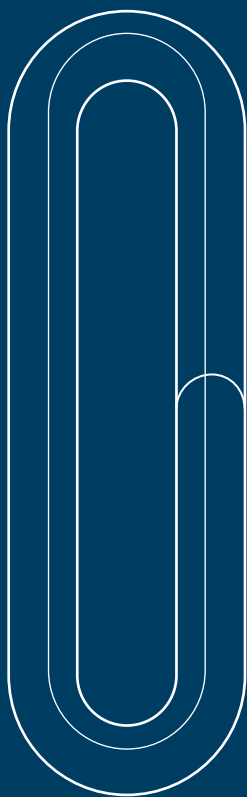


SpanSet®



SpanSet Roundsling User Instructions


CE



**SpanSet
Certified
Safety**

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



SpanSet roundslings/multi-leg slings are designed for commercial use. Do not use the roundslings until you have completely read and understand the operating manual! Also, follow the general rules¹ 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. Roundslings/multi-leg slings must not be used transporting people and/or animals, because they are not designed for this application!
2. Do not overload roundslings/multi-leg slings as this may cause damage or failure.
3. Do not tie knots in roundslings/multi-leg slings. This will considerably reduce strength.
4. Do not connect roundslings/multi-leg slings to a load if they are twisted. This will considerably

reduce strength.

5. Damaged, overloaded or worn roundslings/multi-leg slings hangers must immediately be withdrawn from use. Load-bearing capacity is no longer guaranteed.
6. Do not use roundslings/multi-leg slings with an angle of inclination of more than 60°. This will overload the roundslings/multi-leg slings and lead to failure.
7. Do not understand using roundslings in a chain sling? The roundslings may slip together and the load may fall.
8. Never simply lay roundslings/multi-leg slings over the crane hook. The roundslings/roundsling hangers may slip and the load may fall.
9. Roundslings/multi-leg slings must not be pinched or lie one on top of another. This will considerably reduce strength.
10. Roundslings/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 edge²).
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 roundslings. Roundslings/multi-leg slings 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. Roundslings may take on an electrostatic charge, so their use is forbidden underground and in explosive zones.

¹Also see "Training and important things to know"

²A "sharp edge" means when the radius "r" of the transported goods' edge is smaller than or equal to the thickness "d" of the lifting sling or roundsling.

Roundsling


1 Functional description and application


Roundslings/multi-leg slings are intended for slingers (authorized persons) to use for lifting loads. Roundslings/multi-leg slings must be used as intended. The various SpanSet roundslings/multi-leg slings can be clearly identified by their sewn in label 26 and accompanying documents. All modifications to round slings are forbidden. SpanSet Roundslings/Multi-Leg Slings are made of reinforced synthetic fibres (e.g. polyester, polyamide or polypropylene).


Their production is EN ISO 9001 certified.

2 Safety instructions and handling


Only trained (authorized) 2 persons may undertake lifting operations.


 When choosing and using slings, the weight and mode of use must be considered **18 20 21 22 23**. 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 mode of use. The change in load capacity is shown by the mode factor (M). A sling's nominal load capacity is indicated in the "simple direct" mode of use. The mode factor (M) for the rest of the mode of use **18 20 21 22 23** can be found in this operating manual.


 Using roundslings/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 roundslings/multi-leg slings that have come into contact with acids, alkalis or other aggressive substances. Ask your SpanSet dealer or SpanSet itself about cleaning processes.


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


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


 Never use roundslings/multi-leg slings with illegible or missing labels, because missing safety instructions can lead to improper use. To prevent the product label from being damaged or torn out (e.g. label and transponder), the choke hitch must not be placed in the label area, and the label must not lie on the load or in the crane hook.


 Always lift and lower in a smooth manner. Sudden movement creates forces that cannot be controlled. The roundslings/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 the roundsling or endanger employees' life and health!

 For shortening, the roundslings can be laid around a crane hook **19**

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

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

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

 Use roundslings so that the they may be removed without damage after the lifting process.

3 Operating roundslings/multi-leg slings

3.1 First use

Before first use, the user must inspect the roundslings/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 roundslings/ 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 roundslings must be determined.

20/21 Common attachment methods for roundslings:

- a) direct straight
- b) choked
- c) Straight basket
- d) Inclined basket

22 Common attachment methods for using roundslings 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 roundslings

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 3 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 2 legs can be considered load-bearing.

If roundslings are used in pairs, use of a spreader beam is recommended, so that the load is distributed evenly **23**.

3.3 Choosing the nominal load capacity

The roundslings' nominal load capacity must be greater than or equal to the load's mass. When choosing the round slings, pay attention to which attachment 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 roundslings' load capacity.

3.4 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 protection¹ for coarse and/or sharp-edged loads. The attachment point of the load to the lifting sling can take the force introduced during lifting.

4 Inspection, maintenance, repair and disposal

Roundslings/multi-leg slings must be checked for defects before each use. If you detect defects, the round slings/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 UK only, 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

Roundslings/multi-leg slings can be repaired, for example, if:

- the label is missing and the manufacturer is known,
- a replaceable fitting is damaged,
- or only the outer sleeve is damaged.

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

Roundslings/multi-leg slings should be withdrawn from use if, for example:

- the label is missing and the manufacturer is unknown,

Roundsling

- the roundsling's load-bearing core encased by the outer sleeve is damaged,
- the fabric has been damaged by acid or alkali.
- the outer sleeve has been damaged by the effects of heat (such as weld splatter),
- 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! Roundslings/multi-leg slings can be disposed of with household waste as long as the fabric has not been contaminated with oils, raw materials, etc. If the fabric has been contaminated by chemicals, the roundslings/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 roundslings/multi-leg slings. Therefore, inspect the round slings/multi-leg slings after each use! Damaged roundslings/multi-leg slings must be removed from use or repaired, and soiled roundslings/multi-leg slings must be cleaned before they are put into storage (see 2 Safety instructions and handling). Keep the roundslings/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 roundslings/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 Page DE 19 EN 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. We train on site dependant on suitable location. 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.

 ²⁴ Technical data, roundslings with metal fittings

 ²⁵ Technical data, roundslings.

A - ¹Permissible WLL

A2 - ¹Permissible WLL (kg) to 45°

A3 - ¹Permissible WLL (kg) to 60°

B - ²Item description/type

C - Working length

D - Colour

E - ³Safety factor (SF)

F - Material

Please note: The max. l1 of EK slings is 60 m.

⁶ ¹ WLL = working load limit = max. permissible load capacity.

³ SF = relationship between permissible load capacity and minimum breaking strength.

² RSG = roundslings/multi-leg slings with 1, 2 and 4 load-bearing legs

⁴ LS or GSH = alternative fittings (product types).

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 roundslings 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 roundslings voids this declaration. The roundslings must be used only for the purposes described in the operating manual.

Description of Machine:	Roundsling
Type:	See roundsling statement below 24 25
Function:	Load Suspension device
Serial No:	All serial numbers under the type description
Production year:	Starting in 2013
	Machine Directive 2006/42/EC,
Applicable EC directives:	Electromagnetic compatability 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

Hans-Josef Neunfinger

(Location, Date)

CEO














Patrick Schulte

CEO

02 Lifting

SpanSet Roundsling User Instructions

25 A [kg]					C		D	E	F
					l1 min. (m)	l1 max. (m)			
500	SupraPlus 500			E 500	0,375	30		1.7	PES
1000	SupraPlus 1000	Twintex 1000		E 1000	0,375	30		1.7	PES
2000	SupraPlus 2000	Twintex 2000		E 2000	0,375	30		1.7	PES
3000	SupraPlus 3000	Twintex 3000		E 3000	0,375	30		1.7	PES
4000	SupraPlus 4000	Twintex 4000		E 4000	0,5	30		1.7	PES
5000	SupraPlus 5000	Twintex 5000		E 5000	0,5	30		1.7	PES
6000	SupraPlus 6000	Twintex 6000		E 6000	1	30		1.7	PES
8000	SupraPlus 8000	Twintex 8000		E 8000	1	30		1.7	PES
10.000			MagnumPlus 10.000	E 10.000	1	60		1.7	PES
15.000			MagnumPlus 15.000	E 15.000	1	60		1.7	PES
20.000			MagnumPlus 20.000	E 20.000	1	60		1.7	PES
25.000			MagnumPlus 25.000	E 25.000	1	60		1.7	PES
30.000			MagnumPlus 30.000	E 30.000	1	60		1.7	PES
40.000			MagnumPlus 40.000	E 40.000	3	60		1.7	PES
50.000			MagnumPlus 50.000	E 50.000	3	60		1.7	PES
60.000			MagnumPlus 60.000	E 60.000	3	30		1.7	PES
80.000			MagnumPlus 80.000	E 80.000	3	30		1.7	PES
100.000			MagnumPlus 100.000	E 100.000	3	30		1.7	PES
120.000			MagnumPlus 120.000	E 120.000	3,5	30		1.7	PES
150.000			MagnumPlus 150.000	E 150.000	3,5	30		1.7	PES
200.000			MagnumPlus 200.000	E 200.000	3,5	30		1.5	PES

A1 24	A2	A3	B		GSH		LS		LS		GSH		LS		GSH	C		D	E	F
[kg]			LS			LS			LS				LS			l1 rdn. [m]	l1 max. [m]			
1000			RSG-1-1000 LS			RSG-1-1000 GSH			RSG-2-1400 LS		RSG-2-1400 GSH					0,375	10		1-4	PES/Metal
1400	1400	1000											RSG-4-2100 LS			0,375	10		1-4	PES/Metal
2100	2100	1500														0,375	10		1-4	PES/Metal
2000			RSG-1-2000 LS			RSG-1-2000 GSH			RSG-2-2800 LS		RSG-2-2800 GSH					0,375	10		1-4	PES/Metal
2800	2800	2000														0,375	10		1-4	PES/Metal
4200	4200	3000											RSG-4-4200 LS			0,375	10		1-4	PES/Metal
3000			RSG-1-3000 LS			RSG-1-3000 GSH			RSG-2-4200 LS		RSG-2-4200 GSH					0,375	20		1-4	PES/Metal
4200	4200	3000														0,375	20		1-4	PES/Metal
6300	6300	4500							RSG-2-4200 LS				RSG-4-6300 LS			0,375	20		1-4	PES/Metal
4000			RSG-1-4000 LS			RSG-1-4000 GSH			RSG-2-5600 LS		RSG-2-5600 GSH					0,375	20		1-4	PES/Metal
5600	5600	4000											RSG-4-8400 LS			0,375	20		1-4	PES/Metal
8400	8400	6000														0,375	20		1-4	PES/Metal
5000			RSG-1-5000 LS			RSG-1-5000 GSH										0,375	20		1-4	PES/Metal
7000	7000	5000							RSG-2-7000 LS		RSG-2-7000 GSH					0,375	20		1-4	PES/Metal
10.500	10.500	7500											RSG-4-10500 LS			0,375	20		1-4	PES/Metal
6000			RSG-1-6000 LS													1	20		1-4	PES/Metal
8400	8400	6000							RSG-2-8400 LS							1	20		1-4	PES/Metal
12.600	12.600	9000											RSG-4-12600 LS			1	20		1-4	PES/Metal
8000			RSG-1-8000 LS													1	20		1-4	PES/Metal
11.200	11.200	8000							RSG-2-11200 LS							1	20		1-4	PES/Metal
16.800	16.800	12.000											RSG-4-16800 LS			1	20		1-4	PES/Metal
10.000			RSG-1-10000 LS													2,5	50		1-4	PES/Metal
14.000	14.000	10.000							RSG-2-14000 LS							2,5	50		1-4	PES/Metal
21.000	21.000	15.000											RSG-4-21000 LS			2,5	50		1-4	PES/Metal
15.000			RSG-1-15000 LS													2,5	50		1-4	PES/Metal
21.000	21.000	15.000							RSG-2-21000 LS							2,5	50		1-4	PES/Metal
31.500	31.500	22.500											RSG-4-31500 LS			2,5	50		1-4	PES/Metal
20.000			RSG-1-20000 LS													2,5	50		1-4	PES/Metal
28.000	28.000	20.000							RSG-2-28000 LS							2,5	50		1-4	PES/Metal
42.000	42.000	30.000											RSG-4-42000 LS			2,5	50		1-4	PES/Metal
25.000			RSG-1-25000 LS													2,5	50		1-4	PES/Metal
35.000	35.000	25.000							RSG-2-35000 LS							2,5	50		1-4	PES/Metal
52.500	52.500	37.500											RSG-4-52500 LS			2,5	50		1-4	PES/Metal
30.000			RSG-1-30000 LS													2,5	50		1-4	PES/Metal
42.000	42.000	30.000														2,5	50		1-4	PES/Metal
63.000	63.000	45.000							RSG-2-42000 LS				RSG-4-63000 LS			2,5	50		1-4	PES/Metal

DE Rundschlingern über 40t WLL in Anlehnung an DIN EN 1492-2

ES Correas portadoras redondas para más de 40t WLL en cumplimiento con la norma DIN EN 1492-2

NL Rondstropen hoger dan 40t WLL volgens de bepalingen van DIN N 1492-2

EN Round slings with a WLL over 40t comply with DIN EN 1492-2

FR Rundschlingern über 40t WLL in Anlehnung an DIN EN 1492-2

IT Rfanti ad anello con portata oltre 40t WLL in conformità con la norma DIN EN 1492-2



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17



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16

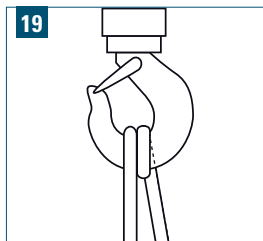
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21	d
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	45°-60° *M 1,0

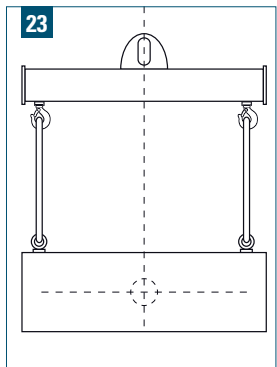
22	a	b
	0°-45° *M 1,4	0°-45° *M 1,12
	45°-60° *M 1,0	45°-60° *M 0,8

18	1	2	3	4
	-	0°-45° *M 1,4	45°-60° *M 1	0°-45° *M 2,1
	*M 1	*M 1,4	*M 1	*M 2,1

18	4
	0°-45° *M 1,4
	45°-60° *M 1,0



19



23

