

Trucker Set

With each sport bag you receive:

- 2x Ratchet lashing, LC 250 daN, 25 mm, one-part, L=4.0 m
- 2x Ratchet lashing, LC 1000 daN, 35 mm, one-part, L=6.0 m
- 2x Ratchet lashing, LC 250 daN, 25 mm, two-part, double J hook, L=4.0 m
- 2x Ratchet lashing, LC 1000 daN, 35 mm, two-part, double J hook, L=6.0 m
- 4x Ratchet lashing, LC 2000 daN, 50 mm, two-part, double J hook, L=8.0 m
- 4x Edge protector, for 50 mm webbing width

- 4x Slip restraining mats, 250 x 100 x 8 mm

Part-No.: N35500002

Minimum purchase: 2 bags

The practical user set for special price!



Including sports bag



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General information about load security

The varying forces, which can result in slipping, rolling, tilting or even lift-off of loads during transport, are regularly underestimated. Possible consequences are e.g. that the vehicle gets out of control, the driving cab is damaged, the vehicle even overturns and the falling load endangers others! The common assumption that very heavy loads do not require lashing security, is a fatal error. Lashing of loads may be performed by competent users (trained in theory and practice) only.

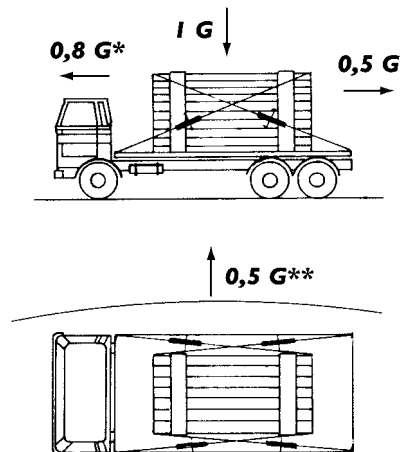
Some basic rules about load security with ratchet lashings

- Depending on the cargo, consideration shall be given to select an appropriate vehicle with adequate structures and lashing points.
- The load centre of gravity should be as low as possible and ideally positioned according to the load distribution plan of the vehicle.
- The permissible gross weight and loads per axle must not be exceeded.
- The load should be stored as close and low as possible and should not leave free space between load, front wall or side walls. Free spaces between the outer walls and the load should be stuffed where possible.
- Depending on the type of cargo, the driving speed should be conform to the road and traffic situation as well as to the driving quality of the vehicle.
- Adverse friction values between cargo and loading area (oily metals, wet areas etc.) will considerably increase the requirement for a correct security of the load. Slip restraining mats will contribute to achieve a more economic and efficient load lashing security.
- Unstable cargo is very susceptible to tilting and in most cases has to be lashed extensively (calculation against slipping and tilting).
- Positive load lashing (e.g. supporting the cargo at front and side walls or with wedges or scantlings fixed on the loading platform) will contribute substantially to the stabilisation of the cargo and to reduction of additional lashing requirement.

Forces on cargo loads (EN 12195)

Truck and trailer loading (road transport) – Acceleration coefficients

During road transport the heaviest stresses on the load security equipment will occur during braking, lift-off of the load by vibration and impact as well as centrifugal forces in narrow curves.



* The value for the longitudinal acceleration in combined traffic (lorry and/or trailer during rail transport) has to be calculated with 1G.

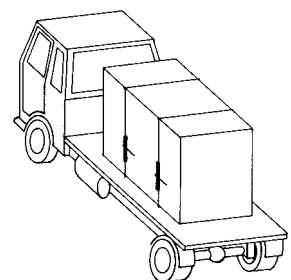
** 0.7 for tilting of instable cargo loads

Lashing methods

Over top lashing

Over top lashing consists of tensioning the lashings to the tension force so as to increase the friction force at the contact surface of the load to avoid any sliding of the load. Influence factors are the dimensions of the load, the acceleration values, the dynamic friction factors as well as the lashing angle.

The calculation of lashing forces will give the required tension force of the lashing devices.



This user information presents a general overview regarding the application of web lashings and does not substitute the existing operating instructions for specific products!

Lashing operations with textile lashing equipment may be carried out by competent users (trained in theory and practice) only. When operated correctly, our textile lashings offer the highest degree of safety in line with long life expectancy and avoid damage to material and people.

Limitations of use

Temperature

Textile lashings in accordance with this part of the European standard EN 12195 are suitable for the following temperature areas:

- a) -40 °C up to +80 °C for polypropylene (PP)
- b) -40 °C up to +100 °C for polyamide (PA)
- c) -40 °C up to +120 °C for polyester (PES)

These temperature areas may change in chemical environments. In this case consult the manufacturer or supplier for advice.

A change of the ambient temperature during transport may influence the tension force of the textile lashing. The tension force should be checked after entering warm regions.

Chemicals

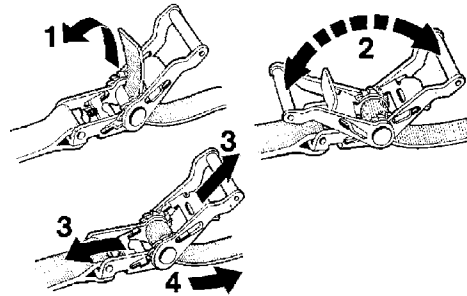
The resistance against chemical influences varies depending on the materials used for the textile lashing. Please observe the advice of the manufacturer, if the textile lashings are subjected to chemicals. Also consider that the effect of the chemical influence will increase with rising temperatures. The resistance of synthetic fibre against chemical influences is summarised as follows:

- a) Polyamides are resistant against alkaline but affected by mineral acids.
- b) Polyester is resistant against mineral acids but affected by alkaline solutions.
- c) Polypropylene is hardly affected by acids and alkaline and is suited for applications that require high resistance against chemicals (except some organic solvents).
- d) Harmless acid or alkaline solutions may be concentrated by evaporation and lead to damages. Affected textile lashings have to be taken out of service immediately, thoroughly rinsed in cold water and dried in the open-air.

Operation in danger zones

During loading and unloading observe low hanging aerial contact lines.

Application advices



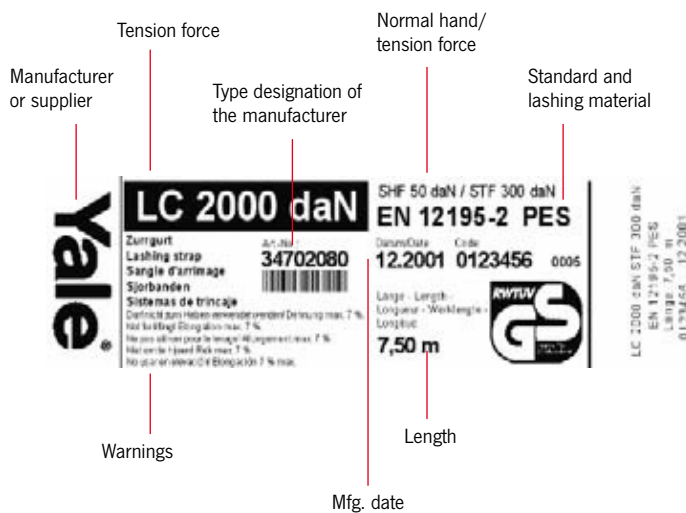
- Selection and use of textile lashings depend on the required tensioning force as well as the mode of application and type of cargo to be lashed. Size, form and weight of the cargo determine the correct choice in addition to the intended usage. For stability reasons, at least two lashing systems should be used for over top lashing and two pairs of lashing straps for diagonal lashing.
- The selected web lashing must be strong enough for the intended job and have the correct length for the type of lashing. Always consider adequate lashing practice: Attachment and removal of lashings should be planned before the start of the journey. In case of longer trips, partial unloadings must be considered. The number of lashings must be calculated as per EN 12195-1:2000. Over top lashing requires systems, which are labelled STF for over top lashing.
- On account of different characteristics and change of length under load, different lashings (e.g. lashing chains and web lashings) may not be used for lashing the same load. When using additional fittings or lashing devices, make sure that these correspond to the existing web lashing.
- During operation, flat hooks must be in contact with the full width of the hook mouth.

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- Releasing of the lashing: Prior to releasing, make sure that the load stands safely (even without safety device) and does not endanger the operator by falling. Before departure check whether additional lashings will be required for further transportation after partial unloading has occurred.
This is also true for lashing elements which permit safe removal.
- Prior to unloading, the lashings must be released to an extent that the load stands freely.
- Make sure that the web lashing will not be damaged by the edges of the cargo. A visual inspection should be standard procedure before and after each usage.
- Only use textile lashings with legible identity labels.
- Textile lashings must not be overloaded:
The max. hand force of 500 N (50 daN on the label; 1 daN = approx. 1 kg) may be applied with one hand only. Do not use cheater bars or levers unless they are part of the lashing element.
- Knotted textile lashings must not be used.
- Damages to the identity labels should be avoided by keeping them away from the edges of the cargo.
- Textile lashings should be protected against friction and abrasion and damages by sharp edges by application of protective sleeves and/or edge protectors.

Labelling



Maintenance and repair

Textile lashings may only be repaired if provided with legible identity labels. In case of accidental contact with chemicals, the web lashing has to be withdrawn from service and the manufacturer or supplier consulted for advice.

Criteria for disposal of textile lashings

Textile lashings must be withdrawn from service and returned for repair to the manufacturer in case of obvious defects. The following points are signs of possible damages:

Textile lashings:

- Cracks, cuts, notches and breaks in the load bearing strands and seams as well as deformations by heat;

Tensioning devices and fittings:

- Deformations, cracks, obvious signs of wear and corrosion.

The quantity of textile lashings has to be calculated according to EN 12195-1:2010

Only use lashing systems for over top lashing which show STF on the label. For easy identification of the required quantity of textile lashings or existing lashings needed for the cargo to be lashed refer to the following table, which has been calculated with friction coefficients of $\mu = 0.2$, $\mu = 0.4$ and $\mu = 0.6$ at various angles of elevation α .

- The calculation refers to situations with min. two, however max. ten textile lashings.
- Whenever possible, always use a slip resistant mat with a certified friction coefficient of 0.6!
- Always operate with the highest possible angle of elevation and lash as steep as possible!!!
- The friction coefficients are applicable for clean and dry surfaces, well covered from frost, ice and snow. In case of moisture refer to the direct lashing method or double the amount of textile lashings!

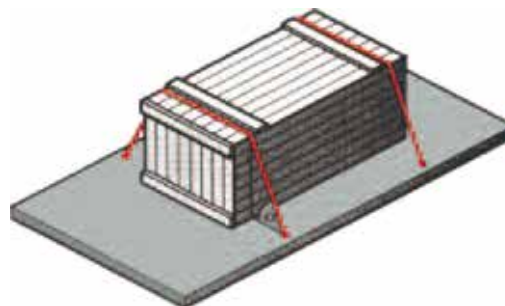
Friction factors according to EN 12195-1:2010

Combination of materials in the contact surface	Friction factor μ	when using a slip resistant mat
Cut timber against fabric base laminate/plywood	0.5	0.6
Cut timber against grooved aluminium	0.4	0.6
Cut timber against steel sheets	0.4	0.6
Cut timber against shrink films	0.3	0.6
Shrink films against fabric base laminate/plywood	0.4	0.6
Shrink films against grooved aluminium	0.4	0.6
Shrink films against steel sheets	0.4	0.6
Shrink films against shrink films	0.4	0.6
Cardboard box against cardboard box	0.5	0.6
Cardboard box against wooden pallet	0.5	0.6
Big bags against wooden pallet	0.4	0.6
Flat steel bars against cut timber	0.5	0.6
Unpainted corrugated sheets against cut timber	0.5	0.6
Painted corrugated sheets against cut timber	0.4	0.6
Unpainted corrugated sheets against unpainted corrugated sheets	0.3	0.6
Painted corrugated sheets against painted corrugated sheets	0.2	0.6

Number of required textile lashings for different cargo weights

- at different friction factors
- at different angles

Tension force of ratchet 300 daN at standard hand force of 50 daN according to EN 12195



Applicable to textile lashings ZGR-50-2500 with LC 2500 daN and ZGR-50-2000 with LC 2000 daN

Cargo weight	Friction factor μ 0.20 Top angle			Friction factor μ 0.40 Top angle			Friction factor μ 0.60 Top angle		
	30°	60°	90°	30°	60°	90°	30°	60°	90°
1000 kg		10	9	7	4	3	3	2	2
2000 kg					8	7	6	3	3
3000 kg						10	9	5	4
4000 kg								7	6
5000 kg								8	7
6000 kg								10	9
7000 kg									10
8000 kg									
9000 kg									
10000 kg									

Cells without indication require more than 10 web lashings. In these cases a reasonable cargo securing can only be obtained by direct lashing method. Obstruction forces by cargo boards and form-fit locking devices have not been considered.



ZGK-25-250 Cambuckle lashing

Made from polyester (PES), EN 12195-2
25 mm - lashing capacity LC 250 daN.

Features

- Standard tension force STF 30 daN at standard hand force SHF 50 daN.
- Standard lengths 2 m, 4 m and 6 m.

INFO

Other lengths on request.

Technical data ZGK-25-250

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGK-25-250-1	192067490	one-part	250	25	2000
ZGK-25-250-1	N35100240	one-part	250	25	4000
ZGK-25-250-1	N35100260	one-part	250	25	6000



ZGR-25-400 Ratchet lashing

Made from polyester (PES), EN 12195-2
25 mm - lashing capacity LC 400 daN.

Features

- Standard tension force STF 50 daN at standard hand force SHF 50 daN.
- Standard lengths 4 m and 6 m.



INFO

Other lengths on request.

Technical data ZGR-25-400

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGR-25-400-1	N34100440	one-part	400	25	4000
ZGR-25-400-1	N34100460	one-part	400	25	6000
ZGR-25-400-2-SPH	N34700440	two-part - with double J hook	400	25	4000
ZGR-25-400-2-SPH	N34700460	two-part - with double J hook	400	25	6000

ZGR-25-500 Ratchet lashing

Made from polyester (PES), EN 12195-2
25 mm - lashing capacity LC 500 daN.

Features

- Standard tension force STF 100 daN at standard hand force SHF 50 daN.
- Standard lengths 2 m, 4 m and 6 m.



INFO

Other lengths on request.

Technical data ZGR-25-500

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGR-25-500-1	192067491	one-part	500	25	2000
ZGR-25-500-1	N34100540	one-part	500	25	4000
ZGR-25-500-1	N34100560	one-part	500	25	6000
ZGR-25-500-2-SPH	192067503	two-part - with double J hook	500	25	2000
ZGR-25-500-2-SPH	N34700540	two-part - with double J hook	500	25	4000
ZGR-25-500-2-SPH	N34700560	two-part - with double J hook	500	25	6000



ZGR-35-1000 Ratchet lashing

Made from polyester (PES), EN 12195-2
35 mm - lashing capacity LC 1000 daN.

Features

- Standard tension force STF 150 daN at standard hand force SHF 50 daN.
- Standard lengths 4 m, 6 m and 8 m.



SPH - with double J hook



Technical data ZGR-35-1000

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGR-35-1000-1	192067506	one-part	1000	35	4000
ZGR-35-1000-1	N34101060	one-part	1000	35	6000
ZGR-35-1000-1	N34101080	one-part	1000	35	8000
ZGR-35-1000-2-SPH	192067515	two-part - with double J hook	1000	35	4000
ZGR-35-1000-2-SPH	N34701060	two-part - with double J hook	1000	35	6000
ZGR-35-1000-2-SPH	N34701080	two-part - with double J hook	1000	35	8000

INFO

Other end fittings (hooks) and individual prints on webbing are available on request.

Other lengths on request.

ZGR-50-2000 Ratchet lashing

Made from polyester (PES), EN 12195-2
50 mm - lashing capacity LC 2000 daN.

Features

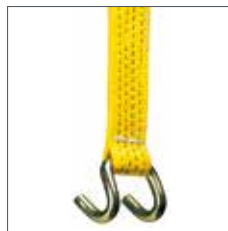
- Standard tension force STF 300 daN at standard hand force SHF 50 daN.
- Standard lengths 6 m, 8 m and 10 m.



GKH - with twisted snap hook



SPH - with double J hook



KLH - with claw hook

Technical data ZGR-50-2000

Model	Art.-No.	Version	Lashing capacity LC	Webbing width	Length of lashing
			daN	mm	mm
ZGR-50-2000-1	N34199999-166	one-part	2000	50	6000
ZGR-50-2000-1	N34102080	one-part	2000	50	8000
ZGR-50-2000-1	N34102010	one-part	2000	50	10000
ZGR-50-2000-2-GKH	N34202080	two-part - with snap hook	2000	50	8000
ZGR-50-2000-2-GKH	N34202010	two-part - with snap hook	2000	50	10000
ZGR-50-2000-2-KLH	N34302080	two-part - with claw hook	2000	50	8000
ZGR-50-2000-2-KLH	N34302010	two-part - with claw hook	2000	50	10000
ZGR-50-2000-FE-KLH	N34302005	Fixed end with ratchet and claw hook	2000	50	400
ZGR-50-2000-2-SPH	N34799999-248	two-part - with double J hook	2000	50	6000
ZGR-50-2000-2-SPH	N34702080	two-part - with double J hook	2000	50	8000
ZGR-50-2000-2-SPH	N34702010	two-part - with double J hook	2000	50	10000
ZGR-50-2000-FE-SPH	N34702005	Fixed end with ratchet and double J hook	2000	50	400

INFO

Other end fittings (hooks) and individual prints on webbing are available on request.

Other lengths on request.



ZGR-50-2500 Ratchet lashing

Made from polyester (PES), EN 12195-2
50 mm - lashing capacity LC 2500 daN.

Features

- Standard tension force STF 300 daN at standard hand force SHF 50 daN.
- Standard lengths 8m and 10m



GKH - with twisted snap hook



SPH - with double J hook



KLH - with claw hook

Technical data ZGR-50-2500

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGR-50-2500-1	N34102580	one-part	2500	50	8000
ZGR-50-2500-1	N34102510	one-part	2500	50	10000
ZGR-50-2500-2-GKH	N34202580	two-part - with snap hook	2500	50	8000
ZGR-50-2500-2-GKH	N34202510	two-part - with snap hook	2500	50	10000
ZGR-50-2500-2-KLH	N34302580	two-part - with claw hook	2500	50	8000
ZGR-50-2500-2-KLH	N34302510	two-part - with claw hook	2500	50	10000
ZGR-50-2500-FE-KLH	N34302505	Fixed end with ratchet and claw hook	2500	50	400
ZGR-50-2500-2-SPH	N34702580	two-part - with double J hook	2500	50	8000
ZGR-50-2500-2-SPH	N34702510	two-part - with double J hook	2500	50	10000
ZGR-50-2500-FE-SPH	N34702505	Fixed end with ratchet and double J hook	2500	50	400

INFO

Other end fittings (hooks) and individual prints on webbing are available on request.

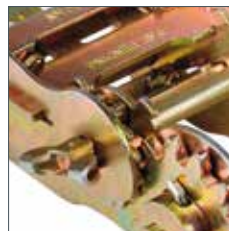
Other lengths on request.

ZGZ-G-75-5000
Ratchet lashing

Made from polyester (PES), EN 12195-2
 75 mm - lashing capacity LC 5000 daN.

Features

- Standard tension force STF 500 daN at standard hand force SHF 50 daN.
- with long lever-transmission - pull ratchet
- Standard lengths 2 m and 4 m.



Long lever-transmission



SPH - with double J hook

Technical data ZGZ-G-75-5000

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGZ-G-75-5000-1	192067448	one-part	5000	75	2000
ZGZ-G-75-5000-1	192067450	one-part	5000	75	4000
ZGZ-G-75-5000-2-SPH	192017853	two-part - with double J hook	5000	75	2000
ZGZ-G-75-5000-2-SPH	192017854	two-part - with double J hook	5000	75	4000

INFO

Other end fittings (hooks) and individual prints on webbing are available on request.

Other lengths on request.



ZGR-XL-50-2500 Ratchet lashing with long lever push ratchet

Made from polyester (PES), EN 12195-2
50 mm - lashing capacity LC 2500 daN.

Features

- Standard tension force STF 500 daN at standard hand force SHF 50 daN.
- Long lever ratchet with precise interlocking.
- With device for controlled release (securing against tipping load).
- Standard lengths 8 m and 10 m.

Technical data ZGR-XL-50-2500 with device for controlled release

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGR-XL-50-2500-1	N34112580	one-part	2500	50	8000
ZGR-XL-50-2500-1	N34112510	one-part	2500	50	10000
ZGR-XL-50-2500-2-GKH	N34212580	two-part - with snap hook	2500	50	8000
ZGR-XL-50-2500-2-GKH	N34212510	two-part - with snap hook	2500	50	10000
ZGR-XL-50-2500-2-KLH	N34312580	two-part - with claw hook	2500	50	8000
ZGR-XL-50-2500-2-KLH	N34312510	two-part - with claw hook	2500	50	10000
ZGR-XL-50-2500-2-SPH	N34712580	two-part - with double J hook	2500	50	8000
ZGR-XL-50-2500-2-SPH	N34712510	two-part - with double J hook	2500	50	10000



Long lever ratchet
with precise interlocking. Device for controlled release (securing against tipping load).



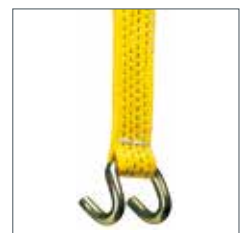
GKH - with twisted snap hook



SPH - with double J hook



KLH - with claw hook



INFO

Other end fittings (hooks) and individual prints on webbing are available on request.

Other lengths on request.

ZGR-XLZ-50-2500 Ratchet lashing with long lever pull ratchet



Made from polyester (PES), EN 12195-2
50 mm - lashing capacity LC 2500 daN.

Features

- Standard tension force STF 500 daN at standard hand force SHF 50 daN.
- Long lever ratchet with precise interlocking.
- Ergonomic pull-type design
- Standard lengths 8 m and 10 m.

INFO

Other end fittings (hooks) and individual prints on webbing are available on request.

Other lengths on request.

Technical data ZGR-XLZ-50-2500 ergonomic pull-type design

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGR-XLZ-50-2500-1	N34132580	one-part	2500	50	8000
ZGR-XLZ-50-2500-1	N34132510	one-part	2500	50	10000
ZGR-XLZ-50-2500-2-GKH	N34232580	two-part - with snap hook	2500	50	8000
ZGR-XLZ-50-2500-2-GKH	N34232510	two-part - with snap hook	2500	50	10000
ZGR-XLZ-50-2500-2-KLH	N34332580	two-part - with claw hook	2500	50	8000
ZGR-XLZ-50-2500-2-KLH	N34332510	two-part - with claw hook	2500	50	10000
ZGR-XLZ-50-2500-2-SPH	N34732580	two-part - with double J hook	2500	50	8000
ZGR-XLZ-50-2500-2-SPH	N34732510	two-part - with claw hook	2500	50	10000

ZGA Automatic ratchet lashing

Made from polyester, EN 12195-2

Features

- With automatic ratchet.
- Quick and precise fixing of load.
- Stepless adjustment.
- Easy rolling of webbing strap.
- PVC coated S-Hook to protect the loading space.



Technical data ZGA

Model	Art.-No.	Version	Lashing capacity LC daN	Webbing width mm	Length of lashing mm
ZGA-25-300	N34799999-9681	two-part - with plastic coated S hooks	300	25	3000
ZGA-50-750	N34799999-11159	two-part - with double J hook	750	50	3000