462
HSS-5,0×220/31	5	5.0	220	31	1046726
HSS-5,0×250/31	5	5.0	250	31	1206458
HSS-5,3×60/31	10	5.30	60	31	1046734
HSS-5,3×95/31	10	5.30	95	31	1046735
HSS-5,3×125/31	10	5.30	125	31	1206451
HSS-5,3×175/31	10	5.30	175	31	1046738
HSS-5,3×220/31	5	5.30	220	31	1206450
HSS-5,3×250/31	5	5.30	250	31	1046740
HSS-5,3×290/31	5	5.30	290	31	1046751
HSS-5,5×60/31	10	5.50	60	31	1046752
HSS-5,5×95/31	10	5.50	95	31	1046753
HSS-5,5×125/31	10	5.50	125	31	1046754
HSS-5,5×175/31	10	5.50	175	31	1046755
HSS-5,5×220/31	5	5.50	220	31	1046756
HSS-5,5×250/31	10	5.50	250	31	1046757
HSS-5,5×290/31	5	5.50	290	31	1046758
HSS-5,7×60/31	10	5.70	60	31	1046760
HSS-5,7×95/31	10	5.70	95	31	1046772
HSS-5,7×125/31	10	5.70	125	31	1046773
HSS-5,7×175/31	10	5.70	175	31	1206429
HSS-5,7×220/31	5	5.70	220	31	1206428
HSS-5,7×250/31	5	5.70	250	31	1046777
HSS-5,7×290/31	5	5.70	290	31	1206427
HSS-5,8×60/31	10	5.80	60	31	7870
HSS-5,8×100/31	10	5.80	100	31	7872
HSS-5,8×125/31	10	5.80	125	31	7891
HSS-5,8×200/31	10	5.80	200	31	7894
HSS-5,8×260/31	10	5.80	260	31	7896
HSS-5,8×300/31	10	5.80	300	31	1238831
HSS-6,5×101/63	10	6.50	101	63	893457

# SDS drill bits



## Application

Pre-drill of reinforced concrete or natural stone

## Approvals



## Material

4x carbide cutting edge, steel shank

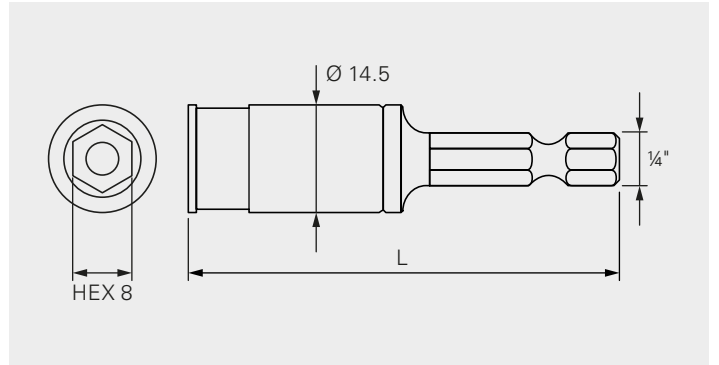
## Features and Benefits

- Four symmetrical cutting edges for exact drilling diameters
- No slipping on the surface due to the centering tip
- Optimal removing of drilling dust due to the cupping flute geometry
- Optimum drilling performance and no seizure when hitting reinforcing steel thanks to the patented reinforcement chamfer
- 50% longer service life due to special geometry

## SDS drill bits

Product code	PU	D	L	WL	FL	
SDS-6×210/150-4C	1	6	210	150	150	1487583
SDS-6×310/250-4C	1	6	310	250	250	1487584
SDS-6×515/455-4C	1	6	515	455	200	1608141
SDS-8×210/150-4C	1	8	210	150	150	1487585
SDS-10×210/150-4C	1	10	210	150	150	1487586

# SOK-IT®



## Application

Installation of all fasteners from diameter 4.8–6.3 mm  
 6Nm for stainless steel fastener (black)  
 8Nm for carbon steel fastener (gold)

## Approvals



## Material

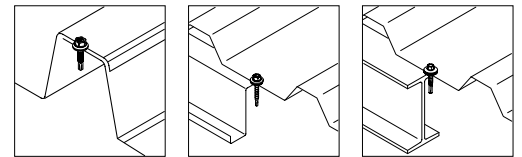
With an 1/4" drive  
 With a safety ball for ideal hold

## Features and Benefits

- No fastener breakages due to limited setting torque
- Reliable fastening when using both standard screwdrivers and impact wrenches
- Reduces downtime and costs due to safe installation with all standard setting tools
- Two different torque levels (6+8Nm) for different applications and fasteners
- min. 5000 pcs. safe installations when used correctly

## Accessories/Ancillaries

Product code	PU	Drive	Head drive	
SOK-IT-¼"-57-6Nm	1	¼"	HEX8	1667323
SOK-IT-¼"-57-8Nm	1	¼"	HEX8	1667322



## Recommended for the following SFS fastener





Stainless steel fastener	Torque force
SX14-5,5	6Nm
SX5-5,5	6Nm
SX3-6,0	6Nm
SXW-6,5	6Nm
SL2-S-6,3	6Nm

Carbon steel fastener	Torque force
SD14-H15-5,5	8Nm
SD14-5,5	8Nm
SD6-H15-5,5	8Nm
SD5-5,5	8Nm
SL3-H15-6,3	8Nm
SL2-H15-6,3	8Nm
SL2-4,8	8Nm
CDM-4,8	8Nm















# Bits, sockets and drive bars



## Bit holder and different T-drives

Product code	PU	Drive	Head drive	L		
Bit holder ZA ¼"	1	¼"	¼"	58	1162306	
T25W-175-HEX ¼"	5	¼"	T25W	175	727979	
T15-25-HEX ¼"	10	¼"	T15	25	938982	
T20-25-HEX ¼"	10	¼"	T20	25	769471	
T20W-25-HEX ¼"	10	¼"	T20W	25	895280	
T25-25-HEX ¼"	10	¼"	T25	25	24008	
T25W-25-HEX ¼"	10	¼"	T25W	25	7662	
T30-25-HEX ¼"	10	¼"	T30	25	24010	
T40-25-HEX ¼"	10	¼"	T40	25	769474	
T30-40-½"	10	½"	T30	40	1489154	
T40-40-½"	10	½"	T40	40	1489155	
T45-40-½"	10	½"	T45	40	1489157	
T50-40-½"	10	½"	T50	40	1489158	

## Sockets

Product code	PU	Drive	Head drive	L		
Drive shaft H15 head	5	¼"	H15	290	1517546	
E308-¼"-50	1	¼"	HEX8	50	1646160	
E466-¼"-40	1	¼"	Square	40	858496	
E313-¼"-50	1	¼"	HEX13	50	508029	
E420-¼"-74	1	¼"	irius®	74	973316	
E380-⅜"-34	1	⅜"	HEX8	34	8018	
ZA¼"	1	¼"	⅜"	50	7645	
E416-½"-38	1	½"	HEX16	38	1389740	
E508-½"-40	1	½"	HEX8	40	1648380	
E513-½"-78	1	½"	HEX13	78	1649258	
E516-½"-78	1	½"	HEX16	78	1649256	
E516-½"-78-red	1	½"	HEX16	78	1649257	
SOK-IT-¼"-57-6NM	1	¼"	HEX8	57	1667323	
SOK-IT-¼"-57-8NM	1	¼"	HEX8	57	1667322	



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