



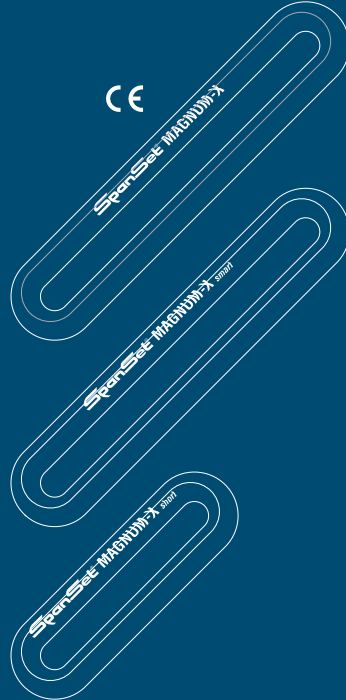
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SpanSet®

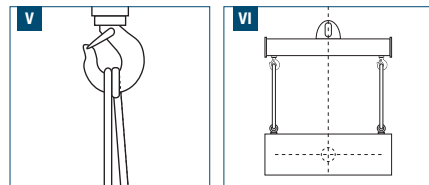
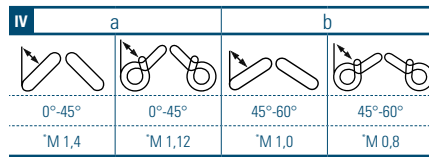
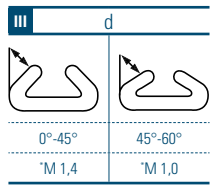
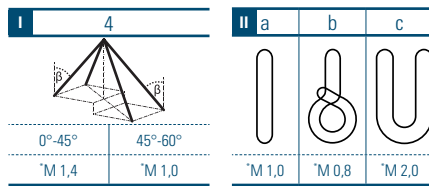
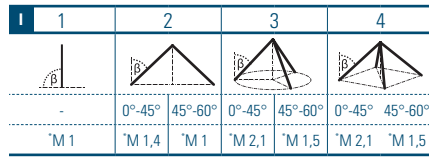


EN

**SpanSet
Certified
Safety**

EN

**Operation Manual Magnum-X
In compliance with EN1492-2**



SpanSet D030918 **MAGNUM-X 10.000**

WLL 10 t L1 [m]: 5,00 Datum: 2014 PES/LCP

in Anlehnung an DIN EN 1492-2

10 t 20 t 8,0 t 14,00 t 10 t

12-1305526-001-00004

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VIII A [kg]	B	C		D	E	F
		**L1 min. [m]	L1 max. [m]			
5.000	Magnum-x 5.000	2	30		1:7	PES/LCP
10.000	Magnum-x 10.000	2	30		1:7	PES/LCP
15.000	Magnum-x 15.000	2	30		1:7	PES/LCP
20.000	Magnum-x 20.000	2	30		1:7	PES/LCP
25.000	Magnum-x 25.000	2	30		1:7	PES/LCP
30.000	Magnum-x 30.000	2	30		1:7	PES/LCP
40.000	Magnum-x 40.000	3	30		1:7	PES/LCP
50.000	Magnum-x 50.000	3	30		1:7	PES/LCP
60.000	Magnum-x 60.000	3	30		1:7	PES/LCP
80.000	Magnum-x 80.000	3	30		1:7	PES/LCP
100.000	Magnum-x 100.000	3	30		1:7	PES/LCP
120.000	Magnum-x 120.000	3	30		1:7	PES/LCP
150.000	Magnum-x 150.000	3	30		1:7	PES/LCP
200.000	Magnum-x 200.000	3	30		1:7	PES/LCP
250.000	Magnum-x 250.000	3	30		1:7	PES/LCP
300.000	Magnum-x 300.000	3	30		1:7	PES/LCP

EN *For short slings, the L1** length is min. 1.0 m and max. 2.5 m.

** Working length





Dear SpanSet customer, Thank you for purchasing SpanSet Magnum-X. You have chosen a quality product that will last a long time when used as intended. 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.de. The SpanSet group of companies



SpanSet Magnum-X round sling are designed for commercial use. Do not use the Magnum-X round sling 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** Magnum-X round slings must not be used when transporting people and/or animals, because they are not designed for this application!
- 2** Do not overload Magnum-X round slings, because they may become damaged or break!
- 3** Do not tie knots in Magnum-X round slings. This will considerably reduce strength.
- 4** Do not fasten Magnum-X round slings to a load if they are twisted. This will considerably reduce strength.
- 5** Damaged, overloaded or worn Magnum-X round slings must immediately be removed from use. Load-bearing capacity is no longer guaranteed.
- 6** Do not use Magnum-X round slings with a tilt angle of more than 60°. This will overload the Magnum-X round slings and break them.
- 7** Do not use the Magnum-X round sling in a chain sling. The Magnum-

¹ Also see "Training and important things to know"

X round sling may slide together and the load may fall.

- 8** Never simply lay Magnum-X round slings over the crane hook. The Magnum-X round slings may slide and the load may fall.
- 9** Magnum-X round slings must not be pinched or lie one above another. This will considerably reduce strength.
- 10** Magnum-X round slings must not be placed against sharp edges, slide over them and/or be pulled across them. The Magnum-X round sling may be severed and the load may fall down (see the definition of sharp edge¹).
- 11** Magnum-X round slings have considerably less working elongation than conventional polyester round slings. Jerky lifting and lowering of the load are therefore prohibited, because force peaks can overload and break the round slings.
- 12** During lifting, the load should never get out of control. Swinging or rotating loads may hurt buildings, machines or people, and components may fall.
- 13** Magnum-X round sling may take on an electrostatic charge, so their use is forbidden underground and in explosive zones.
- 14** Continuous load.

Table of Contents

- 1 Functional description and application
- 2 Safety instructions and handling
- 3 Operating Magnum-X round slings
- 4 Inspection, maintenance, repair and end of use
- 5 Storage and cleaning
- 6 Training and important things to know

1 Functional description and application


Magnum-X round slings are intended for slingers (authorized persons) to use for lifting loads. Magnum-X round slings must be used as intended. The various SpanSet Magnum-X round slings can be clearly identified by their sewn label **VII**² and accompanying documents. All modifications to


1 "sharp edge" means when the radius "r" of the transported goods' edge is smaller than or equal to the thickness "d" of the lifting strap or round sling


2 Étiquette exemplaire


Magnum-X round sling are forbidden. SpanSet Magnum-X round slings are made of reinforced synthetic fibres (e.g. polyester or polyamide). Their production is DIN EN ISO 9001 certified.

2 Safety instructions and handling


 Avoid folding the sling at the anchor point (e.g. crane hook or fitting) as this may lead to loss of strength and premature wear **15**.

 It is prohibited to use the working load limit sleeve as a protective solution or in contact with sharp edges **16**!


 After each lifting operation, the round sling must be repositioned in both the anchor point and crane hook. Changing contact point increases service life and safety because tension is applied to the sling evenly.

 Only trained (authorized) persons may fasten loads.


 When choosing and using slings, the weight and fastening method **I II III IV V VI** must be considered. The weight, geometry, surface condition and design features of the load are crucial criteria for choosing the sling.


 A sling's nominal load capacity can change depending on the fastening method. The change in load capacity is shown by the load fastening factor (M). A sling's nominal load capacity is indicated in the "simple direct" fastening method. The load fastening factor (M) for the rest of the fastening methods **I II III IV VI** can be found in this operating manual.


 Using Magnum-X round slings hangers with chemicals is permitted only with manufacturer approval. The necessary data include: chemical, concentration, temperature and retention time.


 If contact with chemicals cannot be avoided when using Magnum-X round slings, SpanSet offers a residual strength test for an extra fee


for the operator's hazard analysis. Here, the chemical, dwell time, temperature and concentration, among other things are to be specified. Span-Set reserves the right to refuse the residual strength test if examiners are endangered or testing machines are contaminated.


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

 Magnum-X round slings are marked as PES round slings with a blue label. It is safe to use Magnum-X round slings within a temperature range of -40°C to $+100^{\circ}\text{C}$.






 Never use Magnum-X round 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 chock hitch must not be placed in the label area, and the label must not lie on the load or in the crane hook.

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

 Magnum-X round slings may stain and/or leak silicone oil, so sensitive goods must be protected .

-  For shortening, the round slings can be laid around a crane hook.
-  When lifting sharp-edged loads, protect Magnum-X round slings with safety tubes (e.g. secutex safety tubes or NoCut®).
-  For net weight of 25 kg and above, ergonomic handling of Magnum-X round slings requires technical equipment, such as pulleys.
-  Note that UV radiation (sunlight) may impair the properties of the sling.
-  Use Magnum-X round slings so that the latter may be removed without damage after the lifting process.

2.2 Material

Magnum-X round slings are textile slings made of liquid crystalline polymers (LCP) and polyesters (PES) based on EN 1492-2. The round slings consist of a load-bearing LCP core and a tube mesh made of PES and LCP to protect the load

3 Operating Magnum-X round slings

3.1 First use

Before first use, the user must inspect the Magnum-X round 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. Before each use, manual (e.g. feel for hardening) and visual (e.g. screening for punctures) inspection of the X-Magnum round sling should be performed over its entire length. Damaged round slings should be withdrawn from service (see 4. Inspection, care, repair & decommissioning) 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 speeds up and simplifies the routine described.

3.2 Choosing the right Magnum-X round slings hangers

Determine the load's weight by weighing or calculation! Find out the po-

sition 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 Magnum-X round slings must be determined.

II III Common fastening methods for Magnum-X round slings:

- a) direct
- b) simple threading
- c) simple hooked on without an inclination angle
- d) simply hooked on with an inclination angle

IV Common fastening methods for using Magnum-X round slings in pairs

- a) direct **VI**
- b) threaded

For low lifting heights and/or tight spaces, Magnum-X short³ round slings are used. With usable lengths of 1.0, 1.5 and 2.0 this short model rounds out the range for load capacities of 10, 20 and 30 tons.



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



Uneven stretching of the Magnum-X round slings poses a danger of tilting the load.



With symmetrical load distribution, equal strap lengths and equal angles according to BGR 500 for a 4-strap hanger, only three slings are considered to bear load.



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



If Magnum-X round slings are used in pairs, use of a cross member is recommended, so that the load is distributed evenly **VI**.

3.3 Choosing the nominal load capacity

The Magnum-X round slings' nominal load capacity must be greater than or equal to the load's mass. When choosing the slings, pay attention to which fastening method and with what tilt angle the lifting process is to take place, because this affects the useful load capacity of the sling. The sling must lie completely on the load suspension device (e.g. crane hook) and on the load.



Attention: Too strong a lateral enclosure (pinching) decreases Magnum-X round slings' load capacity.

3.4 Arranging the load

Place the sling on the load in such a way that it cannot slide on the load or even off the load during the lifting process. Make sure the lifting strap does not twist or intersect with the load. Use adequate edge protection for coarse and/or sharp-edged loads. Make sure that the part of the load to be fastened to the sling can take the force introduced during lifting.

4 Inspection, maintenance, repair and end of use

Magnum-X round slings must be checked for defects before each use. If you detect defects, the Magnum-X round slings must be set aside. An authorized person must perform the check according to the employer's specified inspection interval, but at least once per year. Depending on the usage and operational conditions, interim inspections may also be necessary. The inspections must be documented according to BGR 500. 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). Magnum-X smart¹ round slings have a second, interior tube sleeve in a signal colour. If the external tube sleeve is damaged, it can easily be changed by the manufacturer or another authorized person. The internal tube sleeve's signal colour makes it easier to notice the damage.

1 The Magnum-X smart is made with a side seam.

Magnum-X round slings can be repaired, for example, if:

- the label is missing and the manufacturer is unknown,
- only the tube sleeve¹ is damaged.

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

Magnum-X round slings should no longer be used if, for example:

- the label is missing and the manufacturer is unknown,
- the round sling's load-bearing core encased by the tube sleeve is damaged,
- the tube sleeve and/or core have been damaged by the effects of heat (such as welding beads),
- the fabric has been damaged by acid or lye. Magnum-X round 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, Magnum-X round slings must be disposed of as special waste.

4.2 Cleaning

When cleaning dirty Magnum-X round slings, please note the following:

- Clean with water only; if necessary in combination with a mild and neutral detergent. Do not use acids or alkalis!
- Magnum-X round slings should be air-dried before further use and stored in well-ventilated rooms, without aids or direct sunlight.
- Do not use heat sources for drying!

5 Storage and cleaning

Maintenance and proper storage prolong the quality and functionality of SpanSet Magnum-X round slings. Therefore, inspect the Magnum-X round slings after each use! Damaged Magnum-X round slings must be removed from use or repaired, and soiled Magnum-X round slings must be cleaned before they are put into storage (see 2 Safety instructions and handling). Keep the Magnum-X round slings clean, dry and well ventila-

¹ The Magnum-X smart is equipped with two tube sleeves, while other round slings in the Magnum-X product line have one.


ted, and protect them from direct sunlight and the effects of chemicals.

6 Training and important things to know

SpanSet Magnum-X round slings fully meet the requirements of BGR 500, 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 rules of the professional associations in Germany. You can get more information and access sources for the regulations from your SpanSet dealer or directly from SpanSet.

Glossary:

 Language: English

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

 Attention: Special caution and attention!

 Forbidden!

 Information: Handling instructions.

 **STZ** Sicherheits-Trainings-Zentrum

Get the benefits of SpanSet training for your employees. Our safety training centre regularly offers seminars in fastening, load safety and fall protection technology. Naturally, we also train on site. Ask us, or visit the seminar website: www.spanset-seminare.de. 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.

VIII Technical details **Magnum-X, Magnum-X^{smart}, Magnum-X^{short}**

- A - Permissible WLL¹
- B - Item description/type
- C - Length²
- D - Colour
- E - Safety factor (SF)³
- F - Material



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

-
- 1 WLL = working load limit max. permissible load capacity.
 - 2 For short slings, the L1 length is min. 1.0 m and max. 2.5 m.
 - 3 SF = relationship between permissible load capacity and minimum breaking strength.

EC declaration of conformity

in accordance with Appendix II Part 1. A of the machinery directive 2006/42/EG

This declaration only refers to Magnum-X and bridles in the condition in which they were sold; parts subsequently sold by the end user and/or subsequently interfered with remain unconsidered.

Manufacturer: SpanSet GmbH & Co. KG, Jülicher Straße 49–51,
52531 Übach-Palenberg

Name: Magnum-X

Description: Load suspension device

Type: See Magnum-X statement below 

Serial no.: All serial numbers under the type description

Year of construction: Starting in 2013

Applicable EC directives:

Machine Directive 2006/42/EC, Electromagnetic 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 1492-2, DIN EN 1677-1, DIN EN 1677-2, DIN EN 1677-3, DIN EN 1677-4

Authorised representative for the compilation of technical documents:

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26.02.2021



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