999292602 - 04/2024
en-GB

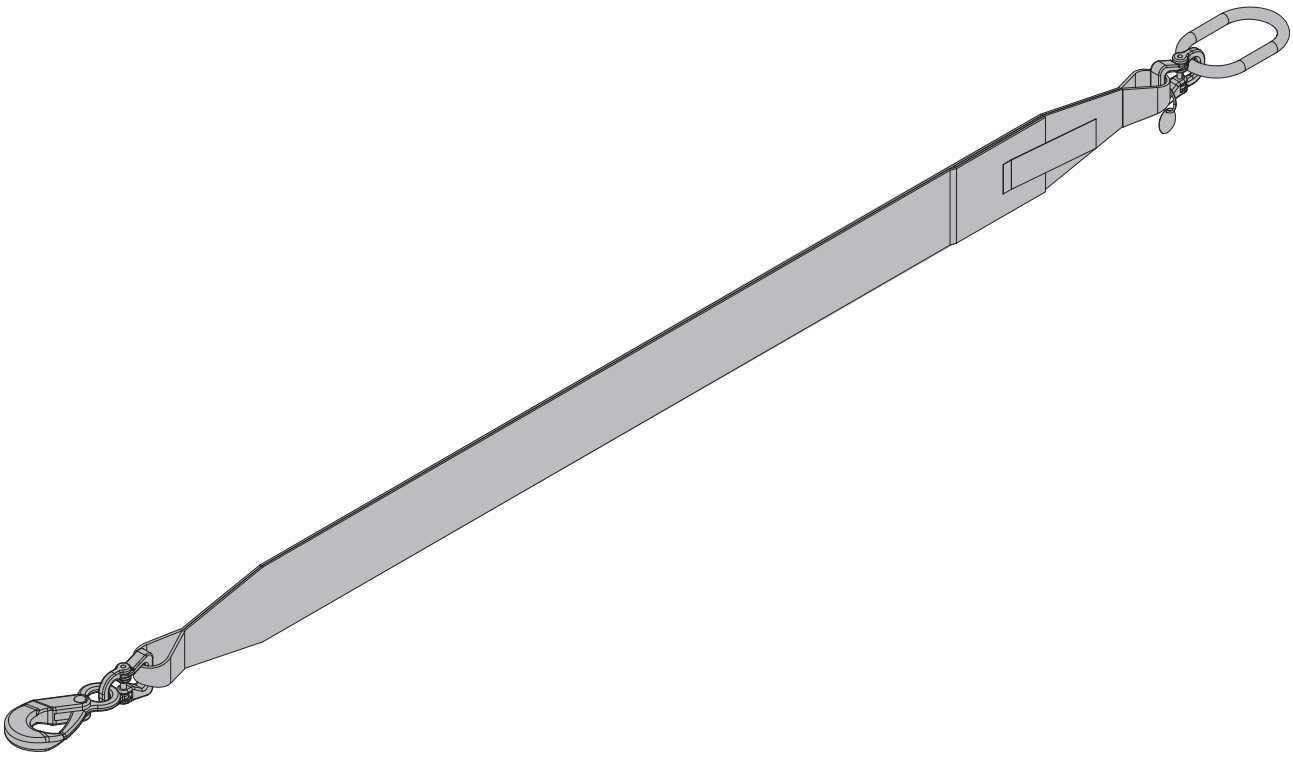
The Formwork Experts.

Lifting sling for transport fork DM 2.5t

Art. n°: 586261000

Original Operating Instructions

Please retain for future reference



Intended use

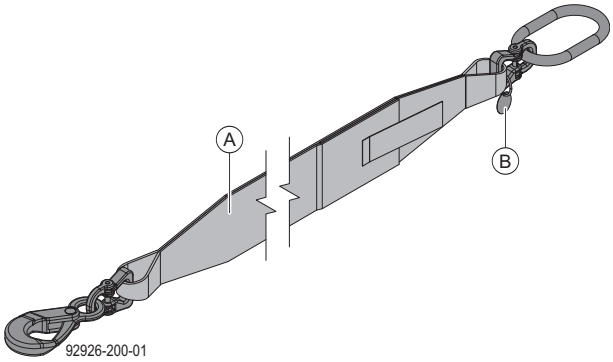
The Lifting sling for transport fork DM 2.5t is a slinging means for repositioning the Transport fork DM 2.5t adjustable.
2 lifting slings per transport fork are needed for repositioning (intended use).

NOTICE

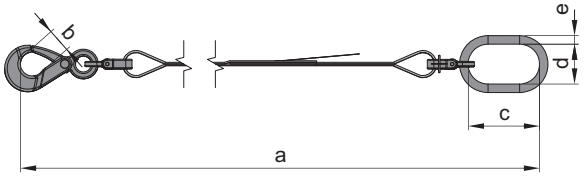
- Other use or use not in conformity with that stated above is non-intended use and requires the prior written approval of the Doka company!

Follow the directions in the 'Transport fork DM 2.5t adjustable' Operating Instructions.

Product presentation



A Lifting sling for transport fork DM 2.5t
B Tag showing the load rating



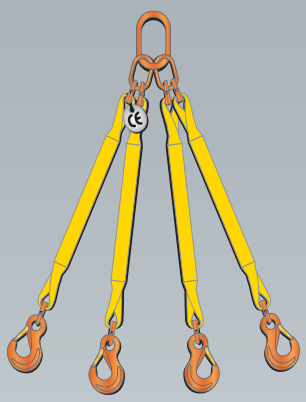
a ... 2250 mm
b ... min. 45 mm
c ... min. 110 mm
d ... min. 65 mm
e ... 16 mm

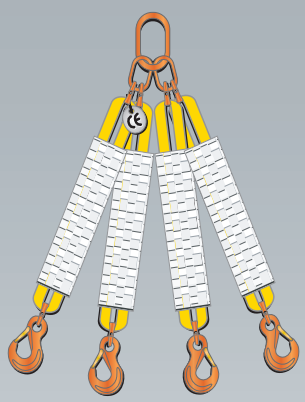
Lifting sling tackle
Round sling tackle

Operating manual

Translation of the original manual - Status: Febru- ary 2024

INTELLIGENT MOTION
Columbus McKinnon Hebetechnik





ATTENTION

Ignorance is not a defence against legislative sanctions!

Section 8 of the German Work Equipment Ordinance stipulates that certain work equipment must be inspected periodically

and at least once a year. Furthermore, in accordance with Section 16, workplace equipment must be maintained for the duration of use

in accordance with the statutory regulations and the manufacturer's instructions. Every

contractor is responsible for complying with this regulation, but may have this work

carried out by third parties.

Hebetechnik checks - you benefit:

- We check out all the well-known brands!
- We assume responsibility for professional maintenance and testing.
- We take care of all the documentation and certification of the inspection work.
- We send you reminders about the stipulated inspection deadlines.
- Our mobile inspection service looks after you on site throughout Austria!
- We work independently - you can devote your full attention to your work.
- You do not have to train in-house inspectors.
- You can also provide us with ancillary staff to save costs.

A two-fold advantage:
All-in-one maintenance & inspection!

As a commercial company, we can - depending on the regulations - carry out maintenance and testing for all common

brands in one operation! This saves you time and money. For example: retrofitting or

repairing of products, followed by testing.

In this way, you fulfil your responsibility to ensure that they are safe and reliable to use

and that your products have a long service life.

We maintain and inspect your appliances to assure prevention

- of sudden failure of your lifting gear, lifting and slinging equipment as a result of cracks or other types of damage.
- We detect concealed defects such as wear in a timely manner and remedy them.
- Wearing parts such as brake discs can get replaced before their function is impaired.
- You and your employees are not exposed to risk.
- You comply with statutory provisions and regulations.

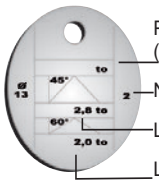
For your benefit and safety!

Marking

Our lifting tackle (using slings and round slings) is manufactured using lifting slings in accordance with EN 1492-1 or round slings in accordance with EN 1492-2 and high-strength fittings (such as rings and hooks) in accordance with the EN 1677 series of standards.
We provide each item of lifting tackle with a test number, works certificate including declaration of conformity and a set of operating instructions.

Year of production
Serial number
Year + month of production

Marking
in acc. with EC Machinery Directive



Perpendicular load capacity
(on single-stranded lifting gear)

Number of strands

Load capacity at 0-45° angle of inclination

Load capacity at 46-60° angle of inclination

Please also read our general user instructions for load handling and lifting gear.

Lifting operations with lifting gear may only be carried out by qualified specialists (trained in theory and practice).
Never use lifting gear that is known to have been overloaded or otherwise damaged and only reuse it after an inspection and any necessary repairs.

Change in delivery condition

Do not alter the shape and design of lifting gear made of textile, e.g. by sewing on or cutting off parts, removing safety parts such as locks, safety latches etc.
Only the manufacturer is permitted to carry out repairs, conversions and maintenance work to lifting slings and round slings! Using genuine spare parts, specialist personnel are also permitted to replace components on lifting gear comprising round slings or lifting slings.

Restrictions on use

If several of the following restrictions on use apply to a lifting operation, all associated reduction factors must be taken into account!

Temperature

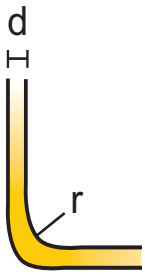
This standard stipulates that polyester slings are suitable for temperature ranges between -40°C and +100°C. These temperature ranges can change in a chemical environment. At sub-zero temperatures and with saturated textile slings, the formation of ice can cause a cutting action and abrasion to the fabric, damaging it. At temperatures below 0°C, please ensure that only dry textile slings are used.

Impact loading

The stipulated load capacities assume that the slings are not subjected to any shock loadings.
The full load capacity can be utilised in the event of slight impacts, e.g. caused by lifting and lowering or moving the load on the crane. Severe impacts, e.g. caused by dropping the load, are not permitted.

Edge loading

Sharp edges constitute a considerable hazard to textile slings because they can be severed suddenly and without warning during a lifting operation or - and this is even more dangerous - during transport due to movements of the load (e.g. starting or braking of the travelling motion of the crane trolley), causing the load to drop.
Textile slings must therefore be protected against sharp edges, friction and abrasion, both on the load and on the lifting device. The edge radius (r) that a lifting strap or round sling touches is considered sharp if it is less than the thickness (d) of the lifting strap or round sling (measured in its flat, load-bearing condition).



Hazardous conditions

The load capacities stipulated here are based on the assumption that there are no particularly hazardous conditions. Circumstances such as particularly hazardous loads, e.g. liquid metals, corrosive substances, fissile material, etc. must be assessed by an expert and the load capacities then need to be reduced accordingly or special precautions must be taken for these lifting operations. Textile slings are not intended for use on personnel access equipment in accordance with EN 14502-1 (transport of persons in work baskets).

Chemicals

Polyester has good resistance properties in relation to mineral acids but alkalis have a destructive impact. We shall be pleased to advise you about your specific form of use. Textile slings with high-strength fittings (e.g. lifting slings with triangular or round sling attachments...) must not be used in contact with acids because these materials would turn brittle! Textile slings must be cleaned carefully after each contact with chemicals. Evaporation can cause otherwise harmless acid solutions to become so concentrated that they can cause damage. Slings and straps contaminated in this way need to be taken out of service immediately, rinsed in cold water, dried in the air and inspected by a specialist.

Instructions for use

Inspection before first time in use

The following points need to be checked before using the textile sling for the first time:

- The sling must correspond to the order
- The sling must be accompanied by a manufacturer's certificate
- The information on the load capacity label must match the manufacturer's certificate

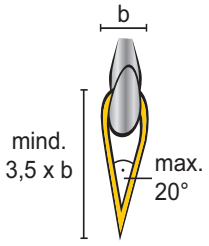
Checking before the start of work

Observe the following points before starting work:

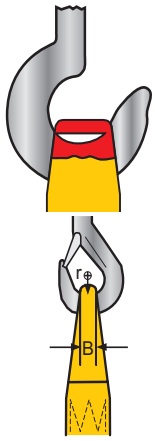
- Textile slings must be inspected for obvious damage before they are put into operation.
- Ensure that their load capacities and dimensions are correct and that the load capacity label is present and legible. Never use damaged or unlabelled slings. Disposable lifting slings that are only intended for the one-off transport of a load (indicated on the load capacity label) must not be used as lifting gear for any other purpose!
- Check that the selected sling type, length and fastening method are suitable and that the textile sling is appropriate for the weight of the load in the corresponding type of sling.
- Check that the load can move freely and can be lifted safely.

Intended use

- Do not overload textile slings. Check the label for the load capacity ratings of the most important types of lifting gear. Pay attention to the angle of inclination and avoid sudden loads and impact loads because these apply much greater forces than the actual weight of the load.
- Round slings and lifting straps must not be knotted, tied together or twisted and may only be used for the lifting of loads. Only use appropriate components (straight contact surface or suitable radius) to connect lifting straps and round slings.
- Avoid damaging the label by keeping it away from the load, the hook and the cording!
- The angle in a loop of a lifting strap must never exceed 20° because this would apply excessive strain to the the seams, causing them to tear apart. This can be assured if the loop length is approx. 3.5 times the maximum width of the hook (b).



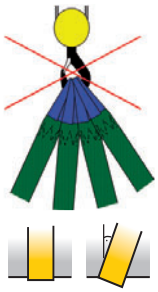
- Never attach the load-bearing seams on lifting slings or the seam of the protective sleeve on round slings above the hook area or other lifting equipment. Ensure that the seams are in the straight part of the lifting gear.



Wenn B < 75 mm gil
min. r >= 0,75 x B

- This illustration shows improper adjustment of a lifting strap with an insufficient radius. The contact surface of a lifting strap must be as straight as possible so that the full cross-section of the webbing can be applied evenly. The radius of curvature of the lifting device can only be at least 0.75 times the load-bearing width of the lifting strap (see illustration) if the load-bearing width of the lifting strap is less than 75 mm. Special care needs to be taken with endless lifting straps (webbing slings), as their full width must be able to fit in the hook. Loop slings may only be hooked into the crane hook using their end loops. Never attach the load to the end loops with the sling placed over the crane hook.

- Ensure that the loops of lifting straps and round slings are not placed on top of each other in the crane hook. These loops must have sufficient space both in the hook and on the load so that they can assume their natural, flattened shape and to ensure that an even load is applied across the entire width of the round sling.



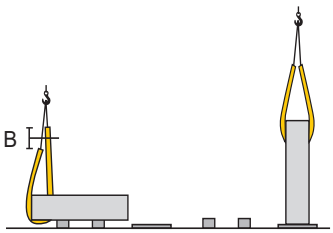
- Lifting slings must be arranged on the load in such a way that they can bear the load across their entire width. With larger angles of inclination, only the edge of a sling is loaded and there is a risk of the sling tearing.

- Never push the load onto the sling or place it on the sling, do not pull it over rough surfaces or edges, clamp it or pull it out from under a load by force. Use suitable wooden supports when setting down the load.

- Use suitable abrasion protection for rough surfaces (e.g. concrete). However, abrasion protection is not suitable for sharp-edged materials. Appropriate edge protection angles or edge protection profiles must be used for this purpose.

- Round slings and lifting straps stretch by approx. 3 - 5% when load is applied. This must be taken into account when attaching slings. Abrasion or damage to fragile surfaces can be caused by this operation. Protective sleeves or profiles are also recommended in these cases.

- During lifting operations (scheduled!), if movements of the load occur, e.g. when setting up or turning goods, protective sleeves must be used if there is friction on the surface of the load without edges, otherwise protective profiles must be used in which the lifting gear can move and adjust in a protected manner and without much friction (see dimension B in the illustration below). Lifting slings are suitable for movements over edges because they slide better within the protective profile. When using round slings to move loads across edges, there is a risk that too much heat will be generated within the edge area due to excessive friction of the sling in the profile.



- If a round sling or lifting strap is used in the cording path, attach it in such a way that it can form a natural cording angle of approx. 60°. Never tighten the cording and prevent heat from building up due to friction (slipping under load). To pick up loads safely that have a smooth, slippery surface, a double cording system is recommended. The individual legs should not cross and should instead be arranged close together. Lifting slings without loop reinforcement must not be used in the cording system and they no longer comply with EN standard 1492-1.

- If more than one sling is used to lift the load, they should be of the same type and as equal a length as possible so that there is no difference in elongation characteristics. Also, they should support the full width of the load (preferably a small angle of inclination, use a spreader beam).

- Polyester has a high electrical resistance when dry and therefore has an insulating effect between the load and the crane hook (e.g. during welding work - observe temperatures!)

- Hooks must always be loaded at the base of the hook, never at the tip of the hook. With multi-leg chain slings, the hook tip should always point outwards after attachment and be able to move freely.

- The suspension ring must have sufficient space in the crane hook and must be able to move freely.

- Unused legs of a sling should be placed back into the lifting ring to minimise the risk of accidental snagging during the lifting process!

- Do not apply force to release jammed slings.

Storage, servicing and repair

Textile slings should be stored in a clean, dry and well-ventilated environment. They should be protected from direct sunlight and other UV radiation (to prevent fading of the colours that indicate load-bearing capacity) and should be stored away from heat sources, chemicals, fumes or corroding surfaces because these can have a negative impact on the quality and service life of the webbing or sling. Only the manufacturer is permitted to carry out repairs, conversions and maintenance work to lifting slings and round slings!

Inspections

Depending on the application, textile slings must be inspected at appropriate intervals and at least once a year by a competent person in accordance with AMVO Section 8.(1). Even after exceptional events (e.g. load fall, collision, heat, etc.) that may have a detrimental effect on the safety of the sling, it must be checked for proper condition before further use in accordance with AMVO Section 9. (1).

This examination must include an inspection for the following defects:

- Completely present and clearly legible label or load capacity tag of the lifting gear.
- Damage due to exposure to chemicals, such as localised softening or flaking of fibres or due to heat (shiny spots and/or hardening of the fabric).
- In the case of metal fittings, no deformations, notches or cross-sectional reductions of more than 10% must be detectable. Metal fittings must be inspected for cracks and any welds must be examined.
- All components (rings, connecting links, hooks, straps, slings, etc.) of lifting slings or round sling lifting attachments must be examined thoroughly. If necessary, components must be removed beforehand or protective hoses removed so that concealed areas can also be inspected.
- Records must be kept and stored of all inspections carried out.
- Damaged slings must be taken out of service immediately and must never be stored in a readily accessible location.

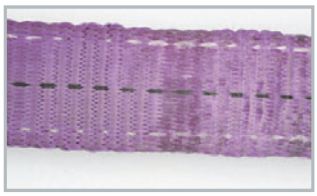
In addition, the following applies to lifting straps:

- All damage to the edge of the webbing.
- Damage to the fabric caused by abrasion or cutting.
- Thread breaks extending across more than 10% of the cross-section are not permissible.
- Severe distortion or melting of threads due to heat (shiny surface and/or hardening of the webbing).
- Damage to load-bearing seams.

In addition, the following applies to round slings:

- Damage to the sheathing due to abrasion or cuts - if the core is visible, the round sling must be taken out of service immediately!
- Damage to the sheathing seams.

Examples for obvious defects on lifting straps



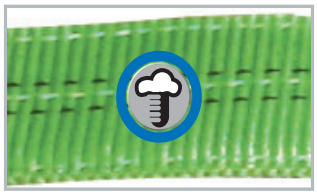
Severe distortion or melting of threads due to heat (shiny surface and/or hardening of the webbing).

Damage to the fabric caused by abrasion or cutting

Label must be entirely visible and easy to read.

Damage to load-bearing seams

Any damage to the edge of the webbing



Chemical damage

Examples for obvious defects on round slings

Damage to the sheathing due to abrasion or cuts - if the core is visible, the round sling must be taken out of service immediately!

Shiny surface and/or hardening of the fabric due to heat

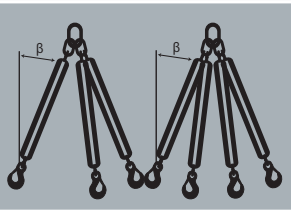
Label must be entirely visible and easy to read.

Chemical damage

Torn seams in the sheathing

Load capacity table (for round slings and lifting strap tackle)

The load capacities quoted here in tons are maximum values for the different types of lifting gear subject to symmetrical loading in accordance with EN 1492-1 + 2. Refer to the following table if there are any exacerbating load factors such as asymmetry, temperature and edge loading.

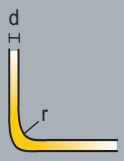
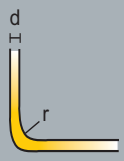
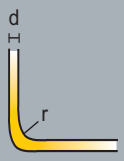
	1-leg	2-leg		3 and 4-leg	
					
Angle of inclination	**0°**	**0° - 45°**	**46° - 60°**	**0° - 45°**	**46° - 60°**
Load factor	**1**	**1.4**	**1**	**2.1**	**1.5**
Type					
Fig. S...-1	1.00	1.40	1.00	2.10	1.50
Fig. S...-2	2.00	2.80	2.00	4.20	3.00
Fig. S...-3	3.00	4.20	3.00	6.30	4.50
Fig. S...-4	4.00	5.60	4.00	8.40	6.00
Fig. S...-5	5.00	7.00	5.00	10.50	7.50
Fig. S...-6	6.00	8.40	6.00	12.60	9.00
Fig. S...-7	7.00	9.80	7.00	14.70	10.50
Fig. S...-8	8.00	11.20	8.00	16.80	12.00
Fig. S...-9	9.00	12.60	9.00	18.90	13.50
Fig. S...-10	10.00	14.00	10.00	21.00	15.00

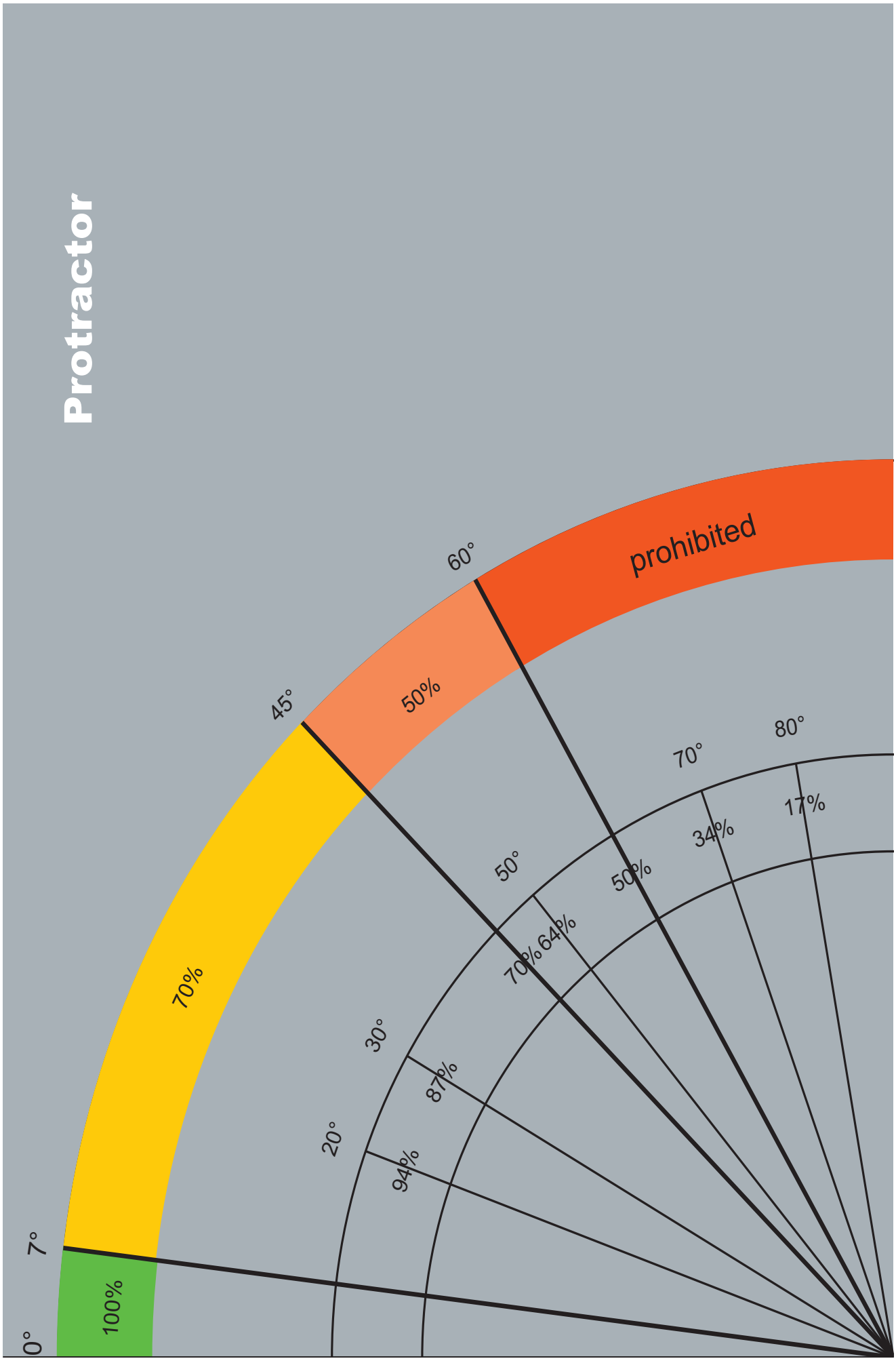
Mitigating factors

If the textile slings are exposed to stresses (e.g. high temperature, asymmetry, edge load, etc.), the maximum load capacities in the load capacity table must be reduced. The load factors below must be used for this purpose. Please also refer to the information in the user information.

Temperature load	below -40° C	above -40° C up to 100° C	above 100° C
Load factor	Not permitted!	1	Not permitted!

Asymmetric load distribution	2-leg tackle		3 and 4-leg tackle	
	0° - 45°	46° - 60°	0° - 45°	46° - 60°
Load factor	0.7	1	0.5	0.7

Edge load	 R = greater than d	 R = d	 R = less than d
Load factor	1	1	Not permitted!


Protractor
prohibited
60°
50%
45°
70%
80°
70°
17%
34%
50°
50%
70%
64%
30°
87%
20°
94%
7°
0°
100%

Translation of the original EC Declaration of Conformity 2006/42/EC

Columbus McKinnon Hebetechnik GmbH
Wiener Str. 132 a
2511 Pfaffstätten
Austria

We hereby declare that the machine described below, in its design and construction and in the version placed on the market by us, complies with the relevant basic safety and health requirements of the EC Machinery Directive 2006/42/EC. This EC Declaration of Conformity loses its validity if the product is modified or supplemented without our consent.
Furthermore, this EC Declaration of Conformity loses its validity if the product is not used in accordance with the intended use described in the operating instructions and the regular inspections to be carried out are not performed.

Machine	Lifting sling gear, single-leg comprising: lifting ring type A8W 18 (grade 10) round sling connection type CM08WSC-13 (grade 8) polyester lifting sling type HBD-04000 (311040176-0001) round sling connection type CM08WSC-13 (grade 8) safety load hook type LHW 10 (grade 10)
Article number	S30795
Load capacity	4000 kg in a straight lift
Effective length	2.25 m
Serial number	from build year 02/2024 (serial number ranges for individual items of lifting tackle are recorded in the production logbook)
Applicable EC directives	EC machinery directive 2006/42/EC
Applied standards	EN 1492-1:2009, Textile lifting gear – Safety – Part 1: Flat woven webbing slings made of man-made fibres for general purpose use EN 1677-1:2009, components for lifting gear – Safety – Part 1: Forged components, grade 8 EN 1677-3:2009, components for lifting gear – Safety – Part 3: Forged, self-locking hooks, grade 8 EN 1677-4:2009, components for lifting gear – Safety – Part 4: Single links, grade 8
Authorised documentation officer	Michael Traupel (Board of Management)
Date / Signature of manufacturer	27.02.2024
Details of the signatory	Michael Traupel Managing Director