

Flat Roof Fastening Systems for Sika Roofing



Sika and SFS intec technology and concepts for roofing Individual solutions tailored to your needs



As a leading worldwide materials manufacturer for the construction industry, Sika has a strong focus on roofing and produces a wide range of different products and systems to meet our customer's requirements and conform to the latest standards.

Backed by the extensive resources of a successful international group, SFS intec sales and marketing support locations in Europe, North America, Near-Far East and China, can offer architects, designers, consulting engineers and contractors a proven commitment to product, quality and innovative ideas. Decades of experience, proven millions of times, worldwide. Our customers and partners place their confidence in us on the basis of our technological leadership, quality standards and expert applications advice.

This documentation illustrates our basic range of high performance solutions in this field, developed for more than 50 year experience in roofing and incorporating the latest technologies. This makes the system the most complete and competent partner for the new construction or refurbishment of your projects.

We hope that this brochure will give you an overview of Sika's and SFS intec solutions for roofing. For further information, advice or assistance, please contact your local Sika or SFS intec Company or go to www.sika.com or www.sfsintec.biz.



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Sika as global leader in roofing material technology



Single ply membranes

PVC

Type Polyvinylchlorid membranes
Brand names **Sarnafil®**, **Sikaplan®**

Advantages

- Established technology with the longest track record
- Availability of products for exposed roofing applications with high fire ratings / extended fire resistance
- Easy to repair
- Possibility of customized design solutions (colours, profiles, and roof graphics)
- Homogeneous hot air welded joints
- Easy to handle on site
- Suitable for use and exposure in different climatic conditions
- Fast installation independent of the weather
- Good vapour permeability
- Highly flexible
- Flame free installation
- Recyclable

FPO

Type Flexible polyolefin membranes
Brand name **Sarnafil®**

Advantages

- High chemical resistance
- Suitability for direct application on such substrates, as bitumen, EPS and XPS insulation (polystyrenes)
- Availability of products for exposed applications with high fire ratings / extended fire resistance
- Long life expectancy
- Easy to repair
- Homogeneous hot air welded joints
- Easy to handle on site
- Suitable for use and exposure in different climatic conditions
- Fast installation independent of the weather
- Outstanding ecological profile
- Flame free installation

Mechanical fastened systems with Sarnafil®, Sikaplan®

- Mechanically fastened roofs are the most cost efficient for exposed roofing applications
- The fastest installation is achieved with mechanical fastening
- The Sarnafil® / Sikaplan® membranes for mechanical fastening have special polyester reinforcement, enabling high wind load resistance
- Installation is almost weather independent

Mechanically fastened systems are ideal for large, lightweight metal decked structures and buildings, such as distribution and logistics centres, warehouses, supermarkets and workshops.

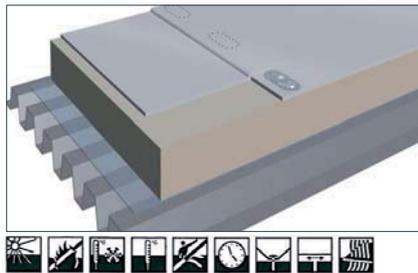
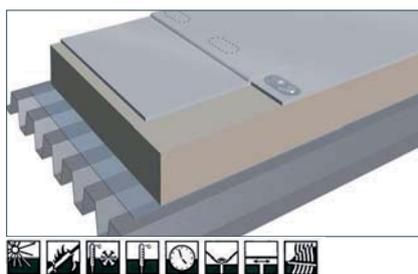
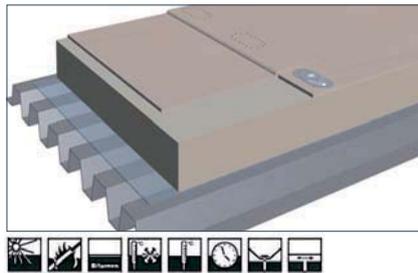
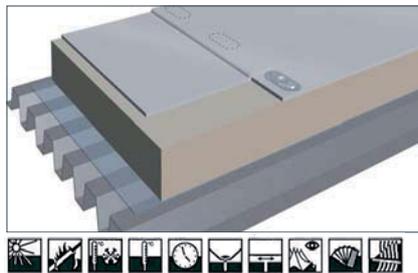
Solutions for exposed roofs: mechanically fastened systems on steel deck – Systems with PIR/mineral wool thermal insulation



Requirements

- **PVC-membrane with laquered surface and extended guarantee**
 - Fast and easy installation
 - Special colours and design (décor profiles)
 - High fire resistance of the thermal insulation
-
- **FPO membrane with extended guarantee**
 - Fast and easy installation
 - High chemical resistance of the waterproofing membrane
 - High fire resistance of the thermal insulation
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- **Standard PVC membrane**
 - Fast and easy installation
 - Standard guarantee (from your local Sika organisation)
 - High fire resistance of the thermal insulation
-
- **PVC membrane with increased fire and cold resistance**
 - Slip resistant surface
 - Standard guarantee (from your local Sika organisation)
 - High fire resistance of the thermal insulation

Design / Build-up



Sika System

- PVC membrane **Sarnafil® S 327** mechanically fastened with
 - **Sarnafast® SF** 4,8 mm and **Sarnafast® Washer KT**
 - **Sarnafast® SBF** 6,0 mm and **Sarnafast® Tube SFT**
 - Mineral wool or PIR insulation
 - Vapour control layer **Sarnavap® 500 E or 1000 E**
 - Steel deck
-
- FPO membrane **Sarnafil® TS 77** mechanically fastened with
 - **Sarnafast® SF** 4,8 mm and **Sarnafast® Washer KT**
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 - Mineral wool or PIR insulation
 - Vapour control layer **Sarnavap® 500 E or 1000 E**
 - Steel deck

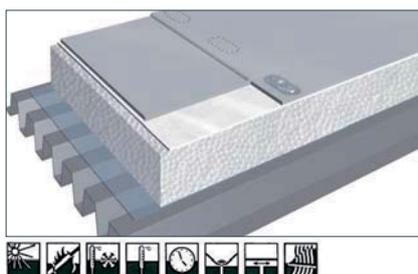
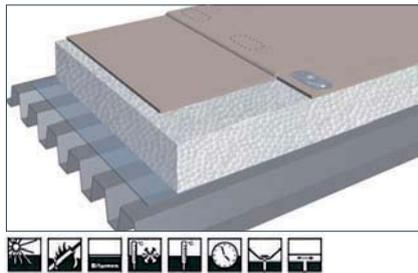
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 - XPS or EPS insulation
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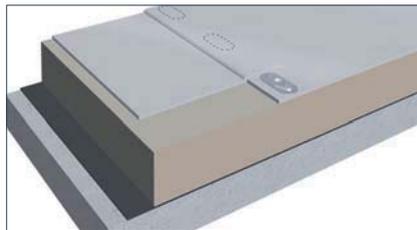
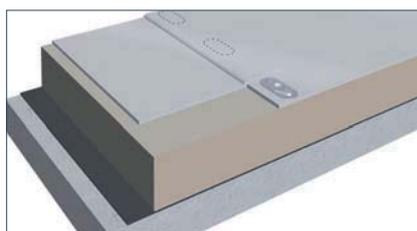
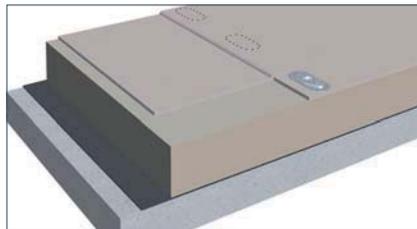
Solutions for exposed roofs: mechanically fastened systems on concrete deck – Systems with PIR/mineral wool thermal insulation



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- **FPO membrane with extended guarantee**
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 - High chemical resistance of the waterproofing membrane
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- **Standard PVC membrane**
 - Fast and easy installation
 - Standard guarantee (from your local Sika organisation)
 - High fire resistance of the thermal insulation
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- **PVC membrane with increased fire and cold resistance**
 - Fast and easy installation
 - Slip resistant surface
 - High fire resistance of the thermal insulation

Design / Build-up



Sika System

- PVC membrane **Sarnafil® S 327** mechanically fastened with
 - **Sarnafast® SB** 6,3 mm and **Sarnafast® Washer KTL**
 - **Sarnafast® SBF** 6,0 mm and **Sarnafast® Tube SFT**
 - Mineral wool or PIR insulation
 - Vapour control layer **Sarnavap® 3000 M**
 - Concrete deck
-
- FPO membrane **Sarnafil® TS 77** mechanically fastened with
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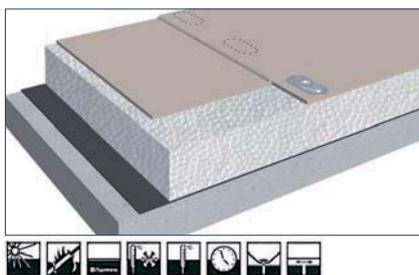
Solutions for exposed roofs: mechanically fastened systems on concrete deck – Systems with EPS/XPS thermal insulation



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Variety of single ply membranes for solar roofs



Sika is focused on solar

Rooftop solar installations are becoming increasingly popular worldwide.

More and more building owners see the opportunity to make effective use of their roof space to make a contribution to the environment through sustainable electricity production. Such installations are investments intended to provide a return over the long-term. Therefore, the roof itself needs a proven track record of high performance with low maintenance requirements as a critical component of solar applications that have an expected service life of 25 years.

Sika has years of experience in the manufacture of sheet membranes that can live up to the demands for performance and life expectancy not only as stand alone waterproofing systems but also ideal substrates for a variety of solar application. For the main solar technologies currently available, Sika can offer an ideally suited solution that either ensures or improves the overall performance of the solar application with as little maintenance and interruption as possible. Sika has created "Solar Parks" at its own facilities to showcase its expertise and flexibility of dealing with solar systems used in rooftop applications.

Building integrated photovoltaic (B.I.PV)

Singly ply membrane sheets can be used as a carrier (master membrane) for the lamination of flexible solar cells. Such membrane sheets with integrated cells are installed over a primary waterproofing layer. Lightweight and easy to install, BIPV solutions take advantage of Sika's range of membranes to create a building integrated solar system.

New

SOL-F - the system for the attachment of solar installations on flat roofs.

The **SFS intec** SOL-F system is unique. It comprises of a fastening system, a dedicated coring tool and a calculation tool. This provides for secure, flexible and speedy installation of solar panels on flat roofs.

The SOL-F fastening system has been successfully tested:

- thermal bridging calculation
- impermeability tests after introduction of force based on ETAG 006
- development cooperation with consulting engineers / structural engineers
- static tests
- dynamic tests
- system test
- TÜV certification submitted
- DIBt Z -14.4 - 617 approval applied for



Main accessories and ancillary products – fasteners and fixings



Description of complete range: Fasteners and fixings are crucial components, especially in mechanically fastened roof systems. Wind uplift forces and corrosion of the metal are the two most vertical influences that put tough demands on those components of a roofing system. Carbon steel solution with special Durocoat® protection (free of chromium VI) or A4 (AISI 316) stainless steel version.

Sarnafast®

High quality metal screws ideally suited for the mechanical fastening of roofing membranes in the main roof areas and in the perimeter zones to different substrates.



- Excellent corrosion resistance
- Suitable for most common substrates (steel, concrete, wood)
- Wide range of lengths
- Compatible with other fixing components (bars, pressure plates etc.)
- Excellent pull-out values

Sika products:

Sarnafast® SF 4.8 mm for steel decks, combined with **Washers KT 82x40, IF/IG-C-82x40, RT 90, DT 70x70, Sarnabar®** / fastening profiles.

Sarnafast® SB 6.3 mm – universal screw for concrete, steel and wood decks, combined with **Washers KTL 82x40, IF/IG-C-82x40, RTL 90, DTL 70x70, Sarnabar®** / fastening profiles.

Sarnafast® SBF 6.0 mm (C-steel) - universal screw for concrete, steel and wood decks, and **Sarnafast® SBF-S** 6.0 mm (stainless) for tube fastenings on steel and wood decks, combined with **Sarnafast® SFT** or **Sarnabar® SBT** tube fastening system.

Washers and termination plates

They are used in combination with **Sarnafast®** screws to provide proper mechanical fastening of the membranes or thermal insulation boards.



- Very high corrosion resistance
- Suitable for soft and hard substrates
- Compatible with **Sarnafast®** screws

Sika products:

Sarnafast® Washers KT, KTL 82x40 – for fastening membrane on thermal insulation.

Sarnafast® Washers IF/IG-C 82x40 – for fastening membrane on rigid substrates.

Sarnafast® Washers DT, DTL 70x70 – for fastening thermal insulation.

Termination plates RT, RTL 90 – for terminations in corner / perimeter areas.

Sarnabar® Tube Insulation Washer SBIW 70x70 – for fastening insulation with SBT tube.



Sarnafast® and Sarnabar® Tube system

Polyamide 6 plastic tube elements developed specially for spot and linear fastening of single ply membranes.



- Thermally broken fastening solution with no chance of cold bridging
- High quality Polyamide plastic provides resistance to very low temperatures and high pull-out values
- Four spikes on the tube for spot fastening gives improved membrane anchoring
- Compatible with the appropriate **Sarnafast®** screws and **Sarnabar®** fastening profiles

Sika products:

Sarnafast® Tube SFT – for spot fastening
Sarnabar® Tube SBT – for linear fastening with **Sarnafast®** fastening profiles

Sarnabar® fastening profiles

Metal profiles specially designed for linear and perimeter fastening of single ply membranes.

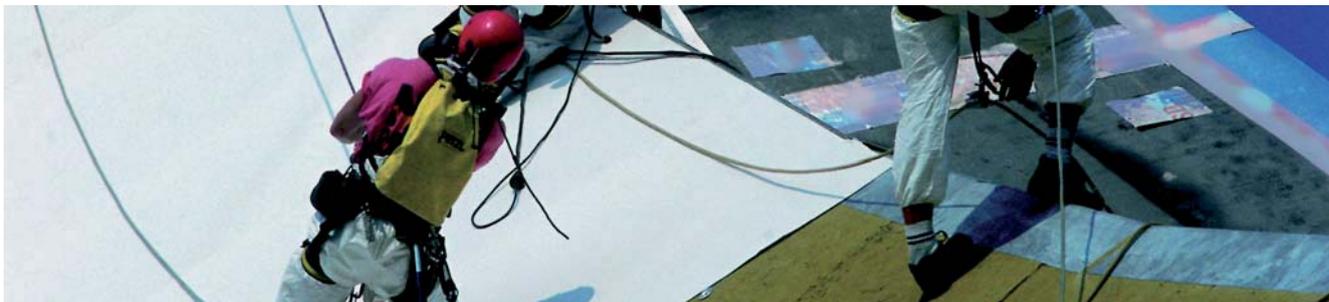


- Two stiffening ribs and 1,5 mm thick steel provides extraordinary mechanical properties
- Very high corrosion resistance from the hot dipped galvanized steel
- Compatible with **Sarnafast®** screws and **Sarnabar®** tube **SBT**
- Universal linear distribution of wind forces gives the possibility of wider gaps between fastening rows in the main roof areas and provides the highest security in perimeter zones

Sika products:

Sarnabar® 6/10
Sarnabar® 6
Sarnabar® 6/15 for tube system

Sarnabar® and Sarnafast® fastening system Application procedures – single ply membranes

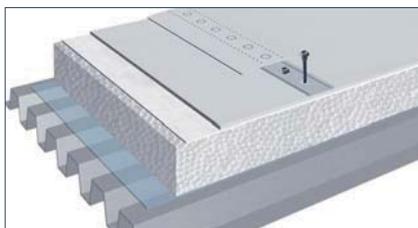


Sika single ply membranes are mechanically fastened to the roof deck against wind uplift forces, using single fasteners or fastening profiles with their fixings drilled into the deck or into the support structure according to the engineers requirements.



Sarnafast® spot fastening system

In spot fastening systems the membranes are fixed using steel screws (**Sarnafast**® 4.8 or 6.3 mm in diameter) with pressure plates anchored into the deck. Adjacent membrane sheets are overlapped and the seams are hot air welded. This can be an efficient solution that allows very fast, cost effective installation.



Sarnabar® linear fastening system

In the **Sarnabar**® system (fastening profiles), the sheets are loosely laid and secured using the fastening bars anchored to the deck. The profiles are then covered with additional strips of the same membrane and welded to the waterproofing layer. This system provides high resistance to wind uplift because loads are transferred through the fastening profiles to the supporting roof structure.



isofast® fastening system: Fully metallic solution **Quality, reliable long lasting and ergonomic performance**

Today, more than ever, it is essential that the mechanical fastening of insulation and membrane on flat roofs is both fast and efficient. It is equally imperative that these fasteners are installed correctly and thereby function properly throughout the expected life of the roof

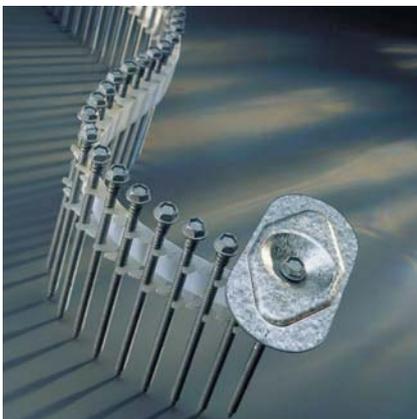
construction. Flat roof fastening systems are subjected to a wide range of thermal, static and dynamic stresses. Correct design is therefore essential to ensure that required performance criterion is achieved. Excellent corrosion resistance is also critical, with environmentally-

friendly coatings of increasing importance. SFS intec have been setting the standards for fastener performance in flat roof applications for many years. The complete fastening systems offer quality, cost effective and innovative fastening solutions.

The convincing advantages of the isofast® fastening system



- A 'treadfast' fastener and stress plate combination ensures that the system is safe to walk on.
- The entire range is available in austenitic stainless steel.
- A complete system featuring the IF240 setting tool for rapid fixing of magazine loaded fasteners.
- Maximum corrosion resistance with safe, chromium VI-free Durocoat® coatings.



High speed installation due to the magazine fed fasteners

A significant part of the installation cost lies in the manual handling of the fasteners. The IF240 setting tool features automatic feeding of the fasteners and stress plates. This provides a completely automated and controlled installation process from beginning to end. The result is that the subsequent installation speed are many times faster than traditional means and the process offers substantial ergonomic benefits to the installer.

No chance for corrosion

Should fastener applications be required in a corrosive atmosphere (for example within buildings of high relative humidity, in acid or waste treatment plants, chloride or marine environments), austenitic stainless steel fasteners are recommended. For other applications, the Durocoat® chromium VI-free surface coating offers excellent protection, whilst meeting exacting current environmental standards.



Telescope fastening system

Cost effective solution for increased insulation requirements

Energy saving directives have resulted in a growing trend for increased insulation thickness requirements for flat roofing. Conventional fasteners were not designed for these increased insulation requirements, where longer

fasteners imply additional heat loss through cold bridging of the insulation layer and thereby increased system costs. SFS intec offers an optimum solution for these demanding applications: a combination of a specially

designed fastener and plastic sleeve combination. This provides resistance to heat flow through the fastener together with a secure and cost effective application.

The convincing advantages of the sleeve system



- Simple, economic solution for increased thickness insulation systems
- Reduced energy loss due to the insulating sleeve
- Secure fixing
- Ergonomic installation with the hand setting tool TP10, TP19 and TP30



The sleeve system: fast, ergonomic and secure

The advantages of this highly reliable fixing method become most apparent with increased insulation thickness. The installation with recommended hand setting tools is particularly effective when used on profiled metal decking. A controlled installation process resulting in fast quality installation with complete repeatability.

A complete range

As well as stand-up setting tools for fitting single pre-assembled fastener and sleeve combinations, SFS intec offers a complete range of installation tools, including drills, drives and bits for each application. Efficient installation demands correct and effective tooling.

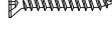


Product index fasteners

Carbon steel quality

Type / code	Carbon steel ■	with Telescop/sleeve	with washer	Substrates			
				Metal deck	Concrete deck	Timber deck	Critical deck
SF			DT, KT				
Chapter/page				2.2			
SB			DTL, KTL				
Chapter/page				2.6	3.2	4.2	
SBF		SFT, SBT Tube					
Chapter/page				2.10	3.11	4.12	
BS		(ISO-TAK) RP75, RP45		SFS			
Chapter/page				2.16			
TI		SFT, SBT Tube			SFS		
Chapter/page					3.8		
TI		(ISO-TAK) R75, R45					
Chapter/page					3.14		
TS		(ISO-TAK) R75, R45				SFS	
Chapter/page						4.18	
TPR-L			DTL, KTL, IE				SFS
Chapter/page							5.3
IWF			IRC/W			SFS	
Chapter/page						4.4	
IWF-T			MW			SFS	
Chapter/page						4.7	
TS		(ISO-TAK) R75, R45				SFS	
Chapter/page						4.18	

Austenitic stainless steel quality

Type / code	Stainless steel ●	with Telescop/sleeve	with washer	Substrates			
				Metal deck	Concrete deck	Timber deck	Critical deck
IR2-S			IF, IR	SFS			
Chapter/page				2.8			
SBF-S		SFT, SBT Tube					
Chapter/page				2.12		4.14	
BS-S		(ISO-TAK) RP75, RP45		SFS			
Chapter/page				2.18			
DT-S			DTL, KTL, IF/IG-C		SFS		
Chapter/page					3.6		
DT-S		SFT, SBT Tube					
Chapter/page					3.17		
IW-S			IRC/W			SFS	
Chapter/page						4.10	

Tools and accessories

Tools and accessories							
Chapter							6

Product index washers

Carbon steel quality

Type / code	Carbon steel ■	with fastener	application	Substrates				
				Metal deck	Concrete deck	Timber deck	Critical deck	
KT-82x40			SF	membrane fixing washer				
Chapter/page				2.2				
KLT-82x40			SB, SBF	membrane fixing washer				
Chapter/page				2.6	3.2	4.2		
DT-70x70			SF	insulation fixing washer				
Chapter/page				2.2	3.2	4.2		
DTL-70x70			SB, SBF	insulation fixing washer				
Chapter/page				2.6				
IF-70x70			IR2-S	insulation fixing washer				
Chapter/page				2.8				
ID-70x70			DT-S	insulation fixing washer				
Chapter/page						3.6/5.3		
IF/IG-C-82x40		 	SB, SBF	convex membrane fixing washer		 		
Chapter/page						3.6		
IE-C-82x40			TPR	convex membrane fixing washer				
Chapter/page								5.3
IR-82x40			IR2-S	membrane fixing washer				
Chapter/page					2.8			
IRD-82x40			DT-S	membrane fixing washer				
Chapter/page						3.6/5.1		
IRC/W-82x40			IWF, IW-S	membrane fixing washer				
Chapter/page							4.4/4.10	
MW-40-FH			IWF-T	membrane fixing washer				
Chapter/page							4.7	
RT-90				termination washer				
Chapter/page								
RTL-90				termination washer				
Chapter/page								
SBT-RTP-105				membrane fixing washer				
Chapter/page								
SBIW-70x70			SBT tube	insulation fixing washer				
Chapter/page								
LDP-90				Samabar® load distribution washer				
Chapter/page								

2

Fastener	Sarnafast® Sika Private label	SFS Standard range	Page
Carbon steel	SF		▶ 2.2
Carbon steel	SB		▶ 2.6
Austenitic stainless steel		IR2-S	▶ 2.8

Fastener and Tubes	Sarnafast® Sarnabar® Sika Private label	SFS Standard range	Page
Carbon steel / Plastic sleeve	SBF SFT, SBT		▶ 2.10
Austenitic stainless steel / Plastic sleeve	SBF-S SFT, SBT		▶ 2.12
Carbon steel / Plastic sleeve		BS RP75, RP45	▶ 2.16
Austenitic stainless steel / Plastic sleeve		BS-S RP75, RP45	▶ 2.18



Sarnafast® SF



Sarnafast® SF



Technical information

Application

For the fastening of waterproofing membrane and insulation to steel deck. For steel deck thicknesses between min. 0,63 mm and max. 2 x 1,25 mm.

Material

Fastener

- SF
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Stress plates

- DT-70x70 / KT-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual
installation of fasteners

IF80 L/S (standard)



- Stand-up setting tool for the
installation of *isofast*® fasteners
and stress plates

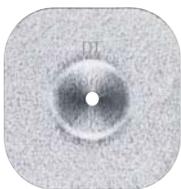
IF240



- Automated setting tool for the
installation of magazine loaded
isofast® fasteners and stress plates

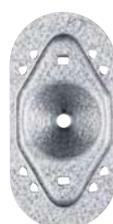
Stress plates

DT-70x70



- Stress plate for insulation

KT-82x40



- Stress plate for membrane



Order information

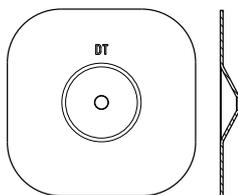
	Hexagon 8 mm A/F
KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm	

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
■ Carbon steel CE ETA 08/0321 		SF- 4,8x 60	40		 t min. steel: 0,63 mm t max. steel: 2 x 1,25 mm Screw length L: KL + 20 mm	
		SF- 4,8x 70	50			
		SF- 4,8x 80	60			
		SF- 4,8x 90	70			
		SF- 4,8x 100	80			
		SF- 4,8x 110	90			
		SF- 4,8x 120	100			
		SF- 4,8x 130	110			
		SF- 4,8x 140	120			
		SF- 4,8x 150	130			
		SF- 4,8x 160	140			
		SF- 4,8x 180	160			
		SF- 4,8x 200	180			
		SF- 4,8x 220	200			
		SF- 4,8x 240	220			
		SF- 4,8x 260	240			
		SF- 4,8x 280	260			
	SF- 4,8x 300	280				

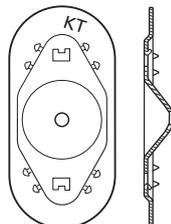
2

Stress plates

DT-70X70



KT-82X40



Sarnafast® SF



Order information

	Hexagon 8 mm A/F 	magazine loaded
--	----------------------	---------------------

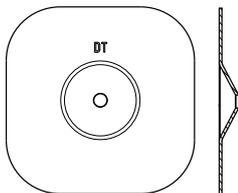
KL clamping length | M magazine loaded | d thread diameter | L Length | t thickness of structure | All measures in mm

Product / Application	Approval	Order code					KL	Application range
		Type	M	d	L			
<p>■ Carbon steel</p>	 ETA 08/0321 	SF-	M-	4,8x	60	40	 t min. steel: _____ 0,63 mm t max. steel: _____ 2 x 1,25 mm Screw length L: KL + 20 mm Attention: The magazine loaded fastener can only be used with the IF 240 setting tool.	
		SF-	M-	4,8x	70	50		
		SF-	M-	4,8x	80	60		
		SF-	M-	4,8x	90	70		
		SF-	M-	4,8x	100	80		
		SF-	M-	4,8x	110	90		
		SF-	M-	4,8x	120	100		
		SF-	M-	4,8x	130	110		
		SF-	M-	4,8x	140	120		
		SF-	M-	4,8x	150	130		
		SF-	M-	4,8x	160	140		
		SF-	M-	4,8x	180	160		
		SF-	M-	4,8x	200	180		
		SF-	M-	4,8x	220	200		
		SF-	M-	4,8x	240	220		

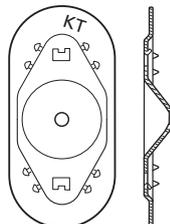
2

Stress plates

DT-70X70



KT-82X40



**Putrajaya Convention Centre, Putrajaya - Malaysia / 2003**

Roofsize: 26'000 m2 - mechanically fastened

Roof built-up:

- Metal deck
- Acoustic insulation board
- Rockwool mineral insulation
- Reinforced double sided aluminium foil vapour retarder
- **Sarnafil**® S 327-15 EL (champagne)

Fastening system: **Sarnafast**® SB 6,3 and **Sarnafast**® KTL 82x40

Sarnafast® SB



Sarnafast® SB



Technical information

Application

For the fastening of waterproofing membrane and insulation to steel deck. For steel deck thicknesses between min. 0,63 mm and max. 2 x 1,25 mm.

Material

Fastener

- SB
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements.

Environment friendly, free of
chromium VI

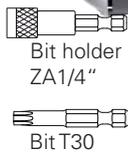
Stress plates

- DTL-70x70 / KTL-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual
installation of fasteners

IF80 L/S with internal drive



- Stand-up setting tool for the installa-
tion of *isofast*® fasteners and stress
plates with inside drive bar for TORX®

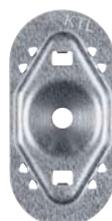
Stress plates

DTL-70x70



- Stress plate for insulation

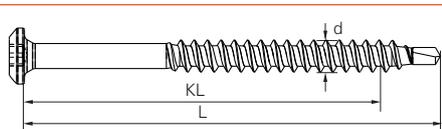
KTL-82x40



- Stress plate for membrane



Order information



T30 recess Ø 11,2 mm

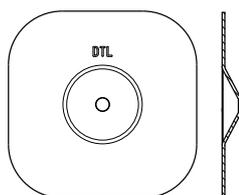


KL clamping length | M magazine loaded | d thread diameter | L Length | t thickness of structure | All measures in mm

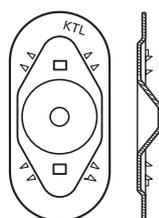
Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>■ Carbon steel</p>		SB- 6,3x 32			15	<p>t min. steel: 0,63 mm</p> <p>t max. steel: 2 x 1,25 mm</p> <p>Screw length L: KL + 20 mm</p> <p>Delivery note: 1 T30 bit is included at each box.</p>
		SB- 6,3x 50			30	
		SB- 6,3x 75			55	
		SB- 6,3x 100			80	
		SB- 6,3x 120			100	
		SB- 6,3x 140			120	
		SB- 6,3x 160			140	
		SB- 6,3x 180			160	
		SB- 6,3x 200			180	
		SB- 6,3x 230			210	
		SB- 6,3x 250			230	

Stress plates

DTL-70X70



KTL-82X40



isofast® IR2-S**isofast® IR2-S****Technical information****Application**

For the fastening of waterproofing membrane and insulation to steel deck. For steel deck thicknesses between min. 0.63 mm and max. 2 x 1,0 mm.

Where the internal relative humidity is in excess of 70%. In chemically aggressive atmospheres or conditions. For refurbishment applications where the detailed condition of the existing build up is not known or when the build up contains abrasive layers that may damage the corrosion protection and make it ineffective. Where an extended design life / warranty is required by the client. For locations with aggressive local conditions (e.g. coastal environments).

Material**Fastener**

- IR2-S
Austenitic stainless steel, grade AISI 316, European Standard 1.4401, grade A4

Drill point and lead thread section

- Fused and hardened carbon steel, length 12 mm, corrosion protected

Stress plates

- IF-70x70 / IR-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich test according to ETAG 006 - D.3.1. and FM requirements

Tools and accessories - details see chapter 6**DI650**

- Drive bar
ZA1/4"
- Socket
E380 hex

- Power screwdriver for manual installation of fasteners

IF80 L/S (standard)

- Stand-up setting tool for the installation of *isofast®* fasteners and stress plates

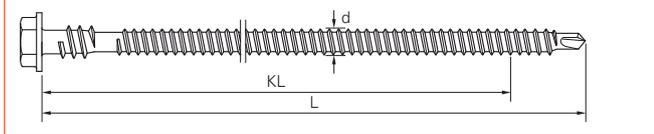
Stress plates**IF-70x70**

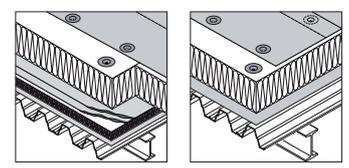
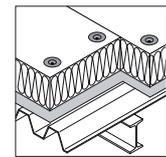
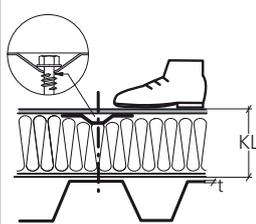
- Stress plate for insulation

IR-82x40

- Stress plate for membrane

Order information

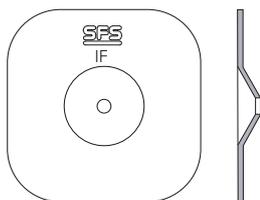
	<p>Hexagon 8 mm A/F</p> 	
<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>		

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>● Stainless steel</p>   		IR2-S-	4,8x	60	40	 <p>t min. steel: 0,63 mm</p> <p>t max. steel: 2 x 1,0 mm</p> <p>Screw length L: KL + 20 mm</p> <p>Availability of magazine loaded fasteners on request.</p>
		IR2-S-	4,8x	80	60	
		IR2-S-	4,8x	100	80	
		IR2-S-	4,8x	120	100	
		IR2-S-	4,8x	140	120	
		IR2-S-	4,8x	160	140	
		IR2-S-	4,8x	180	160	
		IR2-S-	4,8x	200	180	
		IR2-S-	4,8x	220	200	
		IR2-S-	4,8x	240	220	

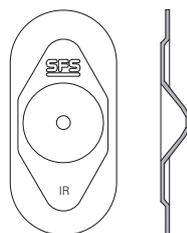
2

Stress plates

IF-70X70



IR-82X40



Sarnafast® SBF / SFT, Sarnabar® SBF / SBT



Sarnafast® SBF / SFT, Sarnabar® SBF / SBT



Technical information

Application

For the fastening of waterproofing membrane and insulation to steel deck. For steel deck thicknesses between min. 0,63 mm and max. 2 x 1,25 mm.

Material

Fastener

- SBF
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Tube

- SFT and SBT
High quality polyamid, PA6

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual
installation of fasteners

TP10, TP19, TP30



- Stand-up setting tool for the
installation of fasteners and sleeves



Order information

<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>			

Product / Application	Approval	Order code			KL	Application range
		SBF-	6,0x	60		
<p>■ Carbon steel</p>		SBF-	6,0x	35	KL see combination table 	<p>t min. steel: _____ 0,63 mm</p> <p>t max. steel: _____ 2 x 1,25 mm</p>
SBF-		6,0x	60			
SBF-		6,0x	70			
SBF-		6,0x	80			
SBF-		6,0x	90			
SBF-		6,0x	100			
SBF-		6,0x	110			
SBF-		6,0x	130			
SBF-		6,0x	160			
SBF-		6,0x	180			
SBF-		6,0x	200			
<p>● Polyamid</p> <p>Sarnafast® spot fastening system</p>		SFT	50x	40	KL see combination table	
SFT		50x	70			
SFT		50x	100			
SFT		50x	130			
SFT		50x	160			
SFT		50x	190			
SFT		50x	230			
SFT		50x	300			
<p>● Polyamid</p> <p>Samabar® linear fastening system</p>		SBT	20x	40	KL see combination table	
SBT		20x	70			
SBT		20x	100			
SBT		20x	130			
SBT		20x	160			
SBT		20x	190			
SBT		20x	230			
SBT		20x	300			

Sarnafast® SBF-S / SFT, Sarnabar® SBF-S / SBT



Sarnafast® SBF-S / SFT, Sarnabar® SBF-S / SBT



Technical information

Application

For the fastening of waterproofing membrane and insulation to steel deck. For steel deck thicknesses between min. 0,63 mm and max. 2 x 1,00 mm.

Material

Fastener

- SBF-S
Austenitic stainless steel, grade
AISI 316, European Standard 1.4401,
grade A4

Tube

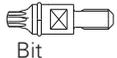
- SFT and SBT
High quality polyamid, PA6

Tools and accessories - details see chapter 6

DI650



Drive bar
ZA1/4"-M6-300/670



Bit
T25-32-M6-RING

- Power screwdriver for manual installation of fasteners

TP10, TP19, TP30



- Stand-up setting tool for the installation of fasteners and sleeves



Order information

<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>	

Product / Application	Approval	Order code			KL	Application range
		SBF-S- Type	6,0x d	60 L		
<p>● Stainless steel</p>		SBF-S- SBF-S- SBF-S- SBF-S- SBF-S-	6,0x 6,0x 6,0x 6,0x 6,0x	60 80 100 130 160	KL see combination table	<p>t min. steel: 0,63 mm t max. steel: 2 x 1,0 mm</p> <p>Screw length L: KL + 20 mm</p> <p><i>Program in development - available on request!</i></p>
<p>● Polyamid</p> <p>Sarnafast® spot fastening system</p>		SFT SFT SFT SFT SFT SFT SFT SFT	50x 50x 50x 50x 50x 50x 50x 50x	40 70 100 130 160 190 230 300	KL see combination table	
<p>● Polyamid</p> <p>Sarnabar® linear fastening system</p>		SBT SBT SBT SBT SBT SBT SBT SBT	20x 20x 20x 20x 20x 20x 20x 20x	40 70 100 130 160 190 230 300	KL see combination table	

2

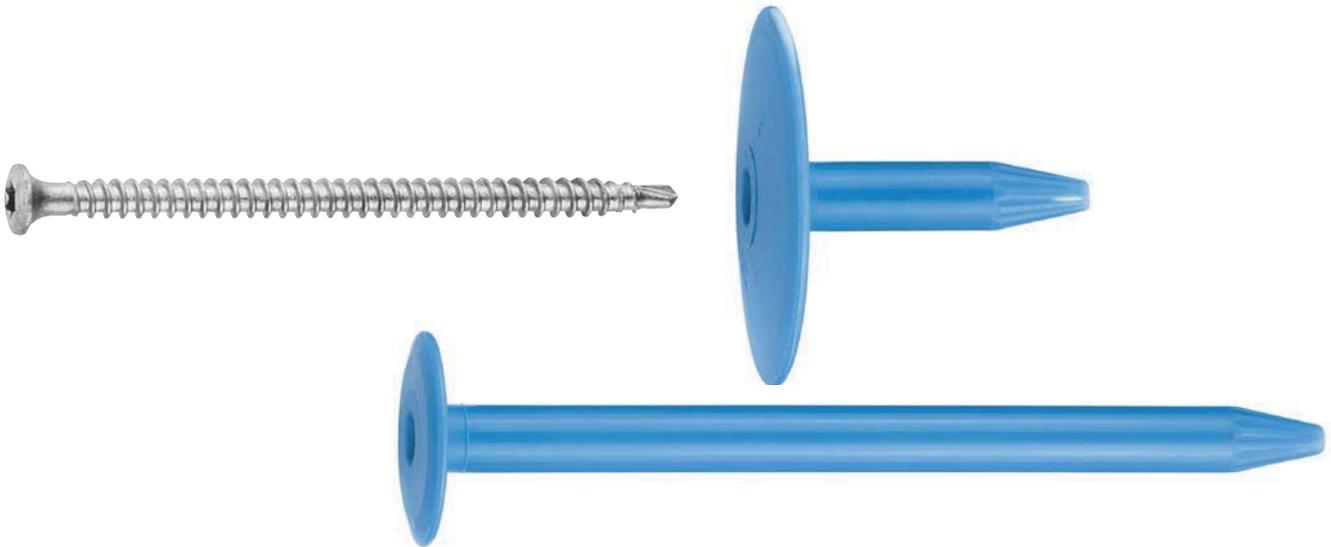


Peace and Friendship Stadium, Piraeus - Greece / 2003

- Roofsize: 15'000 m² - mechanically fastened
- Roof built-up:
- Metal deck
 - **Sarnavap**[®] 1000 E vapour control layer
 - Thermal insulation
 - **Sarnafil**[®] TS 77-15 RAL 7040 (window grey)
- Fastening system: **Sarnafast**[®] SF 4,8 and **Sarnafast**[®] KT 82x40

ISO-TAK® BS / RP75, RP45

ISO-TAK® BS / RP75, RP45



Technical information

Application

For the fastening of insulation to steel deck. For steel deck thicknesses of between min. 0,63 mm and max. 2 x 1,25 mm.

Material

Fastener

- BS
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Sleeve

- RP75, for insulation fixing
High quality polypropylene, PP
- RP45, for membrane fixing
High quality polypropylene, PP

Tools and accessories - details see chapter 6

DI650



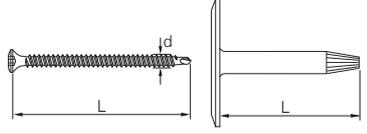
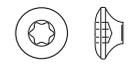
- Power screwdriver for manual
installation of fasteners

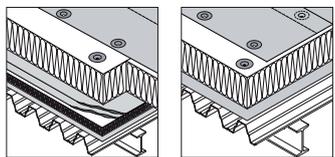
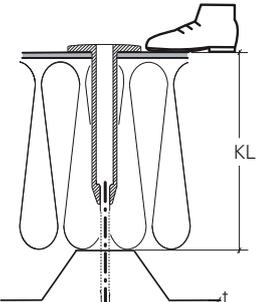
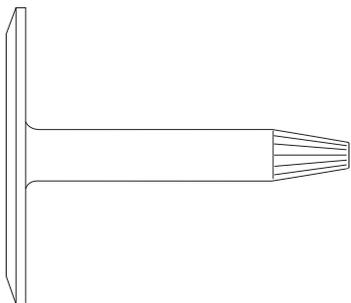
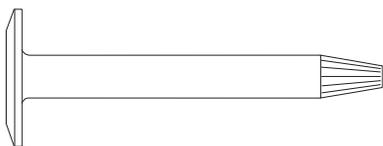
IT19



- Stand-up setting tool for the
installation of ISO-TAK® fasteners
and sleeves

Order information

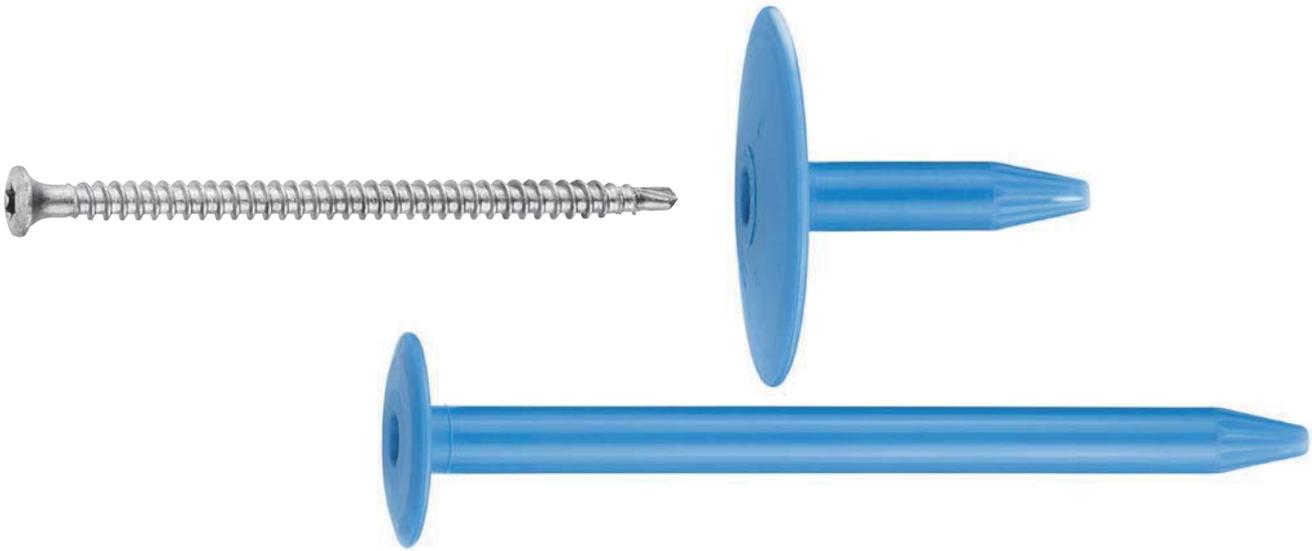
	<p>T25 recess Ø 8,8 mm</p> 
<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>	

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>■ Carbon steel</p>  	<p>CE ETA 06/0170</p> <p>FM APPROVED</p>	BS-	4,8x	50	<p>KL see combination table</p>  <p>Pre-assembled fastening elements on request</p>	
		BS-	4,8x	60		
		BS-	4,8x	70		
		BS-	4,8x	80		
		BS-	4,8x	90		
		BS-	4,8x	100		
		BS-	4,8x	110		
		BS-	4,8x	120		
		BS-	4,8x	130		
		BS-	4,8x	140		
		BS-	4,8x	150		
		BS-	4,8x	170		
		BS-	4,8x	190		
		BS-	4,8x	200		
		BS-	4,8x	220		
		BS-	4,8x	240		
		BS-	4,8x	260		
		BS-	4,8x	300		
		BS-	4,8x	320		
BS-	4,8x	360				
<p>● Plastic</p> 	<p>CE ETA 06/0170</p>	RP	75x	30	<p>KL see combination table</p>	
		RP	75x	60		
		RP	75x	90		
		RP	75x	120		
		RP	75x	150		
<p>● Plastic</p> 	<p>CE ETA 06/0170</p>	RP	45x	30	<p>KL see combination table</p>	
		RP	45x	60		
		RP	45x	90		
		RP	45x	120		
		RP	45x	150		
		RP	45x	180		
		RP	45x	210		

t min. steel: 0,63 mm
t max. steel: 2 x 1,25 mm

ISO-TAK® BS-S / RP75, RP45

ISO-TAK® BS-S / RP75, RP45



Technical information

Application

For the fastening of insulation to steel deck. For steel deck thicknesses of between min. 0,63 mm and max. 2 x 1,0 mm. Where the internal relative humidity is in excess of 70%. In chemically aggressive atmospheres or conditions.

For refurbishment applications where the detailed condition of the existing build up is not known or when the build up contains abrasive layers that may damage the corrosion protection and make it ineffective. Where an extended design life / warranty is required by the client. For locations with aggressive local conditions (e.g. coastal environments).

Material

Fastener

- BS-S
Austenitic stainless steel, grade
AISI 316, European Standard
1.4401, grade A4

Sleeve

- RP75 for insulation fixing
High quality polypropylene, PP
- RP45 for membrane fixing
High quality polypropylene, PP

Tools and accessories- details see chapter 6

DI650



Drive bar
ZA1/4"-M6-300/670

Bit
T25-32-M6-RING

- Power screwdriver for manual installation of fasteners

IT19



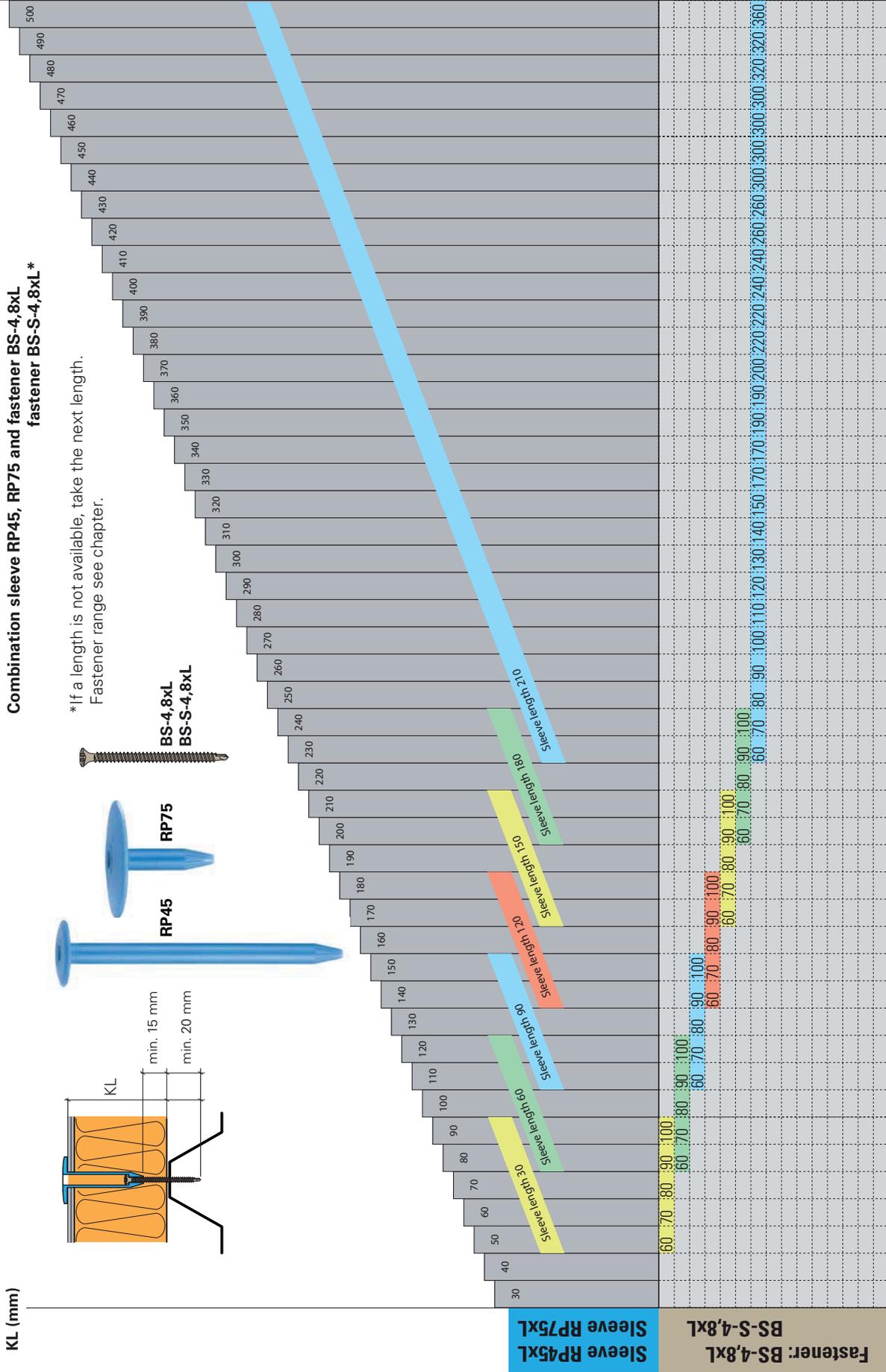
- Stand-up setting tool for the installation of ISO-TAK® fasteners and sleeves

Order information

		<p>T25 recess Ø 8,8 mm</p>
<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>		

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>● Stainless steel</p>		<p>BS-S- 4,8x 60</p> <p>BS-S- 4,8x 80</p> <p>BS-S- 4,8x 100</p> <p>BS-S- 4,8x 120</p> <p>BS-S- 4,8x 160</p>			<p>KL see combination table</p> <p>Pre-assembled fastening elements on request</p> <p>t min. steel: 0,63 mm</p> <p>t max. steel: 2 x 1,0 mm</p>	
<p>● Plastic</p>		<p>RP 75x 30</p> <p>RP 75x 60</p> <p>RP 75x 90</p> <p>RP 75x 120</p> <p>RP 75x 150</p>			<p>KL see combination table</p>	
<p>● Plastic</p>		<p>RP 45x 30</p> <p>RP 45x 60</p> <p>RP 45x 90</p> <p>RP 45x 120</p> <p>RP 45x 150</p> <p>RP 45x 180</p> <p>RP 45x 210</p>			<p>KL see combination table</p>	

Selection of the correct fastener and sleeve combination



Calculation: Roof buildup (KL) - Sleeve length (L) + 35 mm = min. length
 Example: 100 mm - 60 mm + 35 mm = 75 mm -> Type of fastener BS-4,8x80

3

Fastener	Sarnafast® Sika Private label	SFS Standard range	Page
Carbon steel	SB		▶ 3.2
Austenitic stainless steel		DT-S	▶ 3.6

Fastener and Tubes	Sarnafast® Sarnabar® Sika Private label	SFS Standard range	Page
Carbon steel / Plastic sleeve	SFT, SBT	TI	▶ 3.8
Carbon steel / Plastic sleeve	SBF SFT, SBT		▶ 3.11
Carbon steel / Plastic sleeve		TI R45, R75	▶ 3.14
Austenitic stainless steel / Plastic sleeve	SFT, SBT	DT-S	▶ 3.17



Sarnafast® SB



Sarnafast® SB



Technical information

Application

For the fastening of waterproofing membrane and insulation to concrete deck. Concrete decks (quality \geq B25), with a setting depth at least 32 mm by using a drilling diameter of 5,5 mm (drilling depth \geq 45 mm)

Material

Fastener

- SB
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

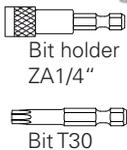
Stress plates

- DTL-70x70 / KTL-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual
installation of fasteners

IF80 L/S with internal drive



- Stand-up setting tool for the installation
of *isofast*® fasteners and stress
plates with inside drive bar for TORX®

Stress plates

DTL-70x70



- Stress plate for insulation

KTL-82x40



- Stress plate for membrane



Order information

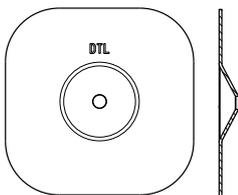
	T30 recess Ø 11,2 mm 	
KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm		

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
■ Carbon steel 		SB- 6,3x 32			0	Sd (Setting depth): min. 32 mm Predrill Ø 5,5 mm Screw length L: KL+Sd Delivery note: 1 T30 bit is included at each box.
		SB- 6,3x 50			18	
		SB- 6,3x 75			43	
		SB- 6,3x 100			68	
		SB- 6,3x 120			88	
		SB- 6,3x 140			108	
		SB- 6,3x 160			128	
		SB- 6,3x 180			148	
		SB- 6,3x 200			168	
		SB- 6,3x 230			198	
		SB- 6,3x 250			218	

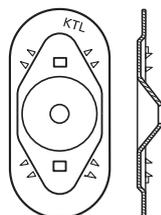
3

Stress plates

DTL-70X70



KTL-82X40





Tempodrom Concert Hall, Berlin - Germany / 2001

- Roofsize: 5'000 m² - mechanically fastened
- Roof built-up:
- Steel construction
 - Prefabricated concrete plates
 - Bitumen vapour retarder
 - Rockwool mineral insulation
 - **Sarnafil**® TS 77-20 E RAL 9016 (white)
- Fastening system: **Sarnabar**® with SFS Spike® twister DT

isofast® SPIKE® twister: Faster, easier fixing into concrete

Fixing into concrete with conventional methods is at best complicated. Using plug free fasteners however considerably improves installation time. The SPIKE® system has been

developed and optimised by SFS intec over recent years and has a proven track record with respect to its fast installation, security of application and ease of use.

The convincing advantages of the SPIKE® twister fastening system



- Tough anchoring due to all round force distribution
- Simple one-piece fastener
- No need to fit and adjust plugs
- Reduced diameter pilot holes required
- Reduced drilling depth
- Maximum corrosion resistance
- Available in austenitic stainless steel
- Highly fire resistant
- Absolutely free from vibration
- Simple procedure: pre-drill and drive in. Secure and stable

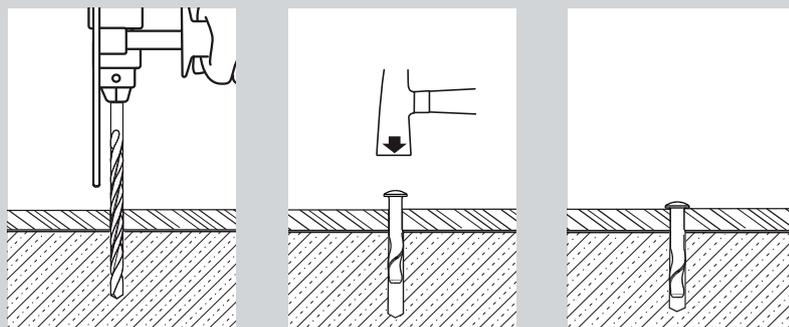


Plug-free fixing directly into concrete

With the latest refinements, fixing into concrete using the SPIKE® system is even more secure and efficient.

The unique spiral tip of the SPIKE® twister fastener exerts an all-round pressure on the bore. This continuous pre-tensioning in every direction results in a considerable pullout performance.

Installation is so simple: drill, hammer home – job done



High bond strength in concrete and similar aggregate materials

The SPIKE® twister is vibration free, corrosion proof and offers extremely high fire resistance. The entire range is available in austenitic stainless steel, making this fastener ideal for critical applications including those with chemically aggressive atmospheric conditions or roof renovation projects.

isofast® SPIKE® twister DT-S

isofast® SPIKE® twister DT-S



Technical information

Application

For the fastening of waterproofing membrane and insulation to solid, dense concrete of minimum grade C12/15. Where the internal relative humidity is in excess of 70%. In chemically aggressive atmospheres or conditions. For refurbishment applications where the detailed condition of the existing build up is not known or when the build up contains abrasive layers that may damage the corrosion protection and make it ineffective. Where an extended design life / warranty is required by the client. For locations with aggressive local conditions (e.g. coastal environments).

Material

Fastener

- DT-S
Austenitic stainless steel, grade
AISI 316, European Standard
1.4401, grade A4

Stress plates

- DTL-70x70 / ID-70x70
IF/IG-C-82x40
KTL-82x40 / IRD-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Tools and accessories - details see chapter 6

DB620



- Electro-pneumatic hammer drill for
drilling into concrete and masonry

ZD15



- Setting tool for the installation of
SPIKE® twister fasteners

Stress plates

DTL-70x70 / ID-70x70



- Stress plate for insulation

IF/IG-C-82x40



- Stress plate for membrane
and insulation on hard substrates

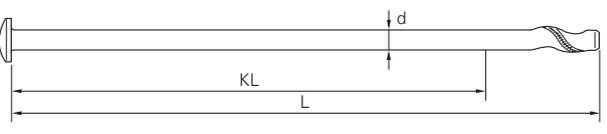
KTL-82x40 / IRD-82x40



- Stress plate for membrane

3

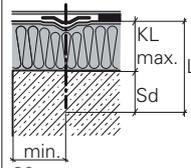
Order information



Mushroom head, $L \leq 51 \text{ mm } \varnothing 11,0 \text{ mm}$
 $L \geq 64 \text{ mm } \varnothing 9,7 \text{ mm}$

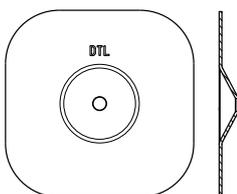


KL clamping length | **M** magazine loaded | **d** thread diameter | **L** Length | **t** thickness of structure | **All measures in mm**

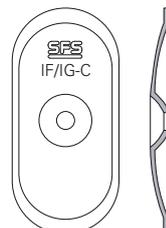
Product / Application	Approval	Order code			KL	Drill bits	Application range
		Type	d	L			
<p>● Stainless steel</p>  		DT-S- 4,8x 28	4,8	28	3	4,8x160	<p>Sd (Setting depth): min. 25 mm Predrill $\varnothing 4,8 \text{ mm}$</p> <p>Screw length L: $KL+Sd$</p> <p>Thickness concrete deck t: min. 60 mm. Concrete quality minimum C12/15. Insulation compressive strength min. 0,07 N/mm².</p> <p>Depth of pilot hole to be 10 - 20 mm deeper than the setting depth of the SPIKE® twister, depending on site conditions.</p>
		DT-S- 4,8x 32	4,8	32	7	160	
		DT-S- 4,8x 38	4,8	38	13	160	
		DT-S- 4,8x 51	4,8	51	26	160	
		DT-S- 4,8x 64	4,8	64	39	160	
		DT-S- 4,8x 89	4,8	89	64	210	
		DT-S- 4,8x 115	4,8	115	90	210	
		DT-S- 4,8x 140	4,8	140	115	260	

Stress plates

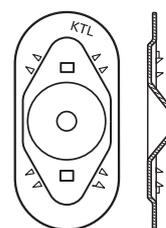
DTL-70X70 / ID-70x70



IF/IG-C-82X40



KTL-82X40 / IRD-82x40



TI / Sarnafast® SFT, TI / Sarnabar® SBT



TI / Sarnafast® SFT, TI / Sarnabar® SBT



Technical information

Application

For the fastening of waterproofing membrane and insulation to solid, dense concrete of minimum grade C12/15, with a setting depth at least 32 mm by using a drilling diameter of 5,0 mm (drilling depth ≥ 30 mm)

Material

Fastener

- TI
Case hardened carbon steel

- Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Tube

- SFT and SBT
High quality polyamid, PA6

Tools and accessories - details see chapter 6

TP10, TP19 or TP30



- Stand-up setting tool for the installation of ISO-TAK® fasteners and sleeves

DB620



- Electro-pneumatic hammer drill for drilling into concrete and masonry

DI650



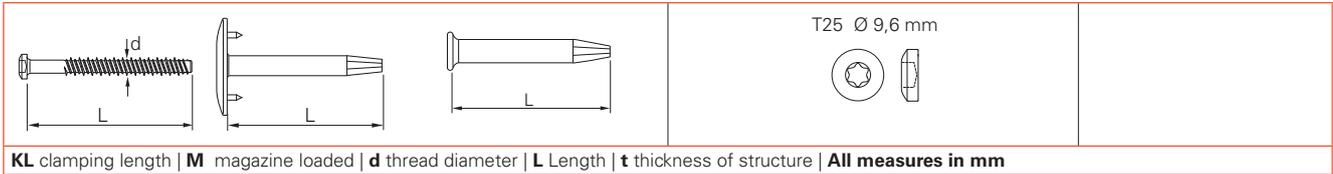
- Drive bar
ZA1/4"-M6-300/670
- Bit
T25-32-M6-RING

- Power screwdriver for manual installation of fasteners

3



Order information

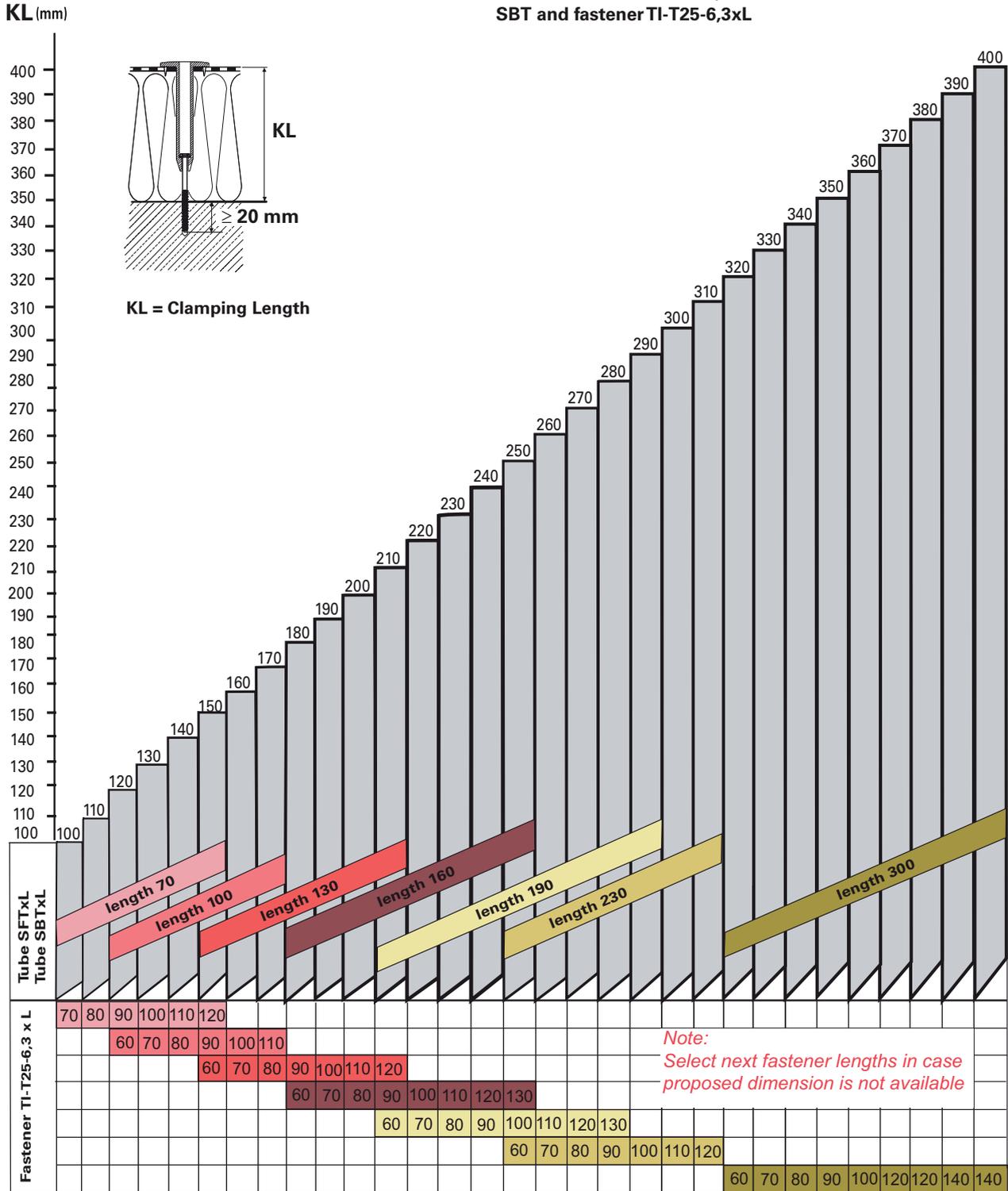


Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>■ Carbon steel</p>		TI-T25- 6,3x 32			KL see combination table	<p>Sd (Setting depth): min. 20 mm Predrill Ø 5,0 mm</p> <p>Screw length L: KL+Sd</p> <p>Thickness concrete deck t: min. 40 mm. Concrete quality minimum C12/15. Insulation compressive strength min. 0,07 N/mm².</p> <p>Depth of pilot hole to be 10 - 20 mm deeper than the setting depth, depending on site conditions.</p>
		TI-T25- 6,3x 50				
		TI-T25- 6,3x 60				
		TI-T25- 6,3x 70				
		TI-T25- 6,3x 80				
		TI-T25- 6,3x 90				
		TI-T25- 6,3x 100				
		TI-T25- 6,3x 120				
		TI-T25- 6,3x 140				
		TI-T25- 6,3x 160				
<p>● Polyamid</p> <p>Sarnafast® spot fastening system</p>	<p>ETA 06/0170</p>	SFT 50x 40		KL see combination table		
		SFT 50x 70				
		SFT 50x 100				
		SFT 50x 130				
		SFT 50x 160				
		SFT 50x 190				
		SFT 50x 230				
		SFT 50x 300				
<p>● Polyamid</p> <p>Sarnabar® linear fastening system</p>	<p>ETA 06/0170</p>	SBT 20x 40		KL see combination table		
		SBT 20x 70				
		SBT 20x 100				
		SBT 20x 130				
		SBT 20x 160				
		SBT 20x 190				
		SBT 20x 230				
		SBT 20x 300				



Selection of the correct fastener and tube combination

Combination tube SFT and fastener TI-T25-6,3xL
SBT and fastener TI-T25-6,3xL



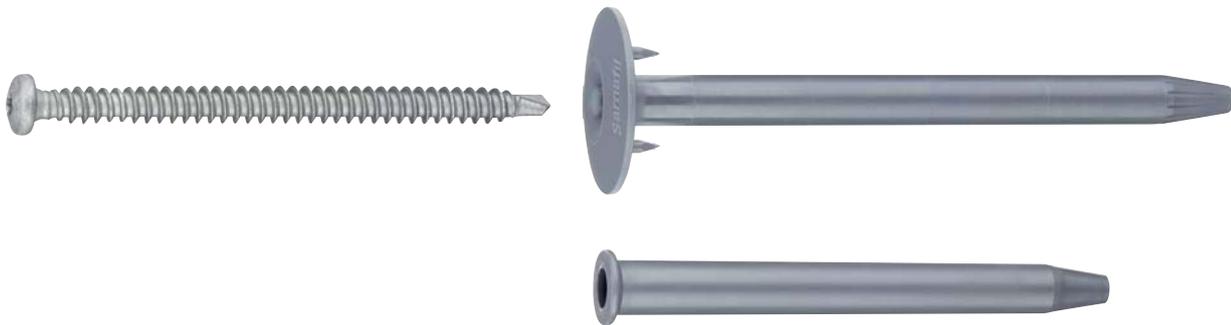
27_02_2012 spl/sre

Calculation: Roof build up (KL) + 40 mm - tube length (L) = min. fastener length (mm)

Example: 160 mm + 40 mm - 100 mm = 100 mm -> **TI-T25-6,3x100**



Sarnafast® SBF / SFT, Sarnabar® SBF / SBT



Technical information

Application

For the fastening of waterproofing membrane and insulation to solid, dense concrete of minimum grade C12/15, with a setting depth at least 20 mm by using a drilling diameter of 5,0 mm (drilling depth \geq 30 mm)

Material

Fastener

- SBF
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Tube

- SFT and SBT
High quality polyamid, PA6

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual
installation of fasteners

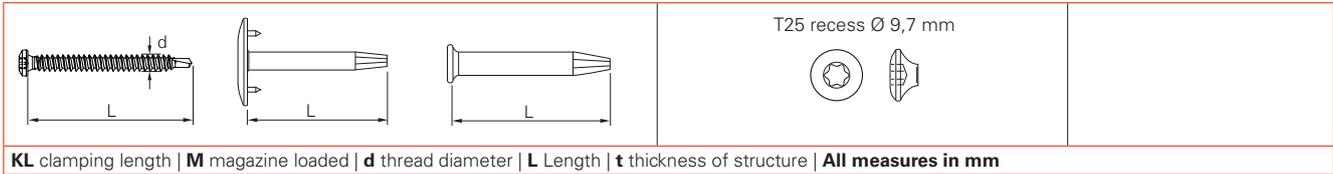
TP10, TP19, TP30



- Stand-up setting tool for the
installation of fasteners and sleeves



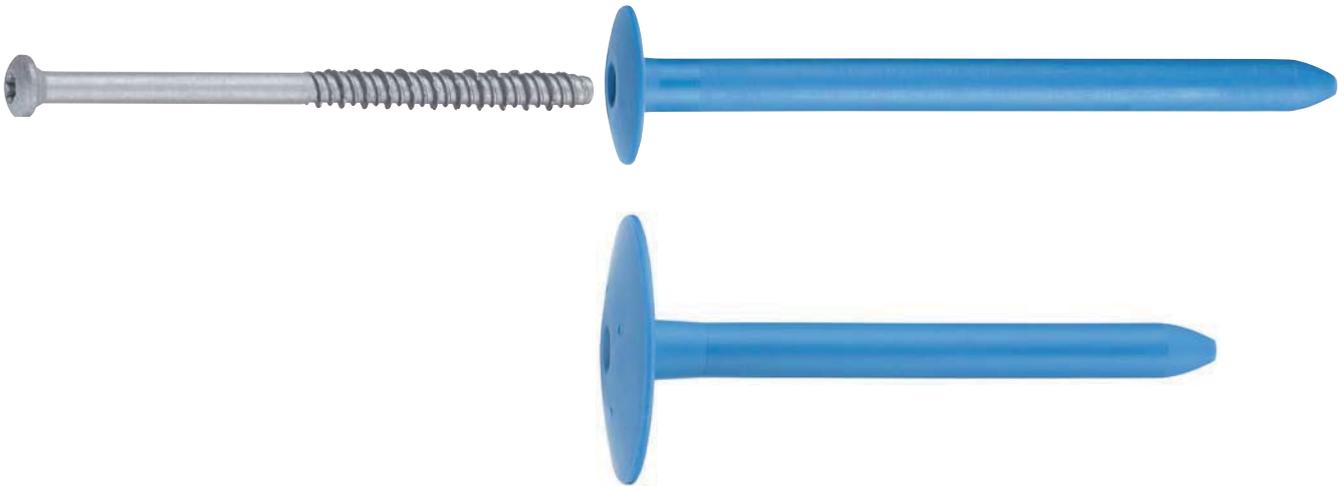
Order information



Product / Application	Approval	Order code			KL	Application range
		SBF-	6,0x	60		
<p>■ Carbon steel</p>		SBF-	6,0x	35	KL see combination table Sd (Setting depth): min. 32 mm Predrill \varnothing 5,0 mm Screw length L: KL+Sd Thickness concrete deck t: min. 40 mm. Concrete quality minimum C12/15. Insulation compressive strength min. 0,07 N/mm ² . Depth of pilot hole to be 10 - 20 mm deeper than the setting depth, depending on site conditions.	
		SBF-	6,0x	60		
		SBF-	6,0x	70		
		SBF-	6,0x	80		
		SBF-	6,0x	90		
		SBF-	6,0x	100		
		SBF-	6,0x	110		
		SBF-	6,0x	130		
		SBF-	6,0x	160		
		SBF-	6,0x	180		
		SBF-	6,0x	200		
		<p>● Polyamid</p> <p>Sarnafast® spot fastening system</p>		SFT		50x
SFT	50x			70		
SFT	50x			100		
SFT	50x			130		
SFT	50x			160		
SFT	50x			190		
SFT	50x			230		
SFT	50x			300		
<p>● Polyamid</p> <p>Sarnabar® linear fastening system</p>		SBT	20x	40	KL see combination table	
		SBT	20x	70		
		SBT	20x	100		
		SBT	20x	130		
		SBT	20x	160		
		SBT	20x	190		
		SBT	20x	230		
		SBT	20x	300		

ISO-TAK® TI / R45, R75

ISO-TAK® TI / R45, R75



Technical information

Application

For the fastening of waterproofing membrane and insulation to solid, dense concrete of minimum grade C12/15.

Material

Fastener

■ TI

Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Sleeve

■ RP75 for insulation fixing
High quality polypropylene, PP

■ RP45 for membrane fixing
High quality polypropylene, PP

Tools and accessories - details see chapter 6

TP10, TP19, TP30



- Stand-up setting tool for the installation of ISO-TAK® fasteners and sleeves

DB620



- Electro-pneumatic hammer drill for drilling into concrete and masonry

DI650



- Power screwdriver for manual installation of fasteners

Order information

<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>	

Product / Application	Approval	Order code			KL	Application range			
		Type	d	L					
<p>■ Carbon steel</p>		TI-T25- 6,3x 32				<p>Sd (Setting depth): min. 20 mm Predrill Ø 5,0 mm Thickness concrete deck t: min. 40 mm. Concrete quality minimum C12/15. Insulation compressive strength min. 0,07 N/mm². Depth of pilot hole to be 10 - 20 mm deeper than the setting depth, depending on site conditions.</p>			
		TI-T25- 6,3x 50							
		TI-T25- 6,3x 60							
		TI-T25- 6,3x 70							
		TI-T25- 6,3x 80							
		TI-T25- 6,3x 90							
		TI-T25- 6,3x 100							
		TI-T25- 6,3x 120							
		TI-T25- 6,3x 140							
		TI-T25- 6,3x 160							
		<p>● Plastic</p>		R			45x	15	KL see combination table for membrane fixing
				R			45x	35	
R	45x			65					
R	45x			85					
R	45x			105					
R	45x			135					
R	45x			165					
R	45x			185					
R	45x			195					
R	45x			225					
R	45x			255					
R	45x			285					
R	45x			325					
R	45x			365					
R	45x	405							
<p>● Plastic</p>		R	75x	15	KL see combination table for insulation fixing				
		R	75x	35					
		R	75x	65					
		R	75x	85					
		R	75x	105					
		R	75x	135					
		R	75x	165					
		R	75x	185					
		R	75x	195					
		R	75x	225					
		R	75x	255					
		R	75x	285					


SPIKE® twister DT-S / Sarnafast® SFT, SPIKE® twister DT-S / Sarnabar® SBT

Technical information
Application

For the fastening of waterproofing membrane and insulation to solid, dense concrete of minimum grade C12/15.

Material
Fastener

- DT-S
Austenitic stainless steel, grade
AISI 316, European Standard 1.4401,
grade A4

Tube

- SFT and SBT
High quality polypamid, PA6

Tools and accessories - details see chapter 6
DB620


- Electro-pneumatic hammer drill for
drilling into concrete and masonry

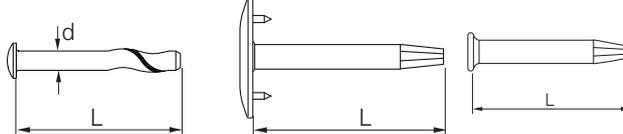
DT-M-500/750


- Mechanical driving tool to
hammer in the SPIKE® twister
using the DB620

SPIKE® twister DT-S / Sarnafast® SFT, SPIKE® twister DT-S / Sarnabar® SBT



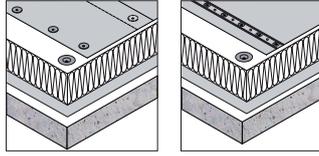
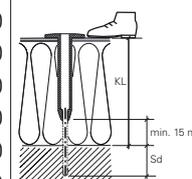
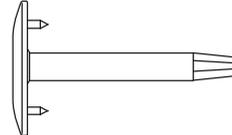
Order information



Mushroom head, $L \leq 51 \text{ mm } \varnothing 11,0 \text{ mm}$
 $L \geq 64 \text{ mm } \varnothing 9,7 \text{ mm}$



KL clamping length | **M** magazine loaded | **d** thread diameter | **L** Length | **t** thickness of structure | **All measures in mm**

Product / Application	Approval	Order code			KL	Drill bits	Application range	
		Type	d	L				
<p>● Stainless steel</p>   		DT-S- 4,8x 28			KL see combination table	4,8x160	 <p>Sd (Setting depth): min. 25 mm Predrill $\varnothing 4,8 \text{ mm}$</p> <p>Screw length L: KL+Sd</p> <p>Thickness concrete deck t: min. 60 mm. Concrete quality minimum C12/15. Insulation compressive strength min. 0,07 N/mm².</p> <p>Depth of pilot hole to be 10 - 20 mm deeper than the setting depth of the SPIKE® twister, depending on site conditions.</p>	
		DT-S- 4,8x 38						160
		DT-S- 4,8x 51						160
		DT-S- 4,8x 64						160
		DT-S- 4,8x 89						160
		DT-S- 4,8x 115						210
		DT-S- 4,8x 140						260
<p>● Polyamid</p>  <p>Sarnafast® spot fastening system</p>		SFT 50x 40			KL see combination table			
		SFT 50x 70						
		SFT 50x 100						
		SFT 50x 130						
		SFT 50x 160						
		SFT 50x 190						
		SFT 50x 230						
		SFT 50x 300						
<p>● Polyamid</p>  <p>Sarnabar® linear fastening system</p>		SBT 20x 40			KL see combination table			
		SBT 20x 70						
		SBT 20x 100						
		SBT 20x 130						
		SBT 20x 160						
		SBT 20x 190						
		SBT 20x 230						
		SBT 20x 300						

3

4

Fastener	Sarnafast®  Private label	SFS Standard range	Page
Carbon steel	SB		▶ 4.2
Carbon steel		IWF	▶ 4.4
Carbon steel		IWF-T	▶ 4.7
Austenitic stainless steel		IW-S	▶ 4.10

Fastener and Tubes	Sarnafast® Sarnabar®  Private label	SFS Product code	Page
Carbon steel / Plastic sleeve	SBF SFT, SBT		▶ 4.12
Austenitic stainless steel	SBF-S SFT, SBT		▶ 4.14
Carbon steel / Plastic sleeve		TS R45, R75	▶ 4.18



Sarnafast® SB



Sarnafast® SB



Technical information

Application

For the fastening of waterproofing membrane and insulation to timber deck. Solid wood 24 mm or thicker and plywood/OSB 22 mm or thicker; fastener length = roof build up + 30 mm.

Material

Fastener

- SB
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

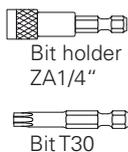
Stress plates

- DTL-70x70 / KTL-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual
installation of fasteners

IF80 L/S with internal drive



- Stand-up setting tool for the installa-
tion of *isofast*® fasteners and stress
plates with inside drive bar for TORX®

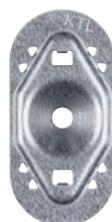
Stress plates

DTL-70x70



- Stress plate for insulation

KTL-82x40



- Stress plate for membrane



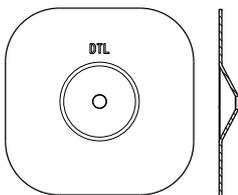
Order information

	<p>T30 recess Ø 11,2 mm</p>	
<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>		

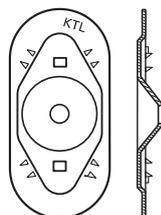
Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>■ Carbon steel</p>		SB- 6,3x 32			2	<p>Fastener length = roof build up + 30 mm Sd (setting depth) = min. 30 mm Screw length = KL + Sd</p> <p>Delivery note: 1 T30 bit is included at each box.</p>
		SB- 6,3x 50			20	
		SB- 6,3x 75			45	
		SB- 6,3x 100			70	
		SB- 6,3x 120			90	
		SB- 6,3x 140			110	
		SB- 6,3x 160			130	
		SB- 6,3x 200			170	
		SB- 6,3x 230			200	
		SB- 6,3x 250			220	

Stress plates

DTL-70X70



KTL-82X40



isofast® IWF

isofast® IWF



Technical information

Application

For the fastening of waterproof membrane to timber deck. The recommended minimum thickness of timber boarding, for example plywood, oriented strand board (OSB) is 18 mm.

Material

Fastener

- IWF
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

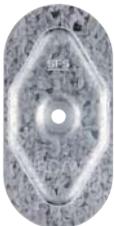
Stress plates

- IRC/W-82x40
Steel 1,0 mm

Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

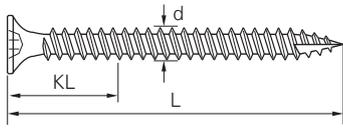
Stress plates

IRC/W-82x40

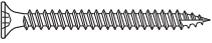
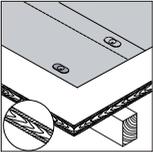
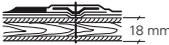
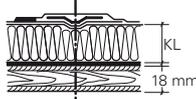


- Stress plate for membrane and
insulation

Order information

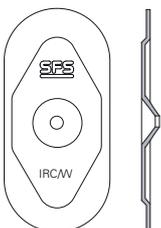


KL clamping length | M magazine loaded | d thread diameter | L Length | t thickness of structure | All measures in mm

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
■ Carbon steel  		IWF-	5,2x	25	*	
		IWF-	5,2x	35	5	
		IWF-	5,2x	45	15	
		IWF-	5,2x	55	25	 Screw length L: KL + 30 mm * For special applications please consult your SFS representative.

Stress plates

IRC/W-82X40



isofast® IWF-T

Profit from a beneficial fastening system for timber decks

The *isofast*® IWF-T-B40 is an ideal fastening system for the direct fixing of membranes to timber sub frames (wood and synthetics like triple-layer, ply, wooden frames, etc.).

The special design of the plate allows the pre-assembling with IWF fasteners. Furthermore, by using the setting tool MV28 a fast and secure setting is possible.

The convincing advantages of the *isofast*® IWF fastening system



- Pre-assembled fastener and stress plate
- Optimum insertion due to the special fiber-cut thread form
- Ergonomic standing position when installing using the dedicated setting tool
- Meets extreme corrosion resistance criteria

isofast® IWF-T**Technical information****Application**

For the fastening of waterproof membrane to timber deck. The recommended minimum thickness of timber boarding, for example plywood, oriented strand board (OSB) is 18 mm.

Material**Fastener**

- IWF-T
With pre-assembled stress plate (MW-40-FH), case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich test according to ETAG 006 - D.3.1. and FM requirements

Environment friendly, free of chromium VI

Stress plates

- MW-40-FH
Steel 1,0 mm

Resistance at 15 cycles Kesternich test according to ETAG 006 - D.3.1. and FM requirements

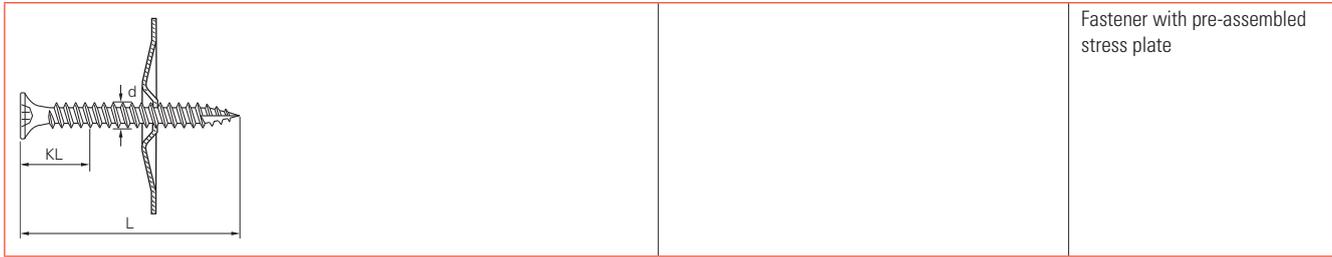
Tools and accessories**MV28-500**

- Setting tool allows a comfortable and upright setting procedure for the attachment of membranes directly to wood substrates

Stress plates**MW-40-FH**

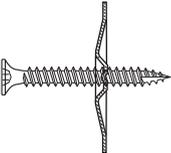
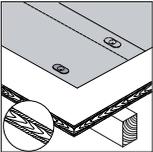
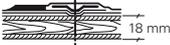
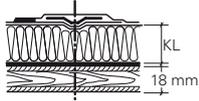
- Stress plate for membrane

Order information



Fastener with pre-assembled stress plate

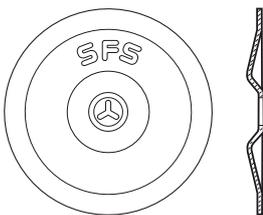
KL clamping length | M magazine loaded | d thread diameter | L Length | t thickness of structure | All measures in mm

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
■ Carbon steel  		IWF-T-B40-	5,2x	25	*	
		IWF-T-B40-	5,2x	35	5	
		IWF-T-B40-	5,2x	45	15	
		IWF-T-B40-	5,2x	55	25	
						Screw length L: KL + 30 mm * For special applications please consult your SFS representative.

4

Stress plates

MW-40-FH



isofast[®] IW-S***isofast*[®] IW-S****Technical information****Application**

For the fastening of waterproof membrane to timber deck. The recommended minimum thickness of timber boarding, for example plywood, oriented strand board (OSB) is 18 mm.

Where the internal relative humidity is in excess of 70%. In chemically aggressive atmospheres or conditions.

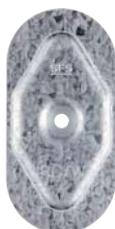
For refurbishment applications where the detailed condition of the existing build up is not known or when the build up contains abrasive layers that may damage the corrosion protection and make it ineffective. Where an extended design life / warranty is required by the client. For locations with aggressive local conditions (e.g. coastal environments).

Material**Fastener**

- *isofast*[®] IW-S
- Austenitic stainless steel, grade
- AISI 304, European Standard
- 1.4301, grade A2

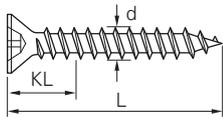
Stress plates

- IRC/W-82x40
- Steel 1,0 mm
- Resistance at 15 cycles Kesternich
- test according to ETAG 006 - D.3.1.
- and FM requirements

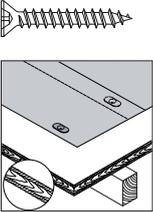
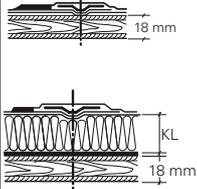
Stress plates**IRC/W-82x40**

- Stress plate for membrane and insulation

Order information

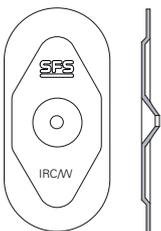


KL clamping length | M magazine loaded | d thread diameter | L Length | t thickness of structure | All measures in mm

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<ul style="list-style-type: none"> Stainless steel 		IW-S-	5,0x	45	15	 <p>Screw length L: KL + 30 mm</p>

Stress plates

IRC/W-82X40



Sarnafast® SBF / SFT, Sarnabar® SBF / SBT



Sarnafast® SBF / SFT, Sarnabar® SBF / SBT



Technical information

Application

For the fastening of waterproof membrane and insulation to timber deck. Solid wood 24 mm or thicker and plywood/OSB 22 mm or thicker; fastener length = roof build up + 30 mm.

Material

Fastener

- SBF
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Tube

- SFT and SBT
High quality polyamid, PA6

Tools and accessories - details see chapter 6

DI650

TP10, TP19, TP30



- Power screwdriver for manual
installation of fasteners



- Stand-up setting tool for the
installation of fasteners and sleeves



Order information

	<p>T25 recess \varnothing 9,7 mm</p>
<p>KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm</p>	

Product / Application	Approval	Order code			KL	Application range
		SBF-	6,0x	60		
<p>■ Carbon steel</p>		SBF-	6,0x	35	KL see combination table Screw length L: KL + 30 mm	
		SBF-	6,0x	60		
		SBF-	6,0x	70		
		SBF-	6,0x	80		
		SBF-	6,0x	90		
		SBF-	6,0x	100		
		SBF-	6,0x	110		
		SBF-	6,0x	130		
		SBF-	6,0x	160		
		SBF-	6,0x	180		
		SBF-	6,0x	200		
<p>● Polyamid</p> <p>Sarnafast® spot fastening system</p>			SFT	50x		40
	SFT		50x	70		
	SFT		50x	100		
	SFT		50x	130		
	SFT		50x	160		
	SFT		50x	190		
	SFT		50x	230		
	SFT		50x	300		
<p>● Polyamid</p> <p>Sarnabar® linear fastening system</p>		SBT	20x	40	KL see combination table	
		SBT	20x	70		
		SBT	20x	100		
		SBT	20x	130		
		SBT	20x	160		
		SBT	20x	190		
		SBT	20x	230		
		SBT	20x	300		

Sarnafast® SBF-S / SFT, Sarnabar® SBF-S / SBT



Sarnafast® SBF-S / SFT, Sarnabar® SBF-S / SBT



Technical information

Application

For the fastening of waterproof membrane and insulation to timber deck. Solid wood 24 mm or thicker and plywood/OSB 22 mm or thicker; fastener length = roof build up + 30 mm.

Material

Fastener

- SBF-S
Austenitic stainless steel, grade
AISI 316, European Standard 1.4401,
grade A4

Tube

- SFT and SBT
High quality polyamid, PA6

Tools and accessories - details see chapter 6

DI650



- Power screwdriver for manual installation of fasteners

TP10, TP19, TP30



- Stand-up setting tool for the installation of fasteners and sleeves



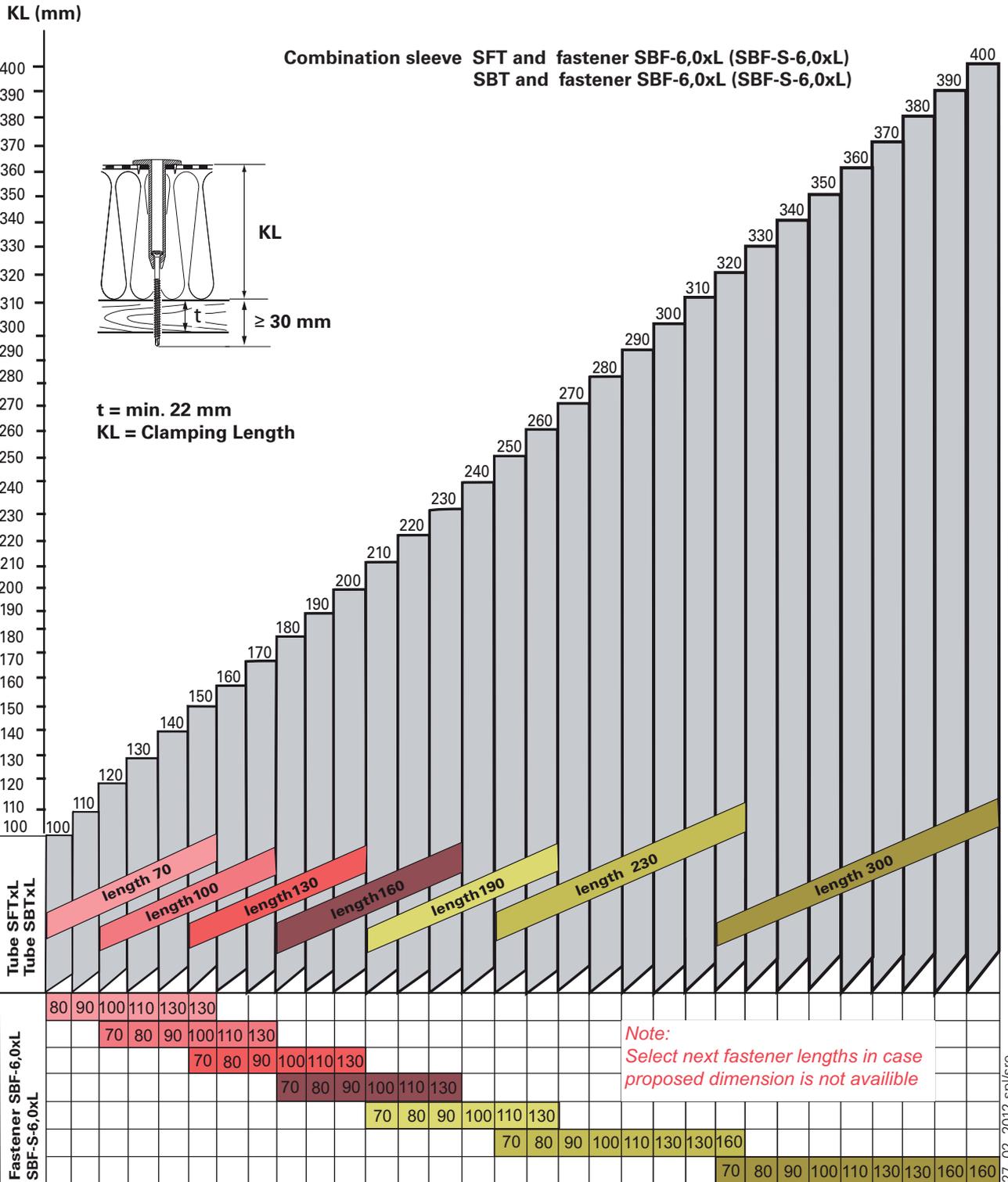
Order information

			T25 recess Ø 9,7 mm
KL clamping length M magazine loaded d thread diameter L Length t thickness of structure All measures in mm			

Product / Application	Approval	Order code			KL	Application range
		SBF-S- Type	6,0x d	60 L		
<p>● Stainless steel</p>		SBF-S- SBF-S- SBF-S- SBF-S- SBF-S-	6,0x 6,0x 6,0x 6,0x 6,0x	60 80 100 130 160	KL see combination table Screw length L: KL + 30 mm <p style="color: red; font-weight: bold; transform: rotate(-10deg);">Program in development - available on request!</p>	
<p>● Polyamid</p> <p>Sarnafast® spot fastening system</p>		SFT SFT SFT SFT SFT SFT SFT	50x 50x 50x 50x 50x 50x 50x	40 70 100 130 160 190 230 300	KL see combination table	
<p>● Polyamid</p> <p>Sarnabar® linear fastening system</p>		SBT SBT SBT SBT SBT SBT SBT	20x 20x 20x 20x 20x 20x 20x	40 70 100 130 160 190 230 300	KL see combination table	



Selection of the correct fastener and tube combination



Calculation: Roof build up (KL) + 50 mm - tube length (L) = min. fastener length (mm)
 Example: 160 mm + 50 mm - 100 mm = 110 mm -> **SBF-6,0x110 (SBF-S-6,0x110)**

27_02_2012 spi/sre

4

Cost effective fastening of insulation and membrane to timber decks

Because conventional wood screws are inadequate for the fastening of membrane through insulation boards into timber decks, only dedicated fastener systems are required for this

application. Specially designed fasteners from SFS intec can be used in combination with either stress plates or plastic sleeves.

The convincing advantages of the ISO-TAK® TS fastening system

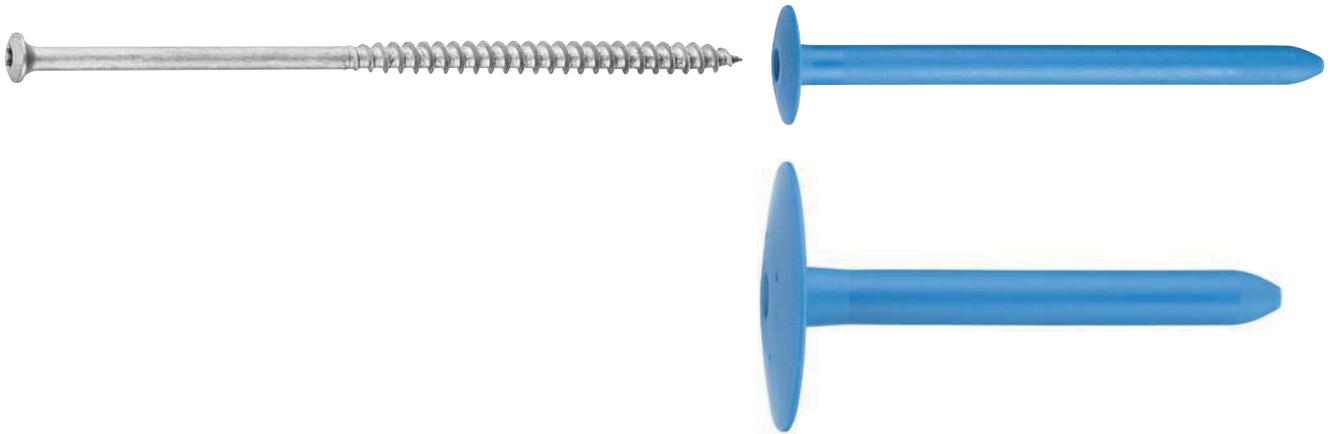


- A 'treadfast' fastener and stress plate combination ensures that the system is safe to walk on
- Ideal for applications with increased insulation thickness
- Cost-effective due to combination screw with plastic sleeve
- Excellent torque transfer through the T25 power drive
- Specially designed installation tool available, saving time and money

Particularly suited to timber decking applications including timber sub structures, plywood, multi layer panels and similar applications.

ISO-TAK® TS / R45, R75

ISO-TAK® TS / R45, R75



Technical information

Application

For the fastening of waterproof membrane to timber deck. The recommended minimum thickness of timber boarding, for example plywood, oriented strand board (OSB) is 18 mm.

Material

Fastener

- TS
Case hardened carbon steel

Durocoat® corrosion protection:
Resistance at 15 cycles Kesternich
test according to ETAG 006 - D.3.1.
and FM requirements

Environment friendly, free of
chromium VI

Sleeve

- RP75 for insulation fixing
High quality polypropylene, PP
- RP45 for membrane fixing
High quality polypropylene, PP

Tools and accessories - details see chapter 6

IT19



- Stand-up setting tool for the installation of ISO-TAK® fasteners and sleeves

DI650



- Power screwdriver for manual installation of fasteners

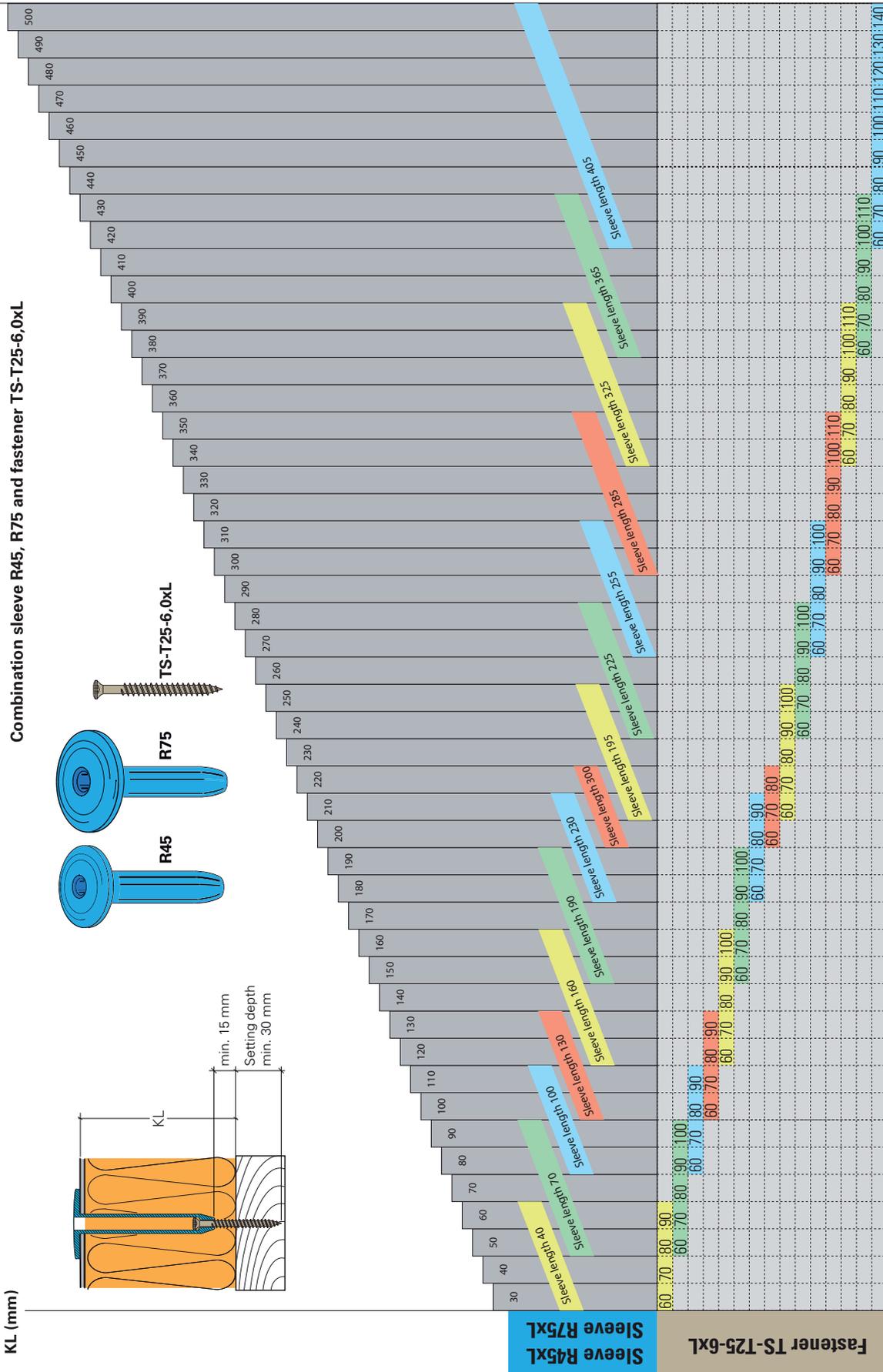
Order information

T25 recess \varnothing 9,0 mm

KL clamping length | M magazine loaded | d thread diameter | L Length | t thickness of structure | All measures in mm

Product / Application	Approval	Order code			KL	Application range
		Type	d	L		
<p>■ Carbon steel</p>	<p>ETA 06/0170</p>	TS-T25-	6,0x	50		
		TS-T25-	6,0x	60		
		TS-T25-	6,0x	70		
		TS-T25-	6,0x	80		
		TS-T25-	6,0x	90		
		TS-T25-	6,0x	100		
		TS-T25-	6,0x	110		
		TS-T25-	6,0x	120		
		TS-T25-	6,0x	130		
		TS-T25-	6,0x	140		
		TS-T25-	6,0x	160		
		TS-T25-	6,0x	180		
		TS-T25-	6,0x	200		
		TS-T25-	6,0x	220		
		TS-T25-	6,0x	240		
<p>● Plastic</p> <p>ETA 06/0170</p>	R	45x	15	<p>KL see combination table</p> <p>for membrane fixing</p>		
	R	45x	35			
	R	45x	65			
	R	45x	85			
	R	45x	105			
	R	45x	135			
	R	45x	165			
	R	45x	185			
	R	45x	195			
	R	45x	225			
	R	45x	255			
	R	45x	285			
	R	45x	325			
R	45x	365				
R	45x	405				
<p>● Plastic</p> <p>ETA 06/0170</p>	R	75x	30	<p>KL see combination table</p> <p>for insulation fixing</p>		
	R	75x	60			
	R	75x	90			
	R	75x	120			
	R	75x	150			

Selection of the correct sleeve and fastener combination



Calculation:
Example:

Roof buildup (KL) - 100 mm

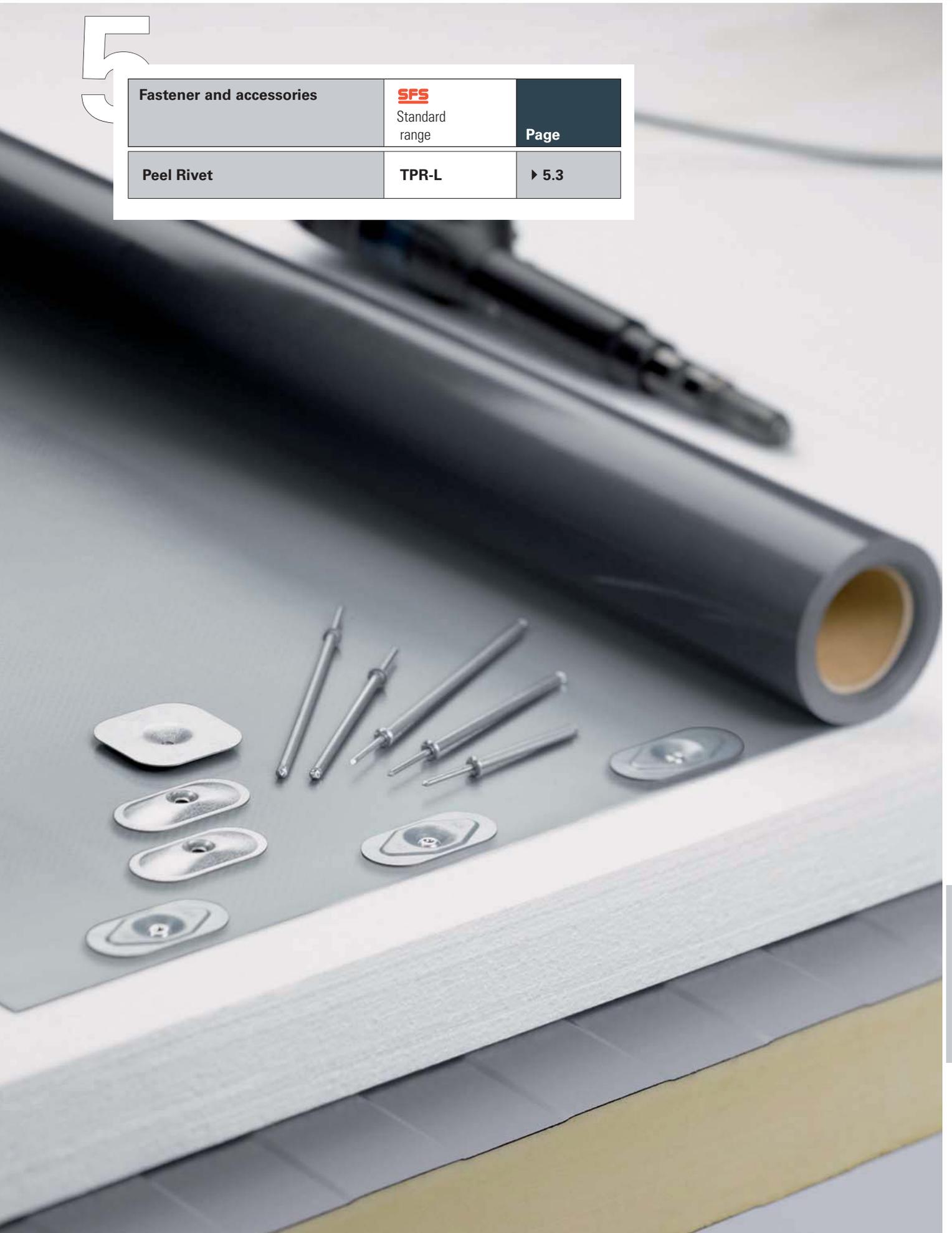
Sleeve length (L) - 85 mm

Type of fastener TS-T25-6.0x60

+ 45 mm = min. length
+ 45 mm = 60 mm ->

5

Fastener and accessories	SFS Standard range	Page
Peel Rivet	TPR-L	▶ 5.3



5

Peel Rivet TPR-L

Peel Rivet fastening system: Safe fixing whatever the sub-frame

Safe fixing to aluminium sheet, thin concrete, timber and cement boards is essential when installing flat roof insulation. Conventional screws do not offer adequate performance or require

to be reinforced with additional security features. The TPR riveting system will remove the additional time and cost otherwise involved.

The convincing advantages of the Peel Rivet fastening system



- High corrosion resistance (rivet sleeve manufactured from aluminium / magnesium alloy, centre pin from zinc coated carbon steel)
- Consistently high pullout values due to dedicated system design
- Center pin remains in the rivet sleeve
- Ergonomic installation using the TPR 55 setting tool
- Dynamic wind loads present no problem
- Can be combined with standard stress plates
- Also suitable for thin steel decks



**Critical sub-structures:
The Peel Rivet fastening system is the ideal solution**

After pre-drilling the sub-structure, the peel rivets can be rapidly fitted using the TPR 55 setting tool. As the centre pin is withdrawn, the rivet is deformed, creating four arms which produce a contact surface equivalent to five times the shaft diameter. In combination with recommended stress plates the rivets provide for a consistently high pullout requirement.



5

Peel Rivet TPR-L



Technical information

Application

For the fastening of waterproof membrane and insulation to aluminium, thin concrete, wood wool and problem decks, where conventional threaded fasteners may not achieve sufficient performance.

	TPR-L
Minimum thickness for steel deck:	$t \geq 0,50$ mm
Minimum thickness for aluminium deck:	$t \geq 0,60$ mm
Minimum clamping length:	$KL \geq 13,0$ mm

Generally

To be installed via a pilot hole. Application tests are required on all projects to determine the suitability and performance.

Material

Fastener

- TPR-L

Body: Aluminium/magnesium alloy

Mandrel: Zinc plated steel

Stress plates

- ID-70x70 / IE-C-82x40 / IRD-82x40

Steel 1,0 mm, zinc plated

Resistance at 15 cycles Kesternich test according to ETAG 006 - D.3.1. and FM requirements

Tools and accessories - details see chapter 6

TPR55



- Riveting tool for fast installation of TPR-L Peel Rivet fasteners

Lever tool RM-20



- Including 4 nozzles

Stress plates

DTL-70x70 / ID-70x70



- Stress plate for insulation

IE-C-82x40



- Stress plate for membrane and insulation on hard substrates

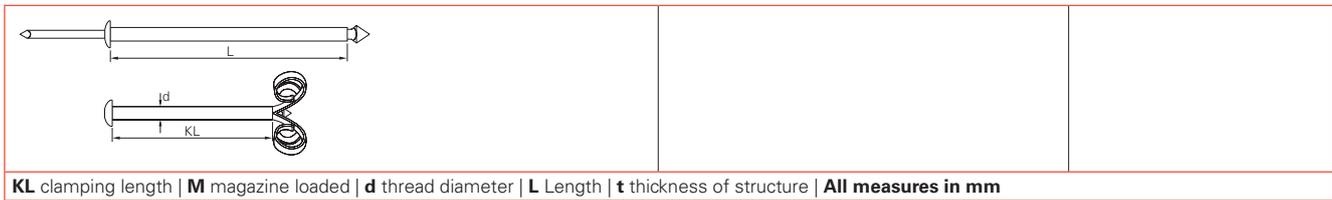
KTL-82x40 / IRD-82x40



- Stress plate for membrane and insulation

Peel Rivet TPR-L

Order information

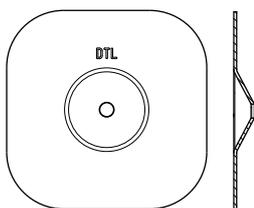


Product / Application	Approval	Order code			KL	Application range
		TPR-L	6,3x	38		
▲ Aluminium 		TPR-L	6,3x	38	13	<p>t min. steel: _____ 0,5 mm</p> <p>t min. alu: _____ 0,6 mm</p> <p>Min. KL = 13 mm due to the mandrel which stays inside the body of the Peel Rivet.</p> <p>Pull-out tests are recommended, if thickness of substrate is lower as t min.</p>
		TPR-L	6,3x	51	26	
		TPR-L	6,3x	64	39	
		TPR-L	6,3x	76	51	
		TPR-L	6,3x	88	63	
		TPR-L	6,3x	102	77	
		TPR-L	6,3x	127	102	
		TPR-L	6,3x	152	127	
		TPR-L	6,3x	178	153	
		TPR-L	6,3x	203	178	
		TPR-L	6,3x	229	204	
		TPR-L	6,3x	254	229	

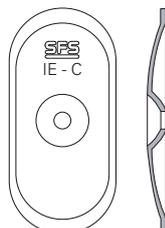
5

Stress plates

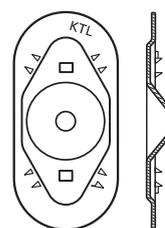
DTL-70x70 / ID-70X70



IE-C-82X40



KTL-82x40 / IRD-82X40



6

	SFS Product code	Page
Steel deck Timber deck Concrete deck Critical deck	IF240, IF80-L/S, TP10, TP19, TP30, DI650	▶ 6.2
	IT19, DB620, TPR55, RM-20	▶ 6.4
SDS drills	SDS	▶ 6.6
Accessories	ZVK	▶ 6.7
Accessories	Drill bits	▶ 6.8
Accessories	Pull-out tester	▶ 6.9



IF240

**Technical details**

Power tool:	DI 650
Wattage:	650 W
Max. revs:	2000 rpm
Power supply:	110V / 230V
Height:	1100 mm (working length)
Width:	415 mm (across rollers)
Weight:	28 Kg

Application

Automated setting tool for the fast and economic installation of magazine loaded *isofast*[®] fasteners and stress plates

Fasteners

Diameter:	4,8 mm and 6,0 mm
Length:	50 mm to 240 mm

IF80 L/S (standard)

**Technical details**

Power tool:	DI 650
Wattage:	650 W
Max. revs:	2000 rpm
Power supply:	110V / 230V
Height:	750 mm / 470 mm
Weight:	2,5 Kg / 2,0 Kg

Application

Stand-up setting tool for the installation of *isofast*[®] fasteners and stress plates.

Fastener assembly may be undertaken on site if necessary.

Fasteners

Drive:	Hexagon head
Diameter:	4,8 mm
Length:	50 mm to 300 mm

IF80 L/S with internal drive

Fasteners

Drive:	Torx (25,30)
Diameter:	6,0 mm and 6,3 mm
Length:	50 mm to 250 mm

TP10, TP19, TP30

**Technical details**

Power tool:	DI 650
Wattage:	650 W
Max. revs:	2000 rpm
Power supply:	110V / 20V
Max. torque:	20 Nm
Tool:	Weight / Length:
TP10:	2,7 Kg 550 mm
TP19:	3,0 Kg 730 mm
TP30:	3,1 Kg 760 mm

Application

Stand-up setting tool for the installation of fasteners and sleeves

DI650

**Technical details**

Power tool:	DI 650
Wattage:	650 W
Max. revs:	2000 rpm
Power supply:	110V / 20V
Max. torque:	20 Nm
Overall length:	290 mm
Weight:	1,6 Kilogram

Application

Power screwdriver for manual installation of fasteners

Tools

IT19

**Technical details**

Power tool:	DI 650
Wattage:	650 W
Max. revs:	2000 rpm
Power supply:	110V / 230V
Height:	900 mm
Weight:	2,7 Kg

Application

Automated setting tool for the fast, secure and economic installation of the *ISO-TAK*® fasteners

DB620

**Technical details**

Wattage:	620 W
Max. revs:	870 rpm
Power supply:	110V / 230V
Weight:	2,4 Kg
Drive connection:	SDS-Plus

Application

Hammer drill for pre-drilling into concrete and masonry

TPR55 (TPR-L Rivet)**Technical details**

Wattage:	600 W
Max. revs:	600 rpm
Power supply:	110V / 230V
Overall length:	480 mm
Weight:	3 Kg

Application

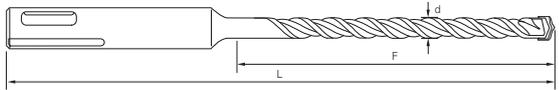
Electric rivetting tool for the fast installation of TPR-L and TPR Peel Rivet fasteners

Lever tool RM-20 (TPR-L Rivet)**Application**

Including 4 nozzles

SDS and HSS drills

Order information

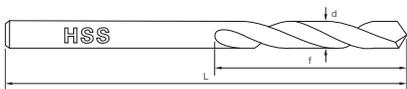


SDS Carbide-geometry
Dynamic, chisel-shaped drill bit head
Multi-fluted, spacious KVS-spiral
Unique KVS-flute design

d diameter | **L** Length | **F** working length | **All measures in mm**

Order code					Application range
Type	d	L	F	Code	
SDS- 4,8x 110/ 50- 4PLUS					
SDS-	4,8x	110/	50-	4PLUS	SPIKE® twister DT-S-4,8xL TI-T25-6,3xL
SDS-	4,8x	160/	100-	4PLUS	
SDS-	4,8x	210/	150-	4PLUS	
SDS-	4,8x	260/	200-	4PLUS	
SDS-	4,8x	310/	250-	4PLUS	
SDS-	4,8x	360/	300-	4PLUS	
SDS- 5,0x 110/ 50- 4PLUS					 SDS- 5,0x 160/ 100- 4PLUS-Sika SDS- 5,0x 210/ 150- 4PLUS-Sika SDS- 5,0x 260/ 200- 4PLUS-Sika SDS- 5,0x 310/ 250- 4PLUS-Sika
SDS-	5,0x	160/	100-	4PLUS	
SDS-	5,0x	210/	150-	4PLUS	
SDS-	5,0x	260/	200-	4PLUS	
SDS-	5,0x	310/	250-	4PLUS	
SDS- 5,2x 160/ 100- 4PLUS					TI-T25-6,3xL
SDS-	5,2x	210/	150-	4PLUS	
SDS- 5,5x 110/ 50- 4PLUS					Sarnafast® SB-6,3xL
SDS-	5,5x	160/	100-	4PLUS	
SDS-	5,5x	210/	150-	4PLUS	
SDS-	5,5x	260/	200-	4PLUS	
SDS-	5,5x	310/	250-	4PLUS	
SDS-	5,5x	350/	290-	4PLUS	
SDS-	5,5x	410/	350-	4PLUS	

Other length of SDS drills are available on request.



d diameter | **L** Length | **f** flute length | **All measures in mm**

Order code				Application range
Type	d	L	f	
HSS- 7,0x 109/ 69				Pre-drilling for TPR-L in steel or aluminium decks.
HSS-	7,0x	109/	69	
HSS-	7,0x	156/	102	
HSS-	7,0x	225/	155	
HSS-	7,0x	290/	200	
HSS-	7,0x	370/	250	

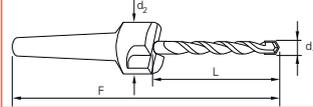
All approvals and recommended design loads are based upon close tolerance pilot holes that are drilled using SFS intec 4PLUS carbide drill bits.

* Technical performance values of the concrete fasteners may differ between countries due to variation in the hardness of locally sourced concrete aggregates. Optimum performance can be determined by site testing using different drill diameters, for example between SDS-4,8 and SDS-5,2. Consult your SFS representative for further information.

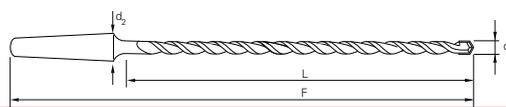


Order information

Sarnadrill-STOP (ZVK-STOP)



Sarnadrill (ZVK)



d diameter | **L** Length | **F** working length | **All measures in mm**

Order code						
Sarnadrill	d ₂	d ₁	L	F	Code	
Sarnadrill	14-	5,0x	45x	82-	STOP	Application range Sika
Sarnadrill	14-	5,0x	100x	135		Sarnafast® SBF-6,0xL

Sarnadrill Extension 14-500 drill extension for the Sarnadrill conus drills



Sarnadrill Extension 14- 500

Sarnadrill-STOP (ZVK-STOP): The special STOP drills additionally core out the insulation providing for easy sleeve insertion and accurate fastener alignment with the pilot hole.

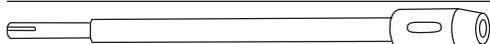
Sarnadrill Extension (ZVK): Conus drills for different use, mostly to replace very long SDS drills.

All approvals and recommended design loads are based on close tolerance holes drilled with SFS intec ZVK carbide drill bits.

Order information

Order code						
Type	d ₁	L	F	Code		
ZVK- 4,8x 100x 165 STOP						Application range SFS intec
ZVK-	4,8x	100x	165	STOP		
						SPIKE® twister DT-S-4,8xL TI-T25-6,3xL TIA-T25-6,3xL More SDS-STOP drills are available in the SFS standard range.
ZVK-	5,0x	55x	115			TI-T25-6,3xL TIA-T25-6,3xL
ZVK-	5,0x	100x	160			TI-T25-6,3xL TIA-T25-6,3xL
ZVK-	5,0x	25x	90	STOP		More SDS-STOP drills are available in the SFS standard range.
ZVK-	5,0x	35x	100	STOP		More SDS-STOP drills are available in the SFS standard range.
ZVK-	5,2x	45x	110	STOP		TI-T25-6,3xL TIA-T25-6,3xL More SDS-STOP drills are available in the SFS standard range.

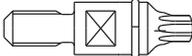
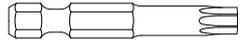
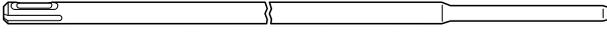
ZAK-500 / ZAK-750 drill extension for the ZVK conus drills



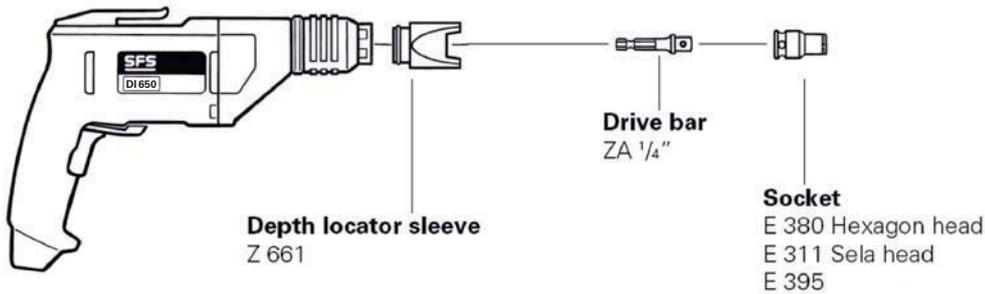
ZAK- 500
ZAK- 750

Driving tools and accessories

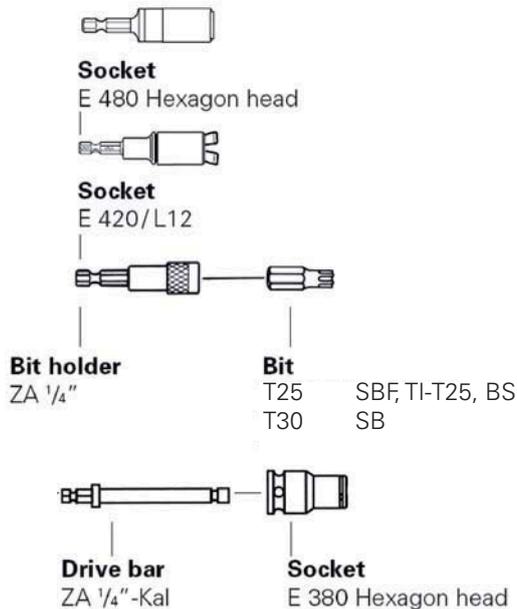
Driving tools and drill bits

	ZA1/4" M6-300-Sika ZA1/4" M6-670-Sika 	ZA1/4" M6-300 ZA1/4" M6-670 	Drive bar for sleeve installation.
	T25-32-M6-RING-Sika 	T25-32-M6-RING 	Insert bit for T25 drive.
		Bit 30 	Insert bit for T30 drive.
		ZD 15 	Setting tool for the installation of SPIKE® twister fastener.
		DT-M-500/750 	Mechanical driving tool to hammer in the SPIKE® twister using the DB620.
		ZD-1000 	Penetrating tool for punching hole in the waterproof membrane prior to the application of sleeves.

Accessories



Optional accessories



900 kg pull-out tester

**Application**

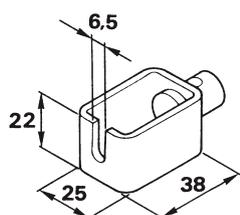
Pull out meter especially adapted for the measurement of pull-out strengths of different fastener types for use in roofing, cladding and building applications. Grips are not included.

Technical details

Range of application: Up to 9000 N tensile force
 Measuring accuracy: $\pm 2\%$
 Housing material: Aluminium casting
 Dimensions: $\varnothing 220 \times 300$ mm
 Weight: 2,6 Kilogram
 Packaging: Metal case
 36 x 27 x 29,5 cm
 Weight with case: 5,9 Kg

Accessories

Grip LFS0250



Grip for standard roofing screws.

Technical details

Range of application: Fasteners with max. shank dia of 6,5 mm
 Weight: 80 g
 Material: Hardened tool steel
 Surface finish: Zinc-coated

Make life easier for yourself with the complete spectrum of support from SFS intec



Finely-honed fastening solutions are only one part of the comprehensive support package offered by SFS intec.

Whether it's a new build or restoration project, we support you all the way from the planning phase through to the construction phase, with a complete money-saving service package.

The right fastening system every time Technical advice and support anytime

Absolute fastener security

Increased safety requirements; economic, ergonomic and aesthetic considerations; meeting the relevant directives and building control guidelines: these and other factors are becoming increasingly important in industrial construction.

That's why choosing the right fastening system for each specific application is vital. We ensure specifiers, architects and installers have the advice and information needed to choose an appropriate system from the wide range of alternatives available.

Your support team is only a phone call away. Our comprehensive website www.sfsintec.biz provides a wealth of information on optimum fastener technology. Draw on our years of experience in every aspect of fastening and fixing to put you in the driving seat when it comes to industrial building.

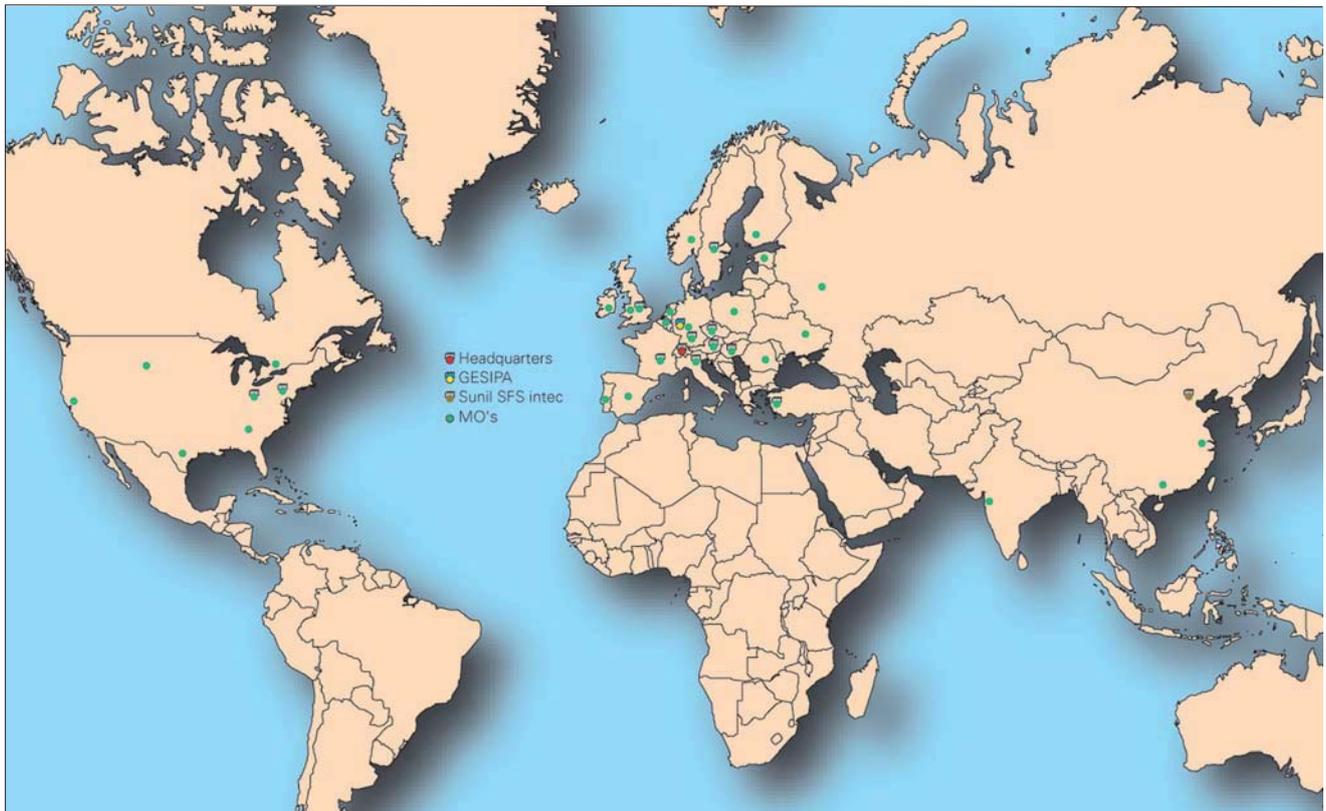


Services ensuring a secure build:

- Choosing the appropriate fastening system at the planning stage
- Comprehensive analysis of your needs including on-site tests
- Optimum supply chain management from plant to site
- On-site personnel training



Presence in Europe, North America and Asia.



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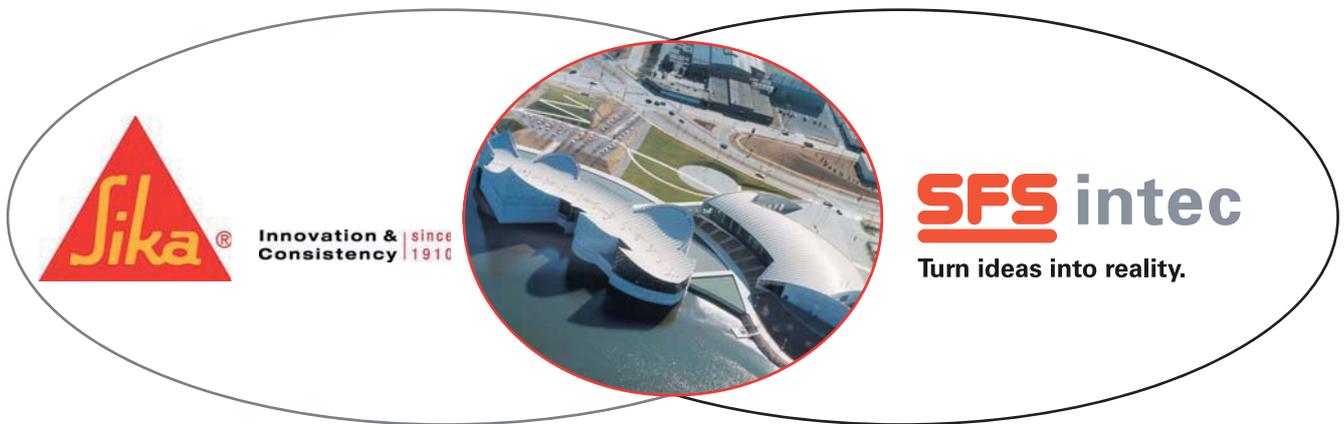
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Common engagement of two innovative partners- No compromises on safety, to ensure long term performance and quality.



Customized fastening solutions for various applications

Global experience in the construction market between two strong partners is highly appreciated by international key accounts. The right selection of fastening solutions in order to meet Sika's requirements is of crucial importance.

The right fasteners for each application is specified in close cooperation with SFS intec's specialists. As a pioneer of self drilling fasteners, we are able to develop application specific solutions for our customers.

It is the aim of both companies to meet customers expectation over the building life span while minimizing maintenance costs. This effort can be maximized by the involvement of two strong partners.



Mechanically fastened roofs



Solar roofs



Refurbishments

