

## Lifting

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### WARNING:

Failure to read, understand and comply with following instructions, working load limits and specifications in this publication could result in serious injury or damage to property.

## Recommended Contact Surface for Polyester Roundsling 7:1

Tonnes	Min. diameter bolt, mm	Min. free contact width
1	23	35
2	32	40
3	35	47
4	38	50
5	42	53
6	46	60
8	50	67
10	56	75
12	58	80
15	70	96
20	78	104
25	84	112
30	90	120
35	96	128
40	102	136
50	120	160

Smaller dimensions in regards of the diameter and free contact width, could adversely affect the safety and may cause damage on the roundsling.



## Polyester Lifting Information

### Use

When using the sling for the first time, read the manufacturers certificate and instructions/education.

1. Always plan the lift carefully before proceeding with the operation.
2. Always check that the length and WLL stated on the sling label are suitable for the intended use.
3. Examine the sling for damage and defects before use. Never use a damaged or defective sling.
4. Never overload!
5. Make sure that the load is lifted vertically, centred above the point of gravity.
6. Use identical slings in case of multi- legged lifting and take the lifting angles into account when choosing equipment.
7. Do not tie knots on the slings to shorten or join them.
8. Never lift with twisted or entwined slings.
9. Place load-bearing seams and joints between the hook and the load.
10. Protect the sling from sharp edges using edge protection or protective sleeves.
11. Avoid shock loading and snatch lifting.
12. Do not drag the sling, with or without load, on the ground.
13. Keep polyester slings away from alkalis (for example ammonia and caustic soda). If in doubt about exposure to chemicals, check with your supplier.
14. Do not use polyester slings in temperatures over +100°C.
15. Examine slings after use and remove from service if visible damage is discovered.
16. Do not stand under the suspended load or between load and other objects in proximity, to avoid being injured from falling or pending load.
17. To avoid injuries, keep hands and body away from sling, when lifting.

### Maintenance

1. Store the equipment in a dry place.
2. Ensure that seams and labelling are undamaged.
3. The equipment can be cleaned by washing in a petroleum-based detergent and rinsing in water.
4. Roundslings with damaged sleeving, allowing dirt to enter, should be discarded.
5. Roundslings with broken yarns as a result of damaged sleeving must be discarded.
6. Roundslings must be inspected regularly for knots and irregularities, indicating yarn breakage. Discard if found.
7. Webbing slings: Discard in case of serious damage due to friction or wear and tear (appears like a blank and hard or "hair-like" surface).
8. Webbing straps: Discard if/when edge wear/ damage exceeds 5% of its width.
9. Webbing straps: Repair or discard when eye sleeving is worn out.
10. Slings shall be periodically controlled regarding above security issues. Records of inspections must be maintained.



## Couplings for Polyester Lifting




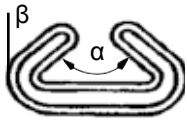
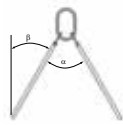


A range of specialized components for safe and easy assembly to chain, steel wire rope, webbing and roundsling, designed to solve your below-the-hook problems.

The Polyester Sling System provides:

- Universal coupling of components to chain, wire and synthetic slings.
- Quick and simple assembly - only a hammer needed.
- Easy assembly - standardized dimensions within each size range effectively eliminates the wrong assembly of components with different safe working loads.
- Heavy hoisting with strong yet lightweight equipment, all components are manufactured from alloy steel for use with grade 8 chain.



## Working Load Limits (tonnes)

	Straight lift	Choked lift	Straight basket hitch		Two part choker		Three and four part choker		
									
			Parallel	$\beta$ 0-45° $\alpha$ 0-90°	$\beta$ 45-60° $\alpha$ 90-120°	$\beta$ 0-45° $\alpha$ 0-90°	$\beta$ 45-60° $\alpha$ 90-120°	$\beta$ 0-45° $\alpha$ 0-90°	$\beta$ 45-60° $\alpha$ 90-120°
Cover colour	Load factor								
	1	0.8	2	1.4	1	1.4	1	2.1	1.5
Purple	1	0.8	2	1.4	1	1.4	1	2.1	1.5
Green	2	1.6	4	2.8	2	2.8	2	4.2	3
Yellow	3	2.4	6	4.2	3	4.2	3	6.3	4.5
Grey	4	3.2	8	5.6	4	5.6	4	8.4	6
Red	5	4	10	7	5	7	5	10.5	7.5
Brown	6	4.8	12	8.4	6	8.4	6	12.6	9
Blue	8	6.4	16	11.2	8	11.2	8	16.8	12
Orange	10	8	20	14	10	14	10	21	15
Orange	12	9.6	24	16.8	12	16.8	12	25	18
Orange	15	12	30	21	15	21	15	31.5	22.5
Orange	20	16	40	28	20	28	20	42	30
Orange	25	20	50	35	25	35	25	52.5	37.5
Orange	30	24	60	42	30	42	30	63	45
Orange	35	28	70	49	35	49	35	73.5	52.5
Orange	40	32	80	56	40	56	40	84	60
Orange	50	40	100	70	50	70	50	105	75
Orange	60	48	120	84	60	84	60	126	90

## Roundsling, Single Cover

EN 1492-2

**Max WLL: 1–15 tonnes.**

Gunnebo Lifting Roundsling with seamless single cover and protected label, made of 100% high tensile polyester, close-woven sealed material for high wear resistance.

CE-marked

Safety factor 7:1

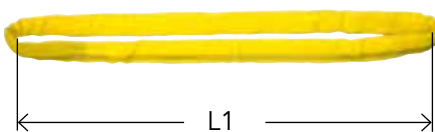
Gunnebo Lifting roundsling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



Eff. length	WLL 1 tonnes		WLL 2 tonnes		WLL 3 tonnes		WLL 4 tonnes		WLL 5 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
0.5	M57P101	0.2	M57P201	0.3	M57P301	0.4				
1	M57P102	0.4	M57P202	0,5	M57P302	0.6	M57P402	0.8	M57P502	1
1,5	M57P103	0.5	M57P203	0.7	M57P303	1.1	M57P403	1.2	M57P503	1.4
2	M57P104	0.7	M57P204	1.1	M57P304	1.3	M57P404	1.6	M57P504	1.9
2.5	M57P105	0.7	M57P205	1.7	M57P305	1.4	M57P405	2	M57P505	2.3
3	M57P106	1	M57P206	1.5	M57P306	1.8	M57P406	2,3	M57P506	2.7
4	M57P108	1.4	M57P208	2	M57P308	2.6	M57P408	3.1	M57P508	3.6
5	M57P110	1.9	M57P210	2.5	M57P310	3.2	M57P410	3.9	M57P510	4.4
6	M57P112	2.4	M57P212	2.8	M57P312	3.9	M57P412	4.7	M57P512	5.3

Eff. length	WLL 6 tonnes		WLL 8 tonnes		WLL 10 tonnes		WLL 12 tonnes		WLL 15 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	M57P604	2.3	M57P804	3.1	M571004	3.9	M571204	4.9	M571504	5.8
2.5	M57P605	3.4	M570805	3.8	M571005	4.8	-		-	-
3	M57P606	3.4	M57P806	4.5	M571006	5.8	M571206	7.3	M571506	8.7
4	M57P608	4.6	M57P808	6	M571008	7.7	M571208	9.6	M571508	11.6
5	M57P610	5.7	M57P810	7.5	M571010	9.6	M571210	12	M571510	14.5
6	M57P612	6.8	M57P812	9	M571012	11.4	M571212	14.2	M571512	17.4
7	-	-	-	-	M571014	13.2	M571214	16.5	M571514	20.3
8	-	-	-	-	M571016	15.1	M571216	18.8	M571516	23.2

Other sizes can be produced upon request.



**L1 = Effective length**

## Roundsling, Double Cover EN 1492-2

**WLL: 1–50 tonnes**

Gunnebo Lifting Roundsling with side seam, double cover, made of 100% high-tensile polyester, close-woven sealed material for high wear resistance.

CE-marked.

Safety factor 7:1

Gunnebo Lifting roundsling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



Eff. length	WLL 1 tonnes		WLL 2 tonnes		WLL 3 tonnes		WLL 5 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
0.5	M470101	0.2	M470201	0.3	M470301	0.4	-	
1	M470102	0.4	M470202	0.5	M470302	0.7	M470502	1.1
1.5	M470103	0.6	M470203	0.8	M470303	1	M470503	1.6
2	M470104	0.7	M470204	1	M470304	1.4	M470504	2.2
2.5	M470105	0.9	M470205	1.3	M470305	1.7	M470505	2.7
3	M470106	1.1	M470206	1.5	M470306	2.1	M470506	3.3
4	M470108	1.4	M470208	2	M470308	2.7	M470508	4.3
5	M470110	1.8	M470210	2.5	M470310	3.4	M470510	5.3
6	M470112	2.1	M470212	3	M470312	4.1	M470512	6.4

Eff. length	WLL 8 tonnes		WLL 10 tonnes		WLL 12 tonnes		WLL 15 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M470802	1.8	-		-		-	
1.5	M470803	2.6	M471003	3.2	-		-	
2	M470804	3.5	M471004	4.3	M471204	5.3	M471504	6.8
2.5	M470805	4.3	M471005	5.3	M471205	6.7	M471505	8.5
3	M470806	5.2	M471006	6.4	M471206	7.9	M471506	10.2
4	M470808	6.9	M471008	8.5	M471208	10.4	M471508	13.5
5	M470810	8.6	M471010	10.6	M471210	13	M471510	16.9
6	M470812	10.2	M471012	12.7	M471212	15.6	M471512	20.2

Eff. length	WLL 20 tonnes		WLL 25 tonnes		WLL 30 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	-		-		-	
2.5	-		-		-	
3	M472006	15	-		-	
4	M472008	20	M472508	25.2	M473008	32
5	M472010	24.9	M472510	31.5	M473010	38.7
6	M472012	29.8	M472512	37.7	M473012	46.4



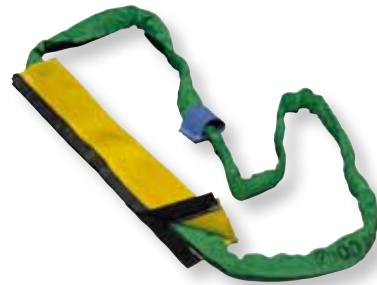
Note! L1 = Effective length

Other sizes can be produced upon request.

## Protective Sleeve for Roundslings

Protective sleeve made of polyester for fitting on roundslings. Velcro tape for easy attachment, no sewing necessary.

Art. no.	Roundslings Tonnes	Length mm
M040124	1 - 3	500
M040125	4 - 8	500
M040126	1 - 3	1000
M040127	4 - 8	1000



Other sizes can be produced upon request.

## Polyurethane Protective Sleeves

Protective sleeves made of polyurethane for roundslings and flat webbing slings can be supplied upon request.



Art. no.	Inside measurement width x depth (mm)	For webbing width (mm)	Length mm	Suits
M890611	32 x 11	30 mm	1000	Web. sling 1 tonnes
M890612	32 x 11	30 mm	2000	Web. sling 1 tonnes
M890613	62 x 11	60 mm	1000	Web. sling 2 tonnes
M890614	62 x 11	60 mm	2000	Roundslings 1 tonnes
M890615	105 x 11	90 mm	1000	Web. sling 3 tonnes
M890616	105 x 11	90 mm	2000	Roundslings 4 tonnes
M890623	130 x 11	120 mm	1000	Web. sling 3 tonnes
M890624	130 x 11	120 mm	2000	Roundslings 5 tonnes
M890625	156 x 11	150 mm	1000	Web. sling 4 tonnes
M890626	156 x 11	150 mm	2000	Roundslings 6/8 tonnes



## Webbing sling - Endless, for light usage

**WLL: 0,525 tonnes**

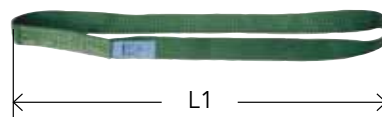
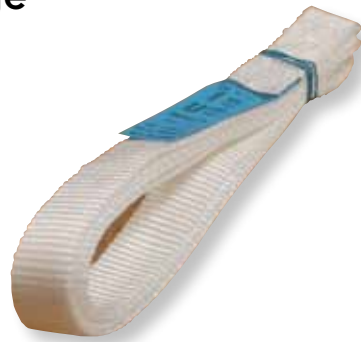
Gunnebo Lifting webbing sling made of 100% polyester, simplex type.

Acc. to standard specifications.

CE-marked

Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.

Safety factor 7:1



**Note! L1 = effective length**

Eff. length	WLL 0,525 tonnes Webb. width 26 mm	
	Art. no.	Weight kgs
1	M030 073	0,10
1.5	M030 077	0,15
2	M030 072	0,19

Other sizes can be produced upon request.

## Webbing sling - Endless

EN 1492-1

**WLL: 1–4 Tonnes.**

Gunnebo Lifting flat webbing endless sling made of 100% high-tensile polyester, close-woven sealed material for high wear resistance.

CE-marked.

Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



**Note! L1 = effective length**



5

Eff. length	WLL 1 tonnes Webb. width 30 mm		WLL 2 tonnes Webb. width 60 mm		WLL 3 tonnes Webb. width 90 mm		WLL 4 tonnes Webb. width 120 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M30P102	0.2	M30P202	0.4	M030030	0.7	M030040	0.9
1.5	M30P103	0.3	M30P203	0.6	M30P303	0.9	M030041	1.3
2	M30P104	0.4	M30P204	0.8	M30P304	1.2	M030042	1.6
2.5	M30P105	0.5	M30P205	1	M30P305	1.5	M030043	2
3	M30P106	0.6	M30P206	1.2	M30P306	1.7	M030044	2.4
4	M30P108	0.7	M30P208	1.5	M30P308	2.3	M030045	3.1
5	M030008	0.9	M30P210	1.9	M30P310	2.2	M030046	3.8
6	M030009	1.1	M30P212	2.3	M30P312	3.4	M030047	4.5

Other sizes can be produced upon request.

# Webbing Sling Duplex with folded and sleeved eyes

EN 1492-1

WLL: 1 – 15 tonnes.

Gunnebo Lifting flat webbing slings with eyes, made of 100% high-tensile polyester, close woven sealed material for high wear resistance.

According to standard specifications.

Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.



Eff. length m	WLL 1 tonnes Web. width 30 mm		WLL 2 tonnes Web. width 60 mm		WLL 3 tonnes Web. width 90 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
1	M37P101	0.3	M37P201	0.6	-	
2	M37P102	0.5	M37P202	1	M37P302	1.4
3	M37P103	0.7	M37P203	1.3	M37P303	2
4	M37P104	0.9	M37P204	1.7	M37P304	2.5
5	M37P105	1	M37P205	2	M37P305	3.1
6	M37P106	1.3	M37P206	2.4	M37P306	3.6
8	M37P108	1.4	M37P208	2.8	M37P308	4.6
10	M033110	1.8	M37P210	3.7	M37P310	5.7
12	M033112	2.1	M37P212	4.8	M37P312	6.1

Eff. length m	WLL 4 tonnes Web. width 120 mm		WLL 5 tonnes Web. width 150 mm		WLL 6 tonnes Web. width 180 mm		WLL 8 tonnes Web. width 240 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
6	M37P406	5.1	M033506	6.7	M033606	6.7	M033806	9.1
8	M37P408	6.7	M033508	8.9	M033608	8.8	M033808	11.7
10	M37P410	8.4	M033510	11	M033610	10.8	M033810	14.5
12	M37P412	9.7	M033512	13.1	M033612	12.9	M033812	17.3

Eff. length m	WLL 10 tonnes Web. width 300 mm		WLL 12 tonnes Web. width 180 mm		WLL 15 tonnes Web. width 240 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
6	M371005	10.2	M033206	12.5	M0331506	18
8	M371008	13.4	M033208	16.5	M0331508	23
10	M371010	16.4	M033210	21.5	M0331510	29
12	M371012	20.3	M033212	24.6	M0331512	35

Other sizes can be produced upon request.

## White Webbing Sling - folded and sleeved eye

**WLL: 5 tonnes**

Suitable for lifting boats etc. Gunnebo Lifting flat webbing sling is manufactured using 100% high tensile polyester, close-woven material for high wear resistance. CE-marked. Gunnebo Lifting webbing sling for safe lifting - marked with manufacturer identification Gunnebo Lifting.

Eff. length	WLL 5 tonnes	
	Webbing width 150 mm	
	Art. no.	Weight kgs
6	M031506	6.74
8	M031508	8.86
10	M031510	10.99
12	M031512	13.11

Other sizes can be produced upon request.



## Webbing Sling - Wide

**WLL: 2.5 – 7.5 tonnes.**

Colour: White

Gunnebo Lifting webbing sling are manufactured using 100% high tensile polyester, close-woven material for high wear resistance, with folded and sleeved eyes. CE-marked.

Eff. length	WLL 2.5 tonnes Webb. width 180 mm		WLL 4.5 tonnes Webb. width 300 mm		WLL 7.5 tonnes Webb. width 480 mm	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
2	M392502	1.3	M394502	2	M397502	3
3	M392503	1.8	M394503	3	M397503	4.5
4	M392504	2.3	M394504	4	M397504	6
5	M392505	3.2	M394505	5	M397505	7.5
6	M392506	3.8	M394506	6	M397506	9
8	M392508	5	M394508	8	M397508	12
10	M392510	6.2	M394510	10	M397510	15
12	M392512	7.4	M394512	12	M397512	18

Other sizes can be produced upon request.



## Lifting and Towing Sling

Lifting: WLL 3 – 8 tonnes

Towing: MBL 21 – 56 tonnes

According to applicable standards.

CE-marked.

Gunnebo Lifting lifting and towing sling are manufactured using 100% high tensile polyester, covered with protective material of polyester. The eyes at the ends are protected.

The sling is equipped with a warning flag.

Gunnebo Lifting webbing sling for safe lifting - marked with Gunnebo Lifting manufacturer ID.

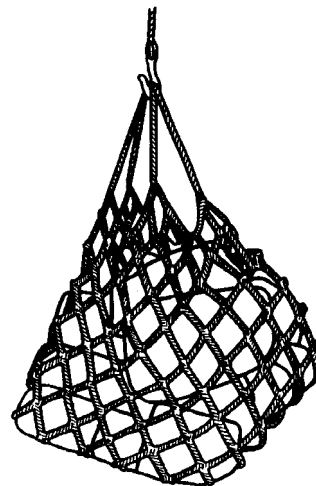


Eff. length	WLL 3 tonnes /7:1 Breaking strength 21 tonnes		WLL 4 tonnes /7:1 Breaking strength 28 tonnes		WLL 6 tonnes /7:1 Breaking strength 42 tonnes		WLL 8 tonnes /7:1 Breaking strength 56 tonnes	
	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs	Art. no.	Weight kgs
4	M041001	2.6	M041002	3.9	M041003	4.6	M041004	8.2
6	M041007	3.8	M041005	6	M041006	9.1	M041008	10.3
8	M041013	5	M041009	8	M041011	11.2	M041010	14.4
10	-	-	-	-	-	-	M041012	19.5

Other sizes can be offered on request.

## Other Polyester Lifting Products

Lifting nets can be supplied on request.



# Polyester Lashing



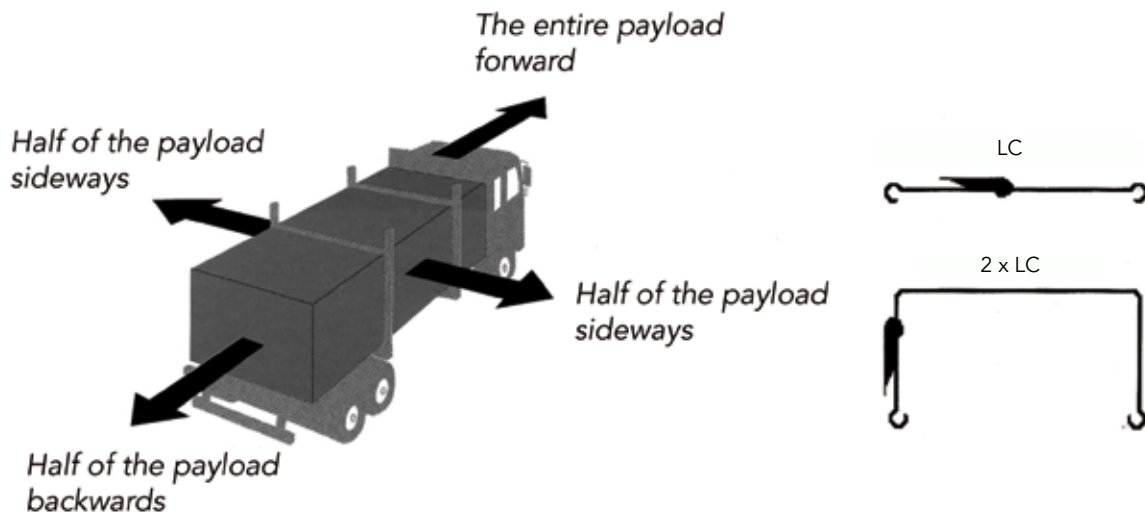
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LIFTING

## Information for Use and Maintenance of Web Lashing

1. In selecting and using web lashings, consideration shall be given to the required lashing capacity, taking into account the mode of use and the nature of the load to be secured. The size, shape and weight of the load, together with the intended method of use, transport environment and the nature of the load will affect the correct selection. For stability reasons free-standing load units must be secured with a minimum of one pair of web lashings for frictional lashing and two pairs of web lashing for diagonal lashing.
2. The selected web lashings shall both be strong enough and of the correct length for the mode of use.  
Basic lashing rules:
  - Plan the fitting and removal operations of lashing before starting a journey
  - Keep in mind that during journeys parts of the load may have to be unloaded
  - Calculate the number of web lashings
  - Only web lashings designed for frictional lashing, marked with STF on the label, are to be used for frictional lashing
  - Check the tension force periodically, especially shortly after starting the journey.
  - The handle must be in a closed position during transport.
3. Because of different behaviour and elongation under load conditions, different lashing equipment (i.e. lashing chain and web lashings) shall not be used to lash the same load. Consideration shall also be given to ancillary fittings (components) and lashing devices in the load restraint assembly are compatible with the web lashing.
4. During use flat hooks shall engage over the complete width of the bearing surface of the strap.
5. Release of the web lashing: Care should be taken to ensure that the stability of the load is independent of the lashing equipment and that the release of the web lashing does not cause the load to fall off the vehicle, thus endangering the personnel. If necessary, attach lifting equipment for further transportation, before releasing the tensioning device in order to prevent accidental falling and/or tilting of the load.
6. Before attempting to unload, the web lashings shall be released so that it can be lifted freely from the load platform.
7. During loading and unloading attention has to be paid to proximity of any low overhead power lines.
8. The materials from which web lashings are manufactured have a selective resistance to chemical attack. Seek the advice of the manufacturer or supplier if exposure to chemicals is anticipated. It should be noted that the effects of chemicals may increase with rising temperature. Polyester has good resistance to mineral acids but is attacked by alkalis. Solutions of acids or alkalis which are harmless may become sufficiently concentrated by evaporation to cause damage. Take contaminated webbings out of service at once, thoroughly soak them in cold water, and dry naturally.
9. Web lashings complying with EN 12195-2 are suitable for use in the following temperature ranges: – 40 °C to + 120 °C for polyester (PES). These ranges may vary in a chemical environment. In this case the advice of the manufacturer or supplier shall be sought.
10. Changing the environmental temperature during transport may affect the forces in the web lashing. Check the tension force after entering warm areas. Web lashings shall be rejected or returned to the manufacturer for repair if they show any signs of damage. The following criteria are considered to be signs of damage:
  - Only web lashings bearing identification labels should be repaired.
  - If there is any accidental contact with chemical products, a web lashing shall be removed from service and the manufacturer or supplier shall be consulted
  - for web lashings (to be rejected): tears, cuts, nicks and breaks in load bearing fibres and retaining stitches; deformations resulting from exposure to heat
  - for end fittings and tensioning devices: deformations, splits, pronounced signs of wear, signs of corrosion.

11. Care should be taken that the web lashing is not damaged by the sharp edges of the load on which it is used. A visual inspection before and after each use is recommended.
12. Only legibly marked and labelled web lashings shall be used.
13. Web lashings shall not be overloaded: Only the maximum hand force of 500 N (50 daN on the label; 1 daN = 1 kg) shall be applied. Mechanical aids such as levers, bars etc. as extensions are not to be used unless they are part of the tensioning device.
14. Never use knotted web lashing.
15. Damage to labels shall be prevented by keeping them away from sharp edges of the load and, if possible, from the load.
16. The webbing shall be protected against friction, abrasion and damage from loads with sharp edges by using protective sleeves and/or corner protectors.

The lashing must take:



Gunnebo Lifting lashings with a breaking load of 500 kg and above are clearly marked with labels.

**The dimensioning of a lashing arrangement must be based on local regulations**

## Technical Explanations for: Standard EN 12195-2

LC = Lashing capacity:	Maximum force for use in straight pull that a web lashing is designed to sustain in use.
Safety factor:	2:1 complete system and metal parts. 3:1 non-sewn polyester webbings.
Elongation:	Maximum 7% when polyester webbing subjected to the LC.
Marked:	Traceability code similar to lifting products. A protected label ensures traceability at all circumstances.

## Webbing

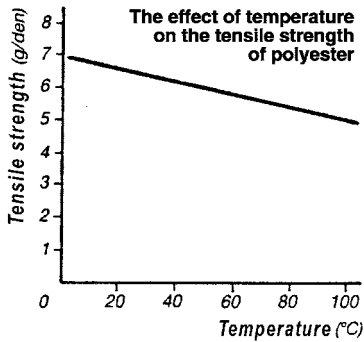
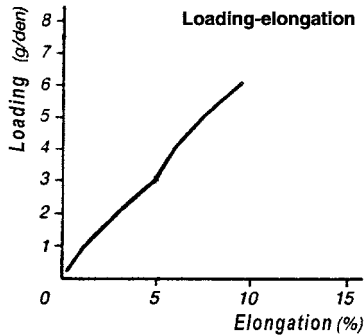
Gunnebo Lifting is one of Sweden's largest producers of polyester webbing. The manufacturing in our weaving mill is subject to constant inspection both manually and automatically, e.g. strength testing in our laboratory.

### Properties of polyester fibre:

#### Physical properties

Specific weight: ca 1.38  
 Melting point: 260°C  
 Sensitivity to low temperature:  
 No effect down to -40°C  
 Aging: Very low

#### Examples of the properties of polyester fibre



#### Elongation properties webbing

Polyester webbing has an elongation to break of approximately 15-20%. Polyester lifting equipment with CE marking (7:1) have a elongation to break of appr. 2-3% with WLL. The first time a webbing or lifting equipment is loaded, it can elongate a little extra when the fibres settle navigate.

#### Chemical properties

Polyester offers good resistance to most acids provided the concentration does not exceed 50%.

#### Resistance to various acids

Acid	Concentration	Temp.	Exposure	Strength derating appr. (%)
Acetic acid	Crystalline	80°C	72 h	5
Formic acid	90%	80°C	72 h	10
Oxalic acid	Saturated solution	80°C	72 h	15
Hydrofluoric acid	40%	25°C	1 week	0
Hydrobromic acid	40%	30°C	4 weeks	5
Bromic acid	15%	30°C	4 weeks	20
Phosphoric acid	98%	70°C	5 weeks	45
Phosphoric acid	50%	70°C	5 weeks	15
Uric acid	Saturated solution	70°C	4 months	0
Hydrocyanic acid	Moist gas	22°C	4 months	0

The tensile strength of polyester can be affected by alkalis, depending on temperature and time. At low concentrations and normal temperatures, resistance is good. However, polyester webbing should not be used in the presence of alkalis.



## Webbing Made of 100% Polyester

Gunnebo Lifting has a wide range of solutions for easy and safe lashing of most cargoes.



Lashing are clearly marked for everyone's safety.

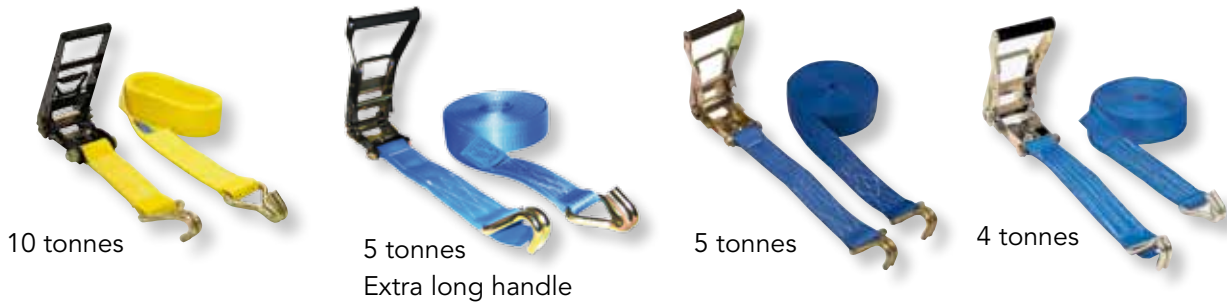
- Web lashing for 300 - 10 000 kg breaking force.
- Webbing widths from 25 mm up to 300 mm with breaking force from 0.7 - 38 tonnes.
- Webbing available with a wide range of end fittings.
- Winches with anchor plates and lashing attachments.
- Lashing systems for internal securing of goods.
- Wheel lashing devices and towing straps.
- Heavy vehicles load securing solutions for land- and sea transportation.
- Custom-made lashing systems.

Art. no *	Width	Breaking strength	Descr.	Standard colours	Min. pallet qty.
M802304	25	900 kp	25/07	Green	2 box / 3500 m
M809456	30	4.200 kp	30/35	Violet	2 box / 1250 m
M806207	35	3.000 kp	35/25	Orange	2 box / 2000 m
M808800	50	2.400 kp	50/21	Off white	2 box / 2500 m
M809501	50	5.100 kp	50/41	Blue	2 box / 1250 m
M810001	50	6.000 kp	50/50	Blue	2 box / 1000 m
M813004	60	8.000 kp	60/70	Green	2 box / 625 m
M815005	90	11.000 kp	90/105	Yellow	2 box / 375 m
M817603	120	15.000 kp	120/140	Grey	2 box / 250 m
M820008	150	22.000 kp	150/175	Red	2 box / 235 m
M821002	180	24.000 kp	180/210	Brown	2 box / 200 m
M822001	240	30.000 kp	240/280	Blue	2 box / 150 m
M823007	300	38.000 kp	300/350	Orange	2 box / 125 m

Other webbing and/or colours can be offered on request.

## Lashing 4 - 10 Tonnes

European standard EN 12195-2



Art. no.	Description	Colour	Width mm	Breaking strength tonnes	EN 12195-2 LC daN	EN 12195-2 STF daN
<b>Complete lashing</b>						
M275140	0.4+3.5 m with wire hook	Yellow	75	10	3000	305
M275141	0.4+9.5 m with wire hook	Yellow	75	10	3000	305
<b>Complete lashing Extra long handle (ERGO)</b>						
M23410K	0.4+9.5 m wire hook	Blue	50	5	2000	430
<b>Complete lashing</b>						
M135098	0.4+7.5 m with wire hook	Blue	50	5	2000	340
M136090	0.4+9.5 m with wire hook	Blue	50	5	2000	340
<b>Complete lashing</b>						
M134098	0.5+ 7.5 m wire hook	Blue	50	4	1700	340
M134090	0.5+9,5 m wire hook	Blue	50	4	1700	340
M24595W	10m endless	Blue	50	5	4000	340
<b>Ratchet with short straps</b>						
M135051K	0.5m with wire hook	Blue	50	4 & 5	1700	

Other lengths and fittings can be offered on request.

## Lashing 1 - 4 Tonnes

European standard EN 12195-2



Art. no.	Description	Colour	Width mm	Breaking strength tonnes	EN 12195-2 LC daN	EN 12195-2 STF daN
<b>Complete lashing</b>						
M140090	0.5+4.5 m with wire hook	Orange	35	2.5	1000	180
M140091	0.5+5.5 m with wire hook	Orange	35	2.5	1000	180
LC 2000	5 m endless (single web.)	Orange	35	2.5	1000	
<b>Complete lashing stainless</b>						
M22210K	0.4+9.5 m with wire hook	Blue	50	3	1500	305
M151106	0.4+3.6 with sewn-on eyes	White	25	0.6	300	
<b>Complete lashing</b>						
M150101	0,4+3,6 m with sewn-on eyes	Blue	26	1.5	700	150
M150102	0,4+3,6 m with wire hook	Blue	26	1.5	700	150
M150110	0,5+4,5 m with wire hook	Blue	26	1.5	700	150
LC 1400	5 m endless	Blue	26	1.5	700	150
<b>Complete lashing</b>						
M151002	0.4+3.6 m with sewn-on eyes	Orange	25	0.7	300	100
M151003	0.4+3.6 m with wire hook	Orange	25	0.7	300	100
M151005	0.5+4.5 m with wire hook	Orange	25	0.7	300	100
LC 600	5 m endless	Orange	25	0.7	300	100
<b>Wheel lashing</b>						
M144301	2 m Tensioner with fixed hook and wheel sling	Orange	35	2.5	1000	180
M144302	3 m Tensioner with fixed hook and wheel sling	Orange	35	2.5	1000	180
M144303	0.3+2 m Tensioner with hook, webbing and wheel sling	Orange	35	2.5	1000	180
M144304	0.3+3 m Tensioner with hook, webbing and wheel sling	Orange	35	2.5	1000	180
M122301	2 m Tensioner with fixed hook and wheel sling	Orange	50	4	1700	340
M122302	3 m Tensioner with fixed hook and wheel sling	Orange	50	4	1700	340
M122303	0.3 + 2 m Tensioner with hook, webbing and wheel sling	Orange	50	4	1700	340
M122304	0.3 + 3 m Tensioner with hook, webbing and wheel sling	Orange	50	4	1700	340

Other lengths and fittings can be offered on request.

## Lashing System - Oneway 35 mm



Breaking strength: 550 kg  
Lashing strength: 1100 kg

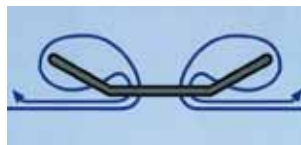
Art. no.	Description
1 M80SW00	Polyester webbing 35/16, 500 m packed in sack. Breaking strength 1800 kg.
2 M153200	Oneway buckle 35 mm / 250 pcs packed in carton
3 M153027	2-part lashing L=7,5 m + 2,0 m. Breaking strength 550 kg,
4 M153030	1-part lashing L=9,5 m. Breaking strength 550 kg,
5 M162101	Plastic corner pads
6 M135051K	Ratchet tensioner 0,5 m with wire hook
7 M13402K	Ratchet tensioner 1,0 m with wire hook

## Lashing System - Oneway 50 mm



Breaking strength: 1850 kg  
Lashing strength: 3700 kg

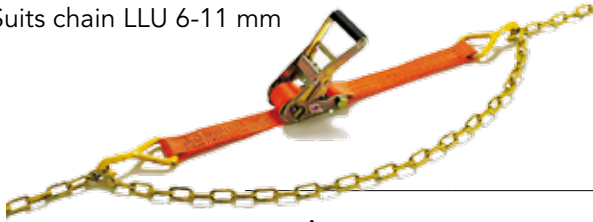
Instruction



Art.no.	Description
1 M80SW03	Polyester webbing 50/21, 250 m packed in sack. Breaking strength 2400 kg.
2 M152400	Oneway buckle 50 mm, packed in carton 125 pcs each. Breaking strength 1850 kg
3 M162101	Plastic corner pads
4 M162002	Threadable wirehook.
5 M231000	Ratchet tensioner
6 M135051K	Ratchet tensioner with short part 0,5 m and with wire hook
7 M13402K	Ratchet tensioner with short part 1,0 m and with wire hook

## Chain Tensioner

Webbing width: 50 mm  
Suits chain LLU 6-11 mm



Art. no.	Description	Breaking strength appr.kgs
M129002	Chain tensioner 0.5 + 1 m, with chain tensioning hook no M161 00D	4500
M129003	Chain tensioner 0.5 + 1 m, with twisted flat hook with latch no M016 604	5000

## Edge Protection



Art. no.	Description
M162101	Edge protection, plastic, max webbing width 75 mm Can be fitted without threading.

## Webbing Coiler

The smart way of coiling your webbing. Fit the coiler on the toolbox or wherever you want to store your webbing.



Art. no.	Description
M165121	Webbing coiler

## Lashing - 0.3 Tonnes

Note! 2 pcs / package

Breaking strength: 0.3 tonnes  
 Lashing strength: 0.6 tonnes  
 Width: 25 mm.  
 Colour: Black as standard  
 Surface treatment: Yellow chromated  
 Safety factor: 1:1



Art. no.	Description
	Complete lashing
M151114	0.4+3.6 m with wire hook, 2 pcs/package

## Lashing Strap - Cambuckle

2 pcs / package

Breaking strength: 250 kg  
 Lashing strength: 500 kg  
 Width: 25 mm



Art. no.	Description	Length m
M153805	2 pcs blue	0.5
M153810	2 pcs yellow	1
M153820	2 pcs red	2
M153830	2 pcs black	3
M153P04	2 pcs green	4
M153P05	2 pcs white	5

## Lashing Strap for home and private use. 40 pcs in each carton

Breaking strength: 250 kg      Lashing strength: 500 kg      Width: 25 mm

Art. no.	40 pcs in each carton	
M153800	10 pcs blue	0.5
	10 pcs yellow	1
	10 pcs red	2
	10 pcs black	3



## Lashing for Construction Machinery

### Rigging Screw with Ratchet Handle

Art. no.	Code	For chain diam. mm	Breaking strength approx. tonnes
G009860018	RS 15 T	10-13 mm	15
G009860023	RS 20 T	13-16 mm	20



### Chain Grade 8 with clevis hooks EGK at both ends

Length = 3.5 meter

Art. no.	Chain dim.	Suit above rigging screw	Breaking strength approx. tonnes
Z100099	10 mm	RS 15 tonnes	12.6
Z100100	13 mm	RS 20 tonnes	21.6



### Complete Lashing Sets (RS) for construction machinery

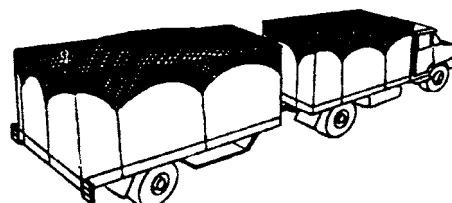
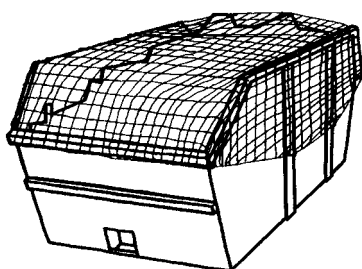
Art. no.	Contents
G009860117	4 rigging screws RS 15 t. nr G009 860 017 4 chains, 10 mm no Z100 099
G009860122	4 rigging screws RS 20 t. nr G009 860 022 4 chains 13 mm n0 Z100 100



5

### Other Lashing Products

Cargo nets can be supplied on request



# Johnson Lifting Blocks

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