Height safety Lifting Load Control Safety Management

— SpanSet

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Introduction									

In addition to external factors, such as temperature, chemical environment and mechanical stress, "sharp edges" still represent one of the main causes for damage on the lifting gear itself and are therefore a frequent cause of accidents. The most damage on sharp or rough edges occur by moving the load transversely to the lifting gear. This is known relative motion. If the edge is "sharp", the lifting gear can, in the worst case, separate. If the load moves to the side, a cutting motion occurs at the edge. Being comparable with the blade of a knife, the edge can cut unprotected lifting gear.

For handling loads with sharp edges, one often improvises and finds an insufficient solution. Therefore, a pile of gloves or paper are used for edge protection, among other things. This can result in fatal accidents.

Machinery components that could potentially have sharp edges can already be planned hand in hand with our lifting technology specialists before or during their construction so that sharp edges are avoided by means of mountable and demountable attachment points located on the load. Direct contact between the lifting gear and the component is avoided in this manner. In the above-mentioned case, use of edge or abrasion protection can be done without.

So-called "rough loads" with a robust surface and cutting edges where scratches and indentations do not play a large role and that are not damaged by the physical impacts of force such as gripping or pushing can be moved using grippers or lifted using heavy chains/wire cable in combination with an edge protector.

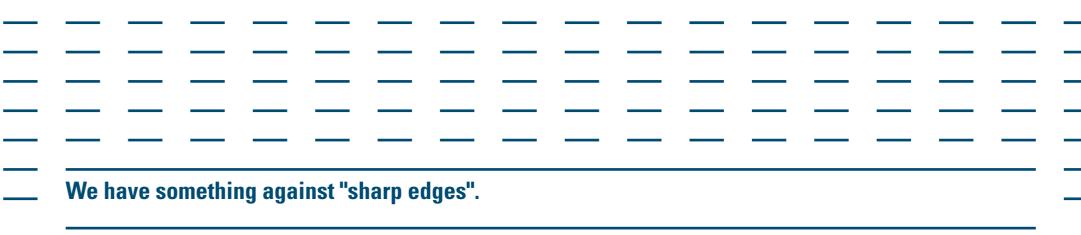
In contrast to rough loads, sensitive constructions with sharp edges have to be handled especially gently. For this purse, textile lifting gear, such as lifting straps or round slings, are suitable. When lifting or moving, the goods and textile lifting gear must not be damaged. Cut-proof sleeves made of polyurethane elastomer or HMPE high-performance fibre maintain the gentle characteristic of textile lifting gear and protect these from being cut by sharp edges.



Other information on the topic of **lifting gear** can be found online at the following address: www.spanset.de



Other information on the topic of **edge pro-**tectors can be found online at the following address: www.secutex.com



Years of experience, in-house test procedures, testing equipment and on-site consultation in the case of **We offer:** especially complicated loads provide for sound knowledge "when dealing" with sharp edges. Furthermore, we would like to provide optimal support to companies and their employees in handling "sharp edges" in order to effectively avoid risks during the course of daily work. For this reason, SpanSet offers training and further education opportunities on the topic of "sharp edges" on an annual basis that convey state-of-the-art knowledge in a practical manner, being held by certified instructors. Special constructions and support in the case of the most difficult lifting procedures make up our day-to-day business.

- A complete range of protective measures and seminars
- Operating manuals, documentation with detailed statements on edge radii and lifting gear
- Product identification using labels and transponders
- Edge protector products certified by DEKRA
- Special solutions in dialogue with customers

### An overview of SpanSet's edge protector range

ExoSet round slings/shakles See Internet: www.spanset.de					R
Edge protector See Internet: www.secutex.com	000		J	J	J
secutex- and Powerflex-coated lifting straps and protective sleeves Pages 12 and 14		3000 kg Sp	3000 kg an Sok - SOCUTOX	Span Sat - secutox	
NoCut <sup>®</sup> sleeve and pad – HMPE (high-modulus polyethylene high performance fibres) woven protective sleeves and cut-proof plates Pages 12 and 15				and the second	2
Consultation, training and accessories					

From page 18 on

# In just few steps, find the right edge protector for your lifting gear directly in a simple manner.

Product selection made easy with the free online tool, NoCut®-"Product Finder"

A ttp://configurator.spanset-nocu	t.de				
		 _ 5-	anSeť		
				$=$ $\neq$ $-$	
	Product-Finder	 			
-					
	Lifting gear				
	Working Load Limit WLL [kg]		02		
	Working length [m]		3		
	Edge radius (mm)		• 4		
5	Sleeve Configuration		♥ 5		
		Find Products	6		

In line with the low intrinsic weight of NoCut<sup>®</sup>, we also make the selection of products easy.

Using the free Product Finder, you can define the appropriate NoCut<sup>®</sup> product for textile lifting gear online in just a few steps.



he Product Finder can be found here: //configurator.spanset-nocut.de

**1** First, the lifting gear used must be selected. Here, the most common lifting straps and round slings by SpanSet can be selected.

- Lifting straps HB, PB, PC, PCS Round slings Liftfix, MagnumPlus, Magnum-X, SupraPlus, Twintex

2 Next, the bearing capacity [WLL] of the lifting gear must be selected.

**3** Then, the working length of the lifting gear must be specified.

**4** Following this, the edge radius of the load has to be defined. Radius from **0 to 3 mm** are possible.

5 Now, the attachment must be determined to be single or double stranded.



6 Finally, the length of the NoCut<sup>®</sup> sleeve/pad must be defined. Should the NoCut<sup>®</sup> pad be the right product for the application, the use can still choose between several designs in the case of the fastening element.

# 5panSet Matching product



• 🛉	No.	Length	P
	D0123456	0,50 m	1
i i i i i i i i i i i i i i i i i i i	D0123456	1,00 m	1
, 😃	D0123456	1,50 m	1
Type: Pad2	D0123456	2,00 m	1
Fastener: Buckle	D0123456	2,50 m	1
Suitable for turning			
	Matching acc	essories	
	DOIDDATE	Less with Maless	







NoCut<sup>®</sup> sleeve

00



NoCut<sup>®</sup> pad2 with

NoCut<sup>®</sup> pad4 with

Velcro fastener

Velcro fastener



NoCut<sup>®</sup> pad2 with Clip buckles



NoCut<sup>®</sup> pad4 with Clip buckles



800

Velcro fastener and buckle



NoCut<sup>®</sup> pad4 with Velcro fastener and buckle

Now, the user can send fill in the contact form and send his request. Afterwards, a SpanSet employee will contact the user. In this way, open questions can be clarified and you can be sure that you have selected the right type of cut protection for the application.

NoCut<sup>®</sup> pad<sup>2</sup> - two-ply (double cut protection), NoCut<sup>®</sup> pad<sup>4</sup> - ply (quadruple cut protection)

\_\_\_\_\_ \_\_\_\_

### **DIRECTIVES AND LAWS**

Obligations for employers and employees

**i** Detailed information on laws and directives can be obtained by participating in a **workshop** on the topic of "sharp edges".

#### Please feel free to contact us

### DGUV Rule 100 – 500 [BGR 500] Chapter 2.8, 3.11.1

The company owner has to ensure and those who are insured have to pay attention that load support equipment is used in such a way that damage are avoided that can result in impairing the load-bearing capacity. In particular, the following has to be paid attention to:

1. Rope, change and lifting straps may not be tensioned or pulled over the sharp edges of loads.

Edges are considered sharp if the edge radius of the load is smaller than

- the diameter of the rope.
- the thickness of the lifting belt,
- the nominal thickness of the round steel chain
- [...] Sufficient rounding can be achieved by using edge protectors.
- 3.11.1

Load-supporting equipment must be used in such a way that damages are avoided that result in impairing the load-bearing capacity.

- 3.11.1.1

Unprotected lifting straps/round slings many not be pulled over sharp edges or rough surfaces.

#### **Product safety law**

The implementation of Directive 89/391/EEC with the scope of German legislation took place upon enforcement of the German Occupational Safety and Health Act (ArbSchG) from 12/06/1989. From this, specific obligations are placed on the company owner:

- Hazard assessment for all work areas and machines
- Information and instructions for employees
- Documentation obligation

### **Industrial Safety Ordinance**

Other European directives have been implemented into German law as of 03/10/2002 with the Industrial Safety Ordinance. The Industrial Safety Ordinance places the organisational obligation on the employer for ensuring occupational safety and health measures.

### **Employer obligations**

The employee must pay special attention to the following points:

- Hazard assessment
- Testing the quality of work equipment
- Determining occupational health and safety measures for suing the work equipment
- Devising written operating instructions for handling the work equipment
- Employee training
- Documentation obligation
- ...

### **Employee obligations**

- using machinery, equipment, tools, hazardous substances, transport equipment and other equipment properly
- using personal protective equipment and storing it after use in the designated area
- not rendering any protection equipment inoperative, intentionally change or converting it and using this protective equipment properly
- immediately reporting any health and safety risk identified as well as any defect found in the safety systems to the employer or an individual appointed by him
- together with the employer or an individual appointed by him, to work towards making it possible to execute all tasks and adhere to all restrictions that characterise the safety and health protection of employees at the work place.
- together with the employer or an individual appointed by him, to work towards the employer being able to ensure that the working environment and the working conditions are safe and do not exhibit any danger for safety or health with the field of activity of the employees.





### **THE SHARP EDGE**

Definition of "sharp edge"

### By definition, a sharp edge is frequently not recognised as such at all because the edge is seen as being round and not sharp.

A sharp edge already exists if the edge radius "r" is smaller than the thickness of the material "d" of the lifting gear. If the edge radius is under 2 mm, experts already consider this a "super-sharp edge". The definition of "sharp edges" was originally devised for wire rope attachments, however not adapted to the development of round slings. This problem was examined by SpanSet in cooperation with the trade association and DEKRA in an extensive series of trials.

#### We have something against the sharp edge.

The 5 – 6 mm thick secutex coating or the textile fabric of NoCut<sup>®</sup> is placed between the load and the lifting gear and enlarges the edge radius by this

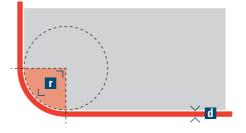
layer. In this way, the edge is no longer sharp for a lifting belt and lifting forces are dispersed from the edge.

In order to assess the sharp edge, "tools" are required. In order to determine radii, among other thing, the following are appropriate: Radius gauge, vernier caliper, folding ruler **i** Detailed information on radius gauges can be obtained by participating in a **workshop** on the topic of "sharp edges".

Please feel free to contact us.



### The sharp edge



#### Edge radius

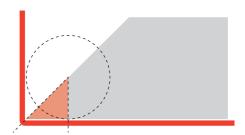
If the edge radius, **I**, is smaller than the thickness of the lifting belt/round sling, **I**, the edge is considered sharp. All motions or surface press can be enough to sever the lifting gear.

### Surface pressure example

	Seating width
MagnumPlus 30 t	170 mm
Magnum-X 30 t	90 mm

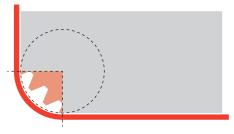
The surface pressure on the Magnum-X round sling increases by approx. 90%. The surface pressures that load exerts on the lifting gear is even lower

- the wider the contact surface is.
- the bigger the radius of the component is
- the thicker the protection between the component and the lifting gear is



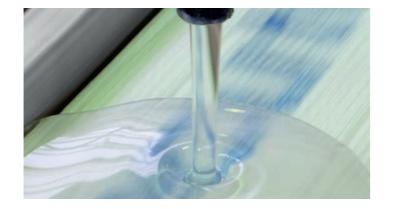
### Deviating shape

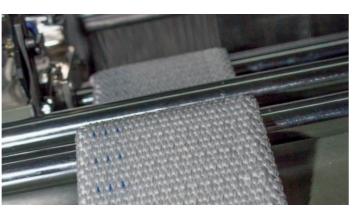
In addition to rectangular edges, there are goods with deviating shapes. These include protruding edges and sharp or jagged outer contours. These edges cannot be determined by the general rule. **Solution:** Enlarging the deflection radius by using secuwave or NoCut for example.



### Structure

Very raw surfaces, such as a prefabricated concrete component, can damage textile lifting gear or a wire rope already at a minimum of set behaviour. **Solution:** Movements at this edges are avoided using cut-proof sleeves.





### secutex

secutex is a polyurethane elastomer with special physical, chemical and mechanical characteristics and is especially cut-proof and wear resistant. The secutex coating penetrates deep into the fabric of the lifting strap resulting in a connection that cannot be severed. The textile fabric is protected against foreign substances penetrating into it. Available in various degrees of hardness, the damping torque of the coating can be optimally adapted to the lifting procedure and the condition of the respective load.

secumove, easyClip, veloxClip, SF-1, SF-2, Clip-SC, secuwave, one-sided[S1], two-sided [S2]

#### Tropic

For use subject to permanent moisture, hydrolysis-resistant "secutex Tropic" is suitable. While common polyurethane elastomers lose their properties under the constant influence of moisture (especially salt water), the lifting straps coated with "secutex Tropic" remain continuously cut-proof – the first choice for offshore use.

secumove, easyClip, veloxClip, SF-1, SF-2, Clip-SC, secuwave, one-sided[S1], two-sided [S2]

### Reinforcement

The patented reinforcement developed by secutex considerably increases the cut resistance of the secutex coating. By specially inserting steel plates, the coated part of the lifting belt is equipped with an additional protective layer. Suitable for sharp edges under 2 mm.

secumove, easyClip, veloxClip, SF-1, SF-2, Clip-SC, secuwave, one-sided[S1], two-sided [S2]

### **Powerflex coating**

"secutex-Powerflex" is an especially thin spray coating that penetrates deep into the fabric and seals it. Foreign particles and fluids can no longer penetrate it and are simply removed from the belt surface. The two-sided coating, "Powerflex" is used everywhere where fabric protection and extreme resistance to abrasion play a central role and, on the other hand, where a high level of flexibility of the lifting belt should be maintained. Since the lifting belt is completed shielded, both sides can be used as the side of attachment.

SFX, Powerflex [PF]

#### **Combination of secutex and Powerflex**

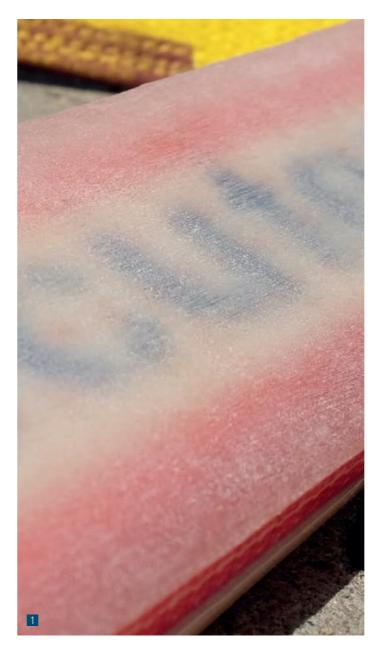
The side of attachment coated with secutex, the backside with Powerflex

secuflex [SX]

#### HMPE high-performance fibres

HMPE (high-modulus polyethylene) is a high-performance fibre with a high level of cut and abrasion resistance. The material has a low coefficient of sliding friction and has a very high level of notch impact strength. By adding UV stabilising substances to the fibres, the material gains a very good level of light resistance. This fibre hardly absorbs any water at all. Therefore, by means of swelling, the material cannot shrink. HMPE woven cut-proof sleeves feature a low intrinsic weight and an especially flexible construction.

NoCut<sup>®</sup> sleeve, NoCut<sup>®</sup> pad



### secutex standard surfaces

In particular, secutex-coated lifting belts with a form-fitting surface are suitable for use under the influence of water, ice, and oil. The combination of raised and recessed structures in the surface works like a drainage and maintains the frictional lock.

#### Smooth

The load is on the entire surface. In a dry state, it offer the largest level of frictional locking and inhibits slipping to the greatest extent possible.

### 1 Ground

This surface is lightly rough. It is used if the side of attachment comes into contact with small amounts of fluids. The rough surface continuously maintains its anti-slip properties.

### Fish bone

More than "ground", this surface makes it possible for liquids to run off the surface. By means of an almost like relationship between bridging and beading, it maintains a high level of frictional locking to the load.

### Pyramid

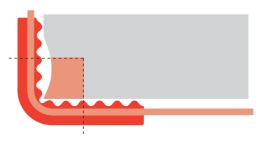
.....

Here, the load is only on the tip. Large amounts of fluid can drain just as fast without breaking the contact between the side of attachment and the load.

#### Wave



Large, wave-shaped protrusions make it possible for the load to tilt against the lifting gear. secuwave enlarges the deflection radius in such a way that "sharp edges" do not have any contact with the protective sleeve and therefore are not able to cut.



### EDGE PROTECTOR RANGE

secutex surfaces

Protective sleeves for textile lifting gear

Туре	Powerflex	secumove	NoCut pad	SFX	easyClip	veloxClip	SF-1	SF-2	Clip-SC	secuwave	NoCut sleeve
Design	Simple abrasion protection, fully shielded	Firm protective sleeve flexible coating	, Woven protective plate protected on one side	Protected on one side sealed on the back	sleeve,	Flexible flat protective sleeve, protected on one side	Protective sleeve, protected on one side	Protective sleeve, protected on both sides	Protective sleeve, protected on one side	Protective sleeve, with wavy structure, protected on one side	Woven protective sleeve, protected on both sides
Cross section											
Smooth edge Not sharp	0	0	0	0	0	0	0	0	0		0
Rough edge Not sharp		0		0	0	0	0	0	0		
<b>Broken edge</b> Sharp			٠	•	٠	٠	٠	•	•	٠	٠
<b>Rolling edge</b> r > 2 mm, sharp			•	•	٠	٠	٠	•	•	•	٠
Very sharp edge* r > 1 mm, very sharp			•*	o <b>*</b>			o <sup>*</sup>	o <b>*</b>	•*	•*	•*
Super-sharp edge r < 1 mm, super-sharp			•*								•*

\* Professional consultant required! • Our recommendation • O Suitable Suitable for turning • Not suitable for turning

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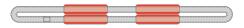
Round slings: Illustration of type 4

Protective sleeve pair for contact surfaces

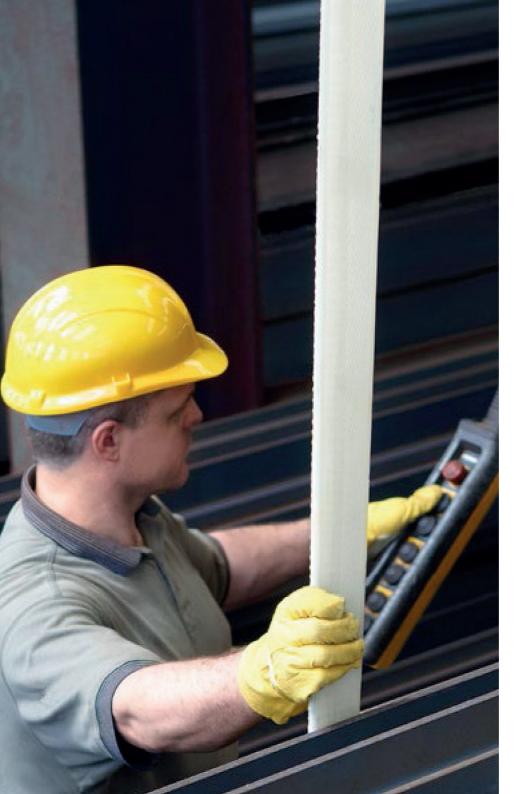
### Protective sleeve types

Lifting procedures are just as different as the respective loads themselves. This also apply to the respective types of protective sleeves. The protective sleeve is adapted to the load and the working range of the lifting gear. In this way, it can protect the lifting strap across the entire or just a short part of its working length. In the case of round slings, the single strand or also the double strand can be protected.





**Round slings: Illustration of type 5** Protective sleeve pair over the entire working surface Round slings: Illustration of type 6 Protective sleeve pairs for contact surfaces



### EDGE PROTECTOR RANGE

### Permanent coating for lifting straps

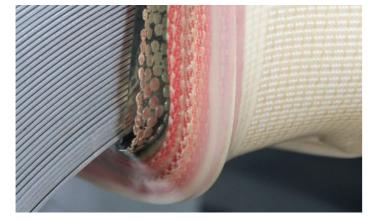
Туре	Without protec- tion	Powerflex [PF]	secuflex [SX]	One-sided [S1]	Two-sided [S2]
Design	None Coating	Complete unshielded	One-sided, protected Sealed on the back side	One-sided coated	Both sides coated
Cross section					
<b>Smooth edge</b> Not sharp	•	0	0	0	0
Rough edge Not sharp		•	0	0	0
<b>Broken</b> Sharp			٠	•	٠
<b>Rolling edge</b> r>2mm, sharp			٠	•	٠
<b>Very sharp*</b> r<2mm, very sharp				0*	0*
Super sharp* r<1mm, super-shar					

★ Professional consultant required! ●Our recommendation ○ Suitable □ Suitable for turning

When to use a permanent coating and when to use a protective sleeve

With a suspended secutex protective sleeve, the lifting gear can move freely through the sleeve while the load "hooks itself" into the soft surface. If movement of the lifting gear is unwanted, or if the load has to be attached in a certain position, preference is giving to secutex permanent coating. It is coated over the entire working range. The load stays in a fixed position and movement is prevented.

secutex





secutex is a great polyurethane elastomer with special physical and chemical properties.

#### High structural capability

secutex is extremely cut and wear resistant. It has an enormously high level of structural strength in comparison to other chemical materials. In this way, the polyurethane elastomer can be strength by up to 500% of its original length without ripping.

#### Protects the load

In comparison to conventional rubber, secutex has a considerably higher level of elasticity – also in the case of extremely high temperature fluctuations. The lifting straps coated with secutex lay against the load softly and flexibly and increase the radius at critical edges. The lifting forces that occur there are dissipated and dispersed. Loads entailing sensitive goods remain undamaged.

#### Extreme wear resistance

secutex is very durable. The coating protects the textile lifting strap from rough surfaces. By means of the sealed surface, foreign particles, fluids and chemicals cannot penetrate and cause damage from the inside out. The textile fibres of the lifting strap remain undamaged.

#### Continuous dimensional stability

No shrinking, forming of creases. secutex remains dimensionally stable even under intensive use and can be simply slid under the load. secutex protective sleeves maintain their length and, in this way, protect textile lifting gear against "sharp edges".

#### Use in continuously wet areas

Hydrolysis-resistant "secutex Tropic" has been developed for use subject to permanent moisture. While common polyurethane elastomers lose their

properties under the constant influence of moisture (especially salt water), the lifting straps coated with "secutex Tropic" remain continuously cut-proof.

### Lifting straps for offshore use

Above all, the climate at sea puts a lot of demand on all lifting equipment. The lifting straps coated with "secutext Tropic" are the first choice for offshore use. The coating protects the textile fabric against penetrating moisture and salt deposits - two factors that can considerably impair the overall load-bearing capacity of lifting straps.

#### Individual contours and surfaces

secutex is moulded. The manufacturing process has many advantages since many forms and structures can be depicted. The in-house construction and the CNC supported mould-making allow the right solution for the respective lifting situation to be devised together with our applications engineers. In this way, the surface of the lifting belt can contain holding points for example or the contour of the respective load can be mapped. The object lying in the lifting belt is supported in a form-fitting manner.

### Optional for protective sleeves and permanent coatings

Every secutex protective sleeve can be optionally equipped with steel plate inserts. In the case of "super-sharp edges" [r < 2 mm], this additional protection is urgently recommended. Consultation with one of our applications engineers is especially important.







provides for a high level of durability by means of using both sides, offering the

highest level of reliability at the same time since misuse can be ruled out. The

NoCut<sup>®</sup> Label that is sewn on also contributes to his with handling instructions

NoCut<sup>®</sup> has been constructed with a fabric rib on both sides. On the outside

the ribbed construction increases cut resistance and on the inside, it facilitates

sliding of the lifting gear in the sleeve which makes turning and rotating sharp-

### EDGE PROTECTOR RANGE

- NoCut<sup>®</sup> sleeve - NoCut<sup>®</sup> pad

### NoCut<sup>®</sup> – high-tech cut protection mad of HMPE high performance fibres for more safety

For the development of NoCut<sup>®</sup>, special testing equipment was constructed and built to allow the cut resistance of the material to be determined while testing the cutting impact at nominal load. Thereby, the protective effect of the NoCut® sleeve and NoCut<sup>®</sup> pad was determined at various sharp edges and certified by DEKRA. Defined knowledge that does not leave any question unanswered during use and that has been certified by DEKRA!

Thereby, NoCut<sup>®</sup> is great for protecting textile lifting gear, such as PowerStar lifting belts and SupraPlus round slings for example, and is suitable for protecting against damages by sharp edges when lifting loads. Furthermore, it offers additional protection for the processed edge.

NoCut<sup>®</sup> cut protection offers a low intrinsic weight in a compact construction for especially ergonomic handling with a low level of effort.

By means of a flexible fabric construction, NoCut<sup>®</sup> can be easily positioned at sharp edges – also in the case of highly restricted space. The sleeve construction with a high level of cut resistance equally distributed all around (up to four ply)



integral weight



Flexible

construction



Tested cut protection

and clear identification.

edged loads possible.

Туре

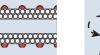
Lifting straps

Magnum-X

Magnum-X

Radius [mm]

Unique ribbed structure



MagnumPlus, SupraPlus, Twintex, Liftfix  $\leq 20t$ 

MagnumPlus, SupraPlus, Twintex, Liftfix  $\leq$  30 t

MagnumPlus, SupraPlus, Twintex, Liftfix  $\leq$  50 t





WLL sleeve pad 2 pad 4

≤20t

≤ 30 t

≤20t

≤ 30 t ≤ 40 t 1 2 3 1 2 3 0 1

Sleeve construction with an equally distributed high level of cut resistance



Further important information on NoCut® can be found online at the following address:





### Safe raising and turning

### When turning and raising coils, protective sleeves cannot be done without.

The lifting belt is hung into the crate hooks and lay onto the load with the protective sleeve. When lifting, the lifting belt freely moves in side of the protective sleeve while this firmly lays against the load

### Our tips for safe rotation:

- The lifting belt is located exactly at 12 o'clock in the eye of the coil.
- Only individual, unpacked and clean would may be used.
- A slip-resistant base such as the secutex turning mat can be used.
- Rolling in the coal or slippage in a transverse direction to the lifting belt must be prevented.
- Diagonally "pulling out" a coil is not permitted.



protective sleeve

Step 2:

strap

2 x H [height]

+ 2 x supernatant 25 cm

Determination of the minimum length of the lifting

1.5 x protective sleeve

Protective sleeve

+ 2 x loop length

free

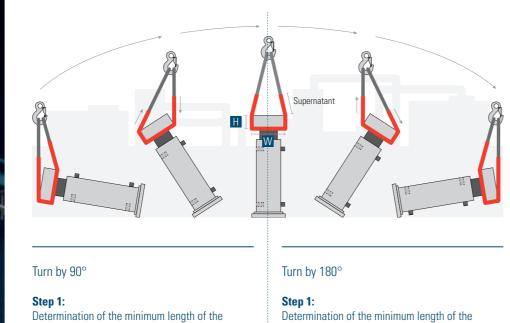
Length of lifting strap

Sheer strap length

(1.5 x protective sleeve)

Length of protective sleeve

+ 2 x W [width]



protective sleeve

- 2 x H [height] + 3 x W [width]
- + 2 x supernatant 25 cm

### Length of protective sleeve

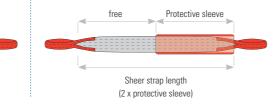
Step 2:

Determination of the minimum length of the lifting strap

2 x protective sleeve

+ 2 x loop length

### Length of lifting strap



i When raising/turning with NoCut sleeves overlap by at least +20% the length of the sleeve.



**01** Do not lift loads without receiving prior training!



**06** Never lift edge radii smaller than 1 mm without having received prior professional consultation Don't take any risks and arrange a consultation appointment with our applications engineers.

### EDGE PROTECTOR RANGE

The 10 commandments of sharp edges for lifting belts and round slings



**02** Carefully plan the lifting procedures using the construction documentation as an aid!



**07** Use coating lifting belts only with mounting hardware when suspending with a chock hitch!



**03** Read the operating manual for textile lifting gear before lifting!



**08** Use the flexible NoCut® sleeve and pad for deflections and narrow gaps!



**04** If the radius of the edge is unknown, this has to be determined using measurement tools!



**O9** Use protective sleeves to balance the lifting gear when lifting sharp-edged loads!



**05** Lifting gear always has to be protected from sharp edges.



**10** Relative motion between the load and the cut protectors is not permitted! Don't take any risks and arrange a consultation appointment with our applications engineers.

i Our recommendation

- Consultation

- Training

### Consultation

# On how SpanSet makes lifting technology safer on a worldwide basis

SpanSet is deployed everywhere where the highest level of quality in the field of lifting technology are set. For every branch and its special requirements, we find the right solution in close cooperation with our customers. In this way, we try to contribute to more safety worldwide on a daily basis.

SpanSet – Certified Safety

### Contact

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Digital business card download

### Training

# Training with attestation of competence in the field of textile lifting technology

# Professional seminar in lifting technology 1, textile

In this seminar, you will learn the economical and proper use of textile lifting gear. As a technical expert, you are qualified to assess the safe and secure condition of lifting straps and round slings according to current rules and regulations.

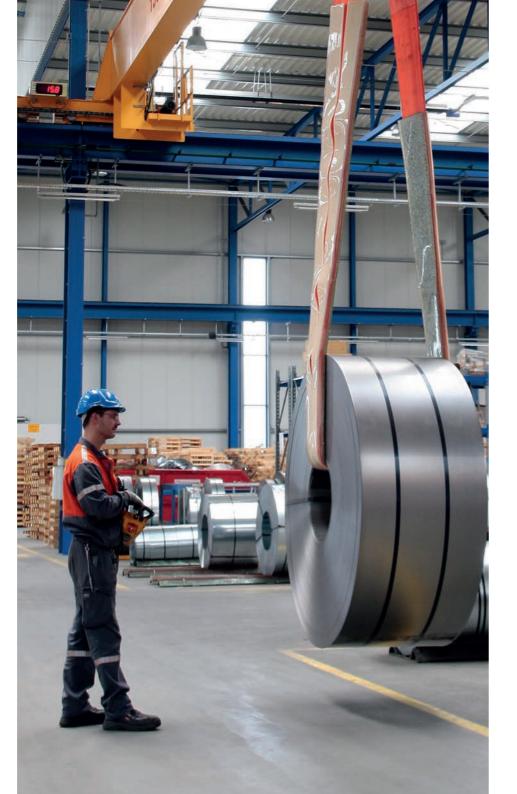
### Contents

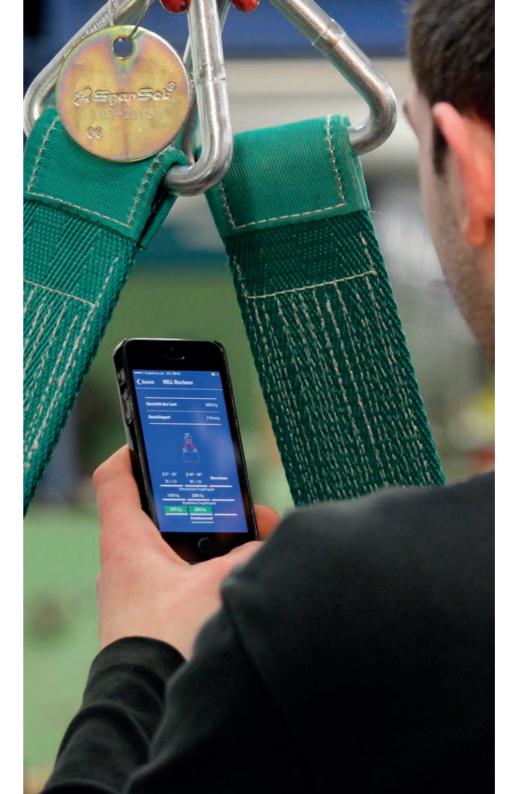
- Textile attachment technology
- Legal foundations
- Product and material information
- Safety technical notes
- Proper use and selection
- Annual auditing according to BGR 500



Other offers on the topic of **seminars** can be found online at the following address:

www.spanset.de, training





### **EDGE PROTECTOR RANGE**

### Accessories

### The new SpanSet app, "Lifting Calculator", determines the necessary load-bearing capacity quickly and accurately.

With the new app, "Lifting Calculator", SpanSet GmbH & Co. KG located in Übach-Palenberg is expanding its extensive portfolio of services offered in the field of attachment and lifting technology. The new is the further development into a digital version of the tried and tested analogue "Lifting Force Controller" and serves to determine the required lifting gear for all occurring tasks for lifting and moving loads. The program is free of charge and available at the AppStore and at GooglePlay.

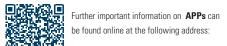
It is quite simple to use. Two parameters have to be input: the weight of the load and the attachment type, e.g. a strand, several strands, with or without an angle, choke hitch, etc. Altogether, with the app, you can select between 14 different attachment types.

Angles can be manually entered if they are known. As an alternative, provided that the strand length as well as the length and width of the load are known, they can also be calculated or measured with the aid of smartphone sensors.

A special feature of the app is its high level of accuracy when calculating and determining

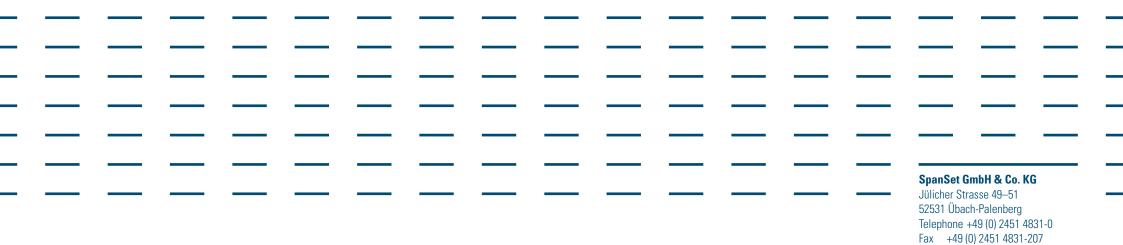
load-bearing capacities based on DIN EN 1492-2 and 1492-1:2009. In this way, not only angles corresponding to the standard can be selected, in the specified ranges of 6 to 45 degrees and 45 to 60 degrees.

This not only contributes to an increased level of safety and security, but can also be of great benefit from an economic perspective because the amount of lifting gear and its load-bearing capacity can be more precisely adapted to the workflow at hand. The load-bearing capacity is displayed as a WLL (Working Load Limit). Followed by this, you can select corresponding SpanSet lifting gear or order it directly on line if required.



www.spanset.de, apps

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