

SpanSet®



SpanSet Webslings User Instructions




CE



**SpanSet
Certified
Safety**

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 This operating manual explains how to use them correctly and safely. Contact your SpanSet dealer or SpanSet application technician if you need further instructions. You can find more information on our lifting, load restraint technology and our services at www.spanset.co.uk The SpanSet group of companies



SpanSet Webslings/Multi-leg slings are designed for commercial use. Do not use the Webslings until you have completely read and understand the operating manual! Also, follow the general rules² for lifting loads. The operating manual must be kept for the entire period of use and passed along with the product.

Non-compliance may cause accidents, injury or even death!



Danger! Failure to comply with this important instruction may lead to improper handling! This may cause accidents, injury or even death.

Please observe the symbols on the foldout pages, which are explained under the numbers below:

1. Webslings/Multi-leg slings must not be used for transporting people and/or animals, because they are not designed for this application!
2. Do not overload webslings/multi-leg slings as this may cause damage or failure.
3. Do not tie knots in webslings/multi-leg slings. This will considerably reduce strength.
4. Do not connect webslings/multi-leg slings to a load if they are twisted. This will considerably reduce strength.
5. Damaged, overloaded or worn webslings/multi-leg slings must immediately be withdrawn from use. Load-bearing capacity is no longer guaranteed.
6. Do not use webslings/multi-leg slings with an angle of inclination of more than 60°. This will overload the webslings/multi-leg slings and lead to failure.
7. Do not understand using webslings in a chain sling. The lifting sling may slide together and the load may fall.
8. Never simply lay webslings/multi-leg slings over the crane hook. The webslings/multi-leg slings may slip and the load may fall.
9. Webslings/multi-leg slings must not be pinched or one on top of another. This will considerably reduce strength.
10. Webslings/Multi-leg slings must not be placed against, slid over or pulled across sharp edges. The lifting sling may be severed and the load may be dropped (see the definition of sharp edge¹).
11. Load hooks must not be loaded on the hook tip. The resultant load will damage the hook and considerably reduce its load capacity.
12. Do not place a load down on webslings/multi-leg slings. Lifting straps/belt strap hangers may become damaged.
13. Load hooks must be used only in such a way as to prevent unintentional disconnection. The load may fall.
14. Metal fittings (such as load hooks) must never be used in acids. This will considerably reduce strength.
15. During lifting, the load must be maintained under control at all times. Swinging or rotating loads may cause damage to buildings or machines or injury to personnel and there could be danger from falling components.
16. Observe local occupational safety regulations and manufacturers' instructions! Following these instructions helps prevent accidents.
17. The opening angle of websling eyes must not exceed 20°. Make sure that the eye length is at least three and a half times as large as the crane hook's bearing surface "d". This may cause damage to the seam of the websling eye.
18. Webslings may take on an electrostatic charge, so their use is forbidden underground and in explosive zones.

Webslings

Preparation
Rescue of Casualties


1. Functional description and application


Webslings/Multi-leg slings are intended for slingers (authorized persons) to use for lifting loads. Webslings/Multi-leg slings must be used as intended. The various SpanSet webslings/Multi-leg slings can be clearly identified by their sewn in label **27** and accompanying documents. All modifications to webslings are forbidden. SpanSet webslings/Multi-leg slings are made of reinforced synthetic fibres (e.g. polyester or polyamide).


Their production is EN ISO 9001 certified.


2. Safety instructions and handling


 Only trained (authorized) persons may undertake lifting operations.


 When choosing and using slings, the weight and mode of use **19 20 21 22 23** must be considered. The weight, geometry, surface condition and design features of the load are crucial criteria for selecting the sling.


 A sling's nominal load capacity can change depending on the connection method. The change in load capacity is shown by the mode factor (M). A sling's nominal load capacity is indicated in the "straight pull" mode. The mode factor (M) for the rest of the connection methods **19 20 21 22 23** can be found in this operating manual.

 Using webslings/multi-leg slings with chemicals is permitted only with manufacturer approval. The required data includes: chemical, concentration, temperature and retention time.

 Before storage and reuse, the user must clean webslings/multi-leg slings that have come into contact with acids, alkalis or other aggressive substances. Ask your SpanSet dealer or SpanSet about cleaning processes.

 When the temperature falls below freezing, ice crystals form in damp webslings/Multi-leg slings and damage the webbing. This can cause loss of strength, so damp webslings must be dried in ventilated areas before reuse.

 Webslings made of polyester (PES) have a blue label, and webslings of polyamide (PA) have a green label. It is safe to use polyester and polyamide webslings within a temperature range of -40°C to +100°C. Webslings made of polypropylene (PP) have a brown label and can be safely used within a range from -40°C to +80°C.

 Never use webslings/multi-leg slings with illegible or missing labels, because missing safety instructions can lead to improper use.

Always lift and lower in a smooth manner. Sudden movement creates forces that cannot be controlled. The webslings/multi-leg slings may tear or become damaged.


If there are people in the danger zone, they must be warned that a lifting process is being performed and, if necessary, they must be removed from the area of immediate danger. It is prohibited for anyone to be under a suspended load!


Hands and body parts must be kept away from the slings in order to prevent injury if the slings tighten.

Plan the load's connection, lifting and lowering process with the greatest of care before the actual lifting process. Reckless connection can damage the load or endanger employees' life and health!

When lifting sharp-edged loads, protect webslings/multi-leg slings with protection sleeves (e.g. secutex protection sleeves or NoCut®).

 For net weight of 25 kg and above, ergonomic handling of webslings/multi-leg slings requires ancillary equipment, such as pulleys.

 Note that UV radiation (sunlight) may impair the properties of the sling.

 Use webslings/multi-leg slings so that they may be removed without damage after the lifting process.

3. Operating webslings/multi-leg slings

3.1 First use

Before first use, the user must inspect the webslings/multi-leg slings for compliance with the order, completeness of accompanying documents (e.g. declaration of conformity and manufacturer certificate) and conformance of the data in the accompanying documents with the product labels. Upon first use, an authorized person must make a visual check and document it according to LOLER. For this, a chart can be created or an inspection card filled out and saved. Equipping products with RFID tags and electronic documentation of commissioning, such as with IDXpert® (database), speeds up and simplifies this process.

3.2 Selecting the right webslings/multi-leg slings

Determine the load's weight by weighing or calculation! Find out the position of the load's centre of gravity from design documents or calculate it! The crane hook must be positioned perpendicularly to the load's centre of gravity, and the length and angle of the webslings must be determined.


20 21 Common attachment methods for webslings:


- a) direct straight
- b) choked


- c) straight basket
- d) inclined basket


22 Common attachment methods for using webslings in pairs


- a) direct **23**
- b) choked

 If more than one lifting sling is used for the lifting process, they must all be identical.

 Uneven elongation of the webslings poses a danger of tilting the load.

 With symmetrical load distribution, equal sling lengths and equal angles according to LOLER for a 4-leg sling, only three legs are considered to bear load.

 With asymmetrical load distribution and/or unequal angles, with 2-leg slings, only one leg can be considered load-bearing, and with 3 or 4-leg slings, only two legs can be considered load-bearing.

 If lifting slings are used in pairs, use of a spread beam is recommended, so that the load is distributed evenly **23**

3.3 VarioWeb websling shortener


VarioWeb offers continuous length adjustment of websling. For this, VarioWeb is easily integrated into the websling individual straps. Then the length of the sling can be adjusted to the load and its special geometry.

- 24 1. Flip the buckle rightward to release the webbing
2. Adjust the websling by sliding lengthwise

3. Flip the buckle to the left
4. Thread the websling into the guide slot, and you're done!

3.4 Choosing the nominal load capacity

The lifting straps' nominal load capacity must be greater than or equal to the load's mass. When choosing the webslings, pay attention to which attachment method method and the angle at which the lifting process is to take place, because this affects the useful load capacity of the lifting sling. The lifting sling must lie completely on the load suspension device (e.g. crane hook) and on the load.

 Attention: Too tight a bearing point (pinching) decreases lifting slings load capacity.

3.5 Arranging the load

Place the lifting sling on the load in such a way that it cannot slip along or even off the load during the lifting process. Make sure the lifting sling does not twist or intersect with the load. Use adequate edge protection for coarse and/or sharp-edged loads¹. Make sure that the attachment point of the load to the lifting sling can take the force introduced during lifting.

4 Inspection, maintenance, repair and disposal

Webslings/multi-leg slings must be checked for defects before

each use. If you detect defects, the webslings/multi-leg slings must be withdrawn from use. An authorized person must perform the check according to the employer's specified inspection interval, but at least in the UK, twice per year. Depending on the usage and operational conditions, interim inspections may also be necessary. The inspections must be documented according to LOLER. Additionally, all metallic fittings must undergo crack inspection at least once every three years. The inspection must be done according to EN 10228 Part 1 (Magnetic powder testing - "fluxes") or Part 2 (Penetration Test).

Speed up and simplify documentation of sling inspections. With IDXpert®,  SpanSet offers the right software and hardware. You can find more information at our homepage: www.spanset.co.uk

Webslings

Preparation Rescue of Casualties

Webslings/multi-leg sling can be repaired if, for example:

- the label is missing but the manufacturer is known,
- a replaceable fitting is damaged,
- the eye reinforcement is damaged,
- or only the protective sleeve is damaged.

Repairs can be made only by the manufacturer or a manufacturer authorized person.

Webslings/multi-leg sling should be withdrawn from use if, for example:

- the label is missing and the manufacturer is unknown,
- the webbing has been damaged by acid or alkali.
- the fabric has been damaged by the effects of heat (such as weld splatters),
- or non-replaceable fittings have been distorted by overload or wear (bending, cutting, ground areas on the bearing surface, etc.).

Especially if fittings show incipient cracks, lateral cracks, notches, breakage or corrosion, the affected slings must be removed from use. Never take a risk! Webslings/multi-leg slings can be disposed of with household waste as long as the webbing has not been contaminated with oils, raw materials, etc. If the webbing has been contaminated by chemicals, the webslings/multi-leg slings must be disposed of as special waste. The metal fittings can be sent for recycling.

5 Storage and cleaning

Maintenance and proper storage prolong the quality and functionality of SpanSet webslings/multi-leg slings. Therefore, inspect the webslings/multi-leg slings after each use! Damaged Webslings/multi-leg slings must be removed from use or repaired, and soiled webslings/multi-leg slings must be cleaned before they are put into storage (see 2 Safety instructions and handling). Keep the webslings/multi-leg slings clean, dry and well ventilated, and protect them from direct sunlight and the effects of chemicals.

6 Training and important things to know

SpanSet webslings/multi-leg slings fully meet the requirements of LOLER, 1492-2, EC machine guideline 2006/42/EC, as well as ZH 1/324 and BGI 556. Please note that the standards and guidelines listed are only examples. Please be aware that specific industries and applications may have special safety requirements that must be complied with. When using textile slings, observe regional occupational safety regulations, such as the regulations of the local professional bodies. You can get more information and access sources for the regulations from your SpanSet dealer or directly from SpanSet.

Glossary:

 EN Language: English



Please read the operating manual and follow the warnings and safety instructions.



Attention: Special caution and attention!

 Forbidden!

 Information: Handling instructions.

Get the benefits of SpanSet training for your employees. Our safety training centre regularly offers training in lifting, load safety and work at height technology. Naturally, we also train on site. Ask us, or visit the training website: www.spanset.co.uk/training

Benefit from the expertise of SpanSet specialists in preparing, configuring, certification, risk assessment, hazard analysis and operating manuals. You can find more information on our services at our homepage.

25 Technical data - Lifting sling types without metal

26 Technical data - Lifting sling types with metal

A¹ - ²Permissible WLL

B - ³Item description/type

C - Working length

D - Colour

E - ⁴Safety factor (SF)

F - Material

G - Between 1.0 - 3.5 metres, depending on WLL

h - open

WV1 - 1-leg sling with variable length setting

WV2 - 2-leg sling with variable length setting

WV4 - 4-leg sling with variable length setting

The manufacturer certificate per EN 1492-1 and EN 1492-2 is a part of this user manual. The relevant text passages are in a grey field.

EC Declaration of Conformity

pursuant to Appendix II Part A of EC Machine Directive 2006/42/EC
SpanSet GmbH & Co. KG • Jülicher Straße 49-51 • D - 52531 Übach-Palenberg

We hereby declare that the lifting sling described below, in the version we have marketed, conforms in its design and construction to the fundamental safety and health requirements of the EC Machine Directive. Any unapproved modification of the lifting straps voids this declaration. The lifting sling must be used only for the purposes described in the operating manual.

Description of Machine:	Lifting sling
Type:	See lifting sling statement below 25 26
Function:	Load Suspension device
Serial No:	All serial numbers under the type description
Production year:	Starting in 2013
Applicable EC directives:	Machine Directive 2006/42/EC, Electronic compatibility RL 2004/108/EC

Harmonized European standards applied

DIN EN ISO 12100, DIN EN ISO 13857

National standards and technical specifications applied

DIN EN 1492-1, DIN EN 1677-1, DIN EN 1677-2, DIN EN 1677-3, DIN EN 1677-4

Person(s) responsible for compiling the technical documentation

SpanSet GmbH & Co. KG (CE Representative)

Übach-Palenberg

15.07.2013



(Location, Date)	Hans-Josef Neunfinger CEO	Patrick Schulte CEO
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03 Lifting

SpanSet Webslings User Instructions

25 A [kg]								C		D	E	F
								l1 min. (m)	l1 max. (m)			
500		HB 500	PA 500								1.7	PES
1000		HB1000	PA 1000	PB 1000 STAR			PD 1000				1.7	PES
1500		HB 1500									1.7	PES
2000	HCS 2000	HB 2000	PA 2000	PB 2000 STAR	PC 2000	PCS 2000	PD 2000				1.7	PES
2500			PA 2500								1.7	PES
3000		HB 3000	PA 3000	PB 3000 STAR			PD 3				1.7	PES
4000	HCS 4000	HB 4000	PA 4000	PB 4000 STAR	PC 4000	PCS 4000	PD 4000				1.7	PES
5000		HB 5000	PA 5000	PB 5000 STAR			PD 5000				1.7	PES
6000	HCS 6000	HB 6000		PB 6000 STAR	PC 6000	PCS 6000					1.7	PES
8000	HCS 8000	HB 8000		PB 8000 STAR	PC 8000	PCS 8000					1.7	PES
10.000	HCS 10.000	HB 10.000		PB 10.000 STAR	PC 10.000	PCS 10.000					1.7	PES
12.000	HCS 12.000					PCS 12.000					1.7	PES
16.000	HCS 16.000					PCS 16.000					1.7	PES
20.000	HCS 20.000					PCS 20.000					1.7	PES

Lifting slings with specific fittings are also produced in compliance with DIN EN1492-1

26	A		B										C		D	E	F	
	A2	A3											ll	ll				
[kg]	[kg]	[kg]											[m]	min.	max.	[m]		
																		
1000			HB 1000 D1D1	HB 1000 D1D2	PB 1000 STAR DD	PB 1000 STAR D1D1	PB 1000 STAR D1D2						VW-1-1000 LS	G	H	1-4	PFS/Metall	
1000													VW-1-1000 ASH			1-4	PFS/Metall	
1400	1400	1400											VW-2-1400 LS			1-4	PFS/Metall	
1400	1400	1400											VW-2-1400 ASH			1-4	PFS/Metall	
1500			HB 1500 D1D1	HB 1500 D1D2												1-4	PFS/Metall	
2000			HB 2000 D1D1	HB 2000 D1D2	PB 2000 STAR DD	PB 2000 STAR D1D1	PB 2000 STAR D1D2	PCS 2000 DD					VW-1-2000 LS			1-4	PFS/Metall	
2000													VW-1-2000 ASH			1-4	PFS/Metall	
2100	2100	2100												VW-4-2100 LS		1-4	PFS/Metall	
2100	2100	2100												VW-4-2100 ASH		1-4	PFS/Metall	
2800	2800	2800														1-4	PFS/Metall	
2800	2800	2800											VW-2-2800 LS			1-4	PFS/Metall	
3000			HB 3000 D1D1	HB 3000 D1D2	PB 3000 STAR DD	PB 3000 STAR D1D1	PB 3000 STAR D1D2									1-4	PFS/Metall	
4000			HB 4000 D1D1	HB 4000 D1D2	PB 4000 STAR DD	PB 4000 STAR D1D1	PB 4000 STAR D1D2	PCS 4000 DD								1-4	PFS/Metall	
4200	4200	4200												VW-4-4200		1-4	PFS/Metall	
4200	4200	4200												VW-4-4200 ASH		1-4	PFS/Metall	
5000			HB 5000 D1D1	HB 5000 D1D2	PB 5000 STAR DD	PB 5000 STAR D1D1	PB 5000 STAR D1D2									1-4	PFS/Metall	
6000			HB 6000 D1D1	HB 6000 D1D2	PB 6000 STAR DD	PB 6000 STAR D1D1	PB 6000 STAR D1D2	PCS 6000 DD								1-4	PFS/Metall	
8000			HB 8000 D1D1	HB 8000 D1D2	PB 8000 STAR DD	PB 8000 STAR D1D1	PB 8000 STAR D1D2	PCS 8000 DD								1-4	PFS/Metall	
10000			HB 10 000 D1D1	HB 10 000 D1D2	PB 10 000 STAR DD	PB 10 000 STAR D1D1	PB 10 000 STAR D1D2	PCS 10 000 DD								1-4	PFS/Metall	
12000								PCS 12 000 DD								1-4	PFS/Metall	
16000								PCS 16 000 DD								1-4	PFS/Metall	
20000								PCS 20 000 DD								1-4	PFS/Metall	



1



10



2



11



3



12



4



13



5



13



6



14



7



15



8



17



9



18

20	a	b	c
	*M 1,0	*M 0,8	*M 2,0

21	d
	0°-45°
	*M 1,4
	45°-60°
	*M 1,0

22	a	b
	0°-45°	0°-45°
	*M 1,4	*M 1,12
	45°-60°	45°-60°
	*M 1,0	*M 0,8

19	1	2	3	4
	-	0°-45°	45°-60°	0°-45°
	*M 1	*M 1,4	*M 1	*M 2,1
				45°-60°
				*M 1,5
				*M 2,1
				*M 1,5



16

19	4
	0°-45°
	*M 1,4
	45°-60°
	*M 1,0

