



## Green Pin Tycan® Lifting Chain

# As strong as steel, a fraction of the weight



safer  
working



improved  
efficiency



### Material:

Made with 100% Dyneema®; layers of webbing in a Mobius twist with stitching on each side

### Safety Factor:

MBL equals 4 x WLL

### Temperature Range:

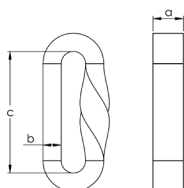
-40°C (-40°F) up to +70°C (158°F)

### Certification:

2.1 2.2 MTC<sup>®</sup> DNV GLTQ DNV GLTA CE

link size	working load limit	width link	thickness link	length inside	links per mtr	elongation at MBL	weight per mtr	layers
mm	t	a mm	b mm	c mm		%	kg	
11x15	2.6	15	11	100	10	5	0.32	6
11x20	4	20	11	100	10	5	0.47	6
15x25	5	25	15	100	10	5	0.58	8
13x30	6.8	30	13	125	8	5	0.75	7

link size	working load limit	width link	thickness link	length inside	links per mtr	elongation at MBL	weight per mtr	layers
inch	t	inch	inch	inch		%	lbs	
$\frac{7}{16} \times \frac{19}{32}$	2.6	$\frac{19}{32}$	$\frac{7}{16}$	4	10	5	0.70	6
$\frac{7}{16} \times \frac{25}{32}$	4	$\frac{25}{32}$	$\frac{7}{16}$	4	10	5	1.04	6
$\frac{19}{32} \times 1$	5	1	$\frac{19}{32}$	4	10	5	1.28	8
$\frac{1}{2} \times 1 \frac{3}{16}$	6.8	$1 \frac{3}{16}$	$\frac{1}{2}$	$4 \frac{23}{32}$	8	5	1.65	7



FCHLIFT

Green Pin Tycan® has been created from the world's strongest man-made fibre, Dyneema®, and is a link chain that has all the performance and flexibility of steel chain but is a fraction of the weight. It is very safe to use, non-corrosive and waterproof. In fact, it even floats! The soft touch and light weight makes Green Pin Tycan® easy to use, allows quicker application and greatly reduces the potential of damage to cargo, a critical factor when handling objects with sensitive surfaces. By using Green Pin Tycan® companies achieve greater efficiency and a safer working environment for their staff.

### Quality assurance

- Every chain length is proof load tested to 2 times Working Load Limit (WLL).
- Visual inspection is carried out on each chain link to detect possible defects.
- A 5-link sample of every 1000 meters (0.62 miles) produced is tested to destruction to confirm MBL.
- Green Pin Tycan® has a DNV GL Type Approval.
- Declaration of conformity to the Machinery Directive 2006/42/EC with relevant CE marking.

### Where and how can Green Pin Tycan® Lifting Chain be used

- Green Pin Tycan® Lifting Chain is a general purpose lifting chain that can be used within the limits as set forth in this user manual.
- Green Pin Tycan® Lifting Chain can be used in min/max environmental temperatures, but should not be exposed to temperatures above +70°C (158°F).
- Green Pin Tycan® Lifting Chain is able to lift loads safely only up to the designated WLL, but never exceeded.
- Green Pin Tycan® Lifting Chain is able to lift loads safely only when the relevant load reduction factor is taken into account. Do not exceed the WLL.
- Green Pin Tycan® Lifting Chain can be used on land, at sea and in a subsea environment.
- Green Pin Tycan® Lifting Chain should be used under static or near-static conditions.

### Verification before first use

Before first use of Green Pin Tycan® Lifting Chain it should be ensured 'that':

- Green Pin Tycan® Lifting Chain meets the exact requirements specified in the order.
- The valid manufacturer certificate and CE declaration are available for examination and/or verification.
- Ensure that manufacturer's label(s) are present and legible and that the label(s) contain the same information as the manufacturer's certification.
- The users of the sling have received appropriate instruction and training.

### Verification before each use

- Check Green Pin Tycan® Lifting Chain for any damage, defects or missing ID tags prior to each use. Never use damaged Green Pin Tycan® Lifting Chain.
- Connect Green Pin Tycan® Lifting Chain to recommended components as mentioned further in this manual or to certified components with a maximum surface roughness of 5 microns and adhering to below values:






link size	lifting capacity	minimum pin diameter	minimum clevis width	maximum clevis width
mm	t	mm	mm	mm
11x15	2.6	13	15.5	18
11x20	4	16	20.5	24
15x25	5	16	26	31
13x30	6.8	20	31	37

- Green Pin Tycan® Lifting Chain must be inspected before each use and if any damage is detected removed from service. See Inspection and Removal from Service Criteria.
- Ensure that Green Pin Tycan® Lifting Chain is rigged according to the load, the planned lift and according to the boundary conditions set forth in the user manual.
- Ensure load reduction factors are calculated and planned for according to charts and tables further in this manual.
- Use Green Pin Tycan® Lifting Chain only with a minimum number of 5 load bearing links per sling leg.

### Other remarks

- A limited twist of 0.50 turns per meter (per 3.28 feet) is allowed.
- Keep Green Pin Tycan® Lifting Chain away from any sharp particles, such as metal shavings, and any foreign particle that may disturb the chain's geometry during operation. If such particles are present on the chain, inspect the chain and remove such particles gently before any use of the chain.
- Green Pin Tycan® Lifting Chain is generally resistant to chemicals, except oxidizing chemicals, avoid contact from damaging chemicals and/ or consult with a Qualified Person.
- Green Pin Tycan® Lifting Chain should be kept away from direct heat sources.
- In case a dynamic loading situation is to be expected, the load or WLL should be adjusted accordingly local regulations.

### Recommended products for use with Green Pin Tycan® Lifting Chain

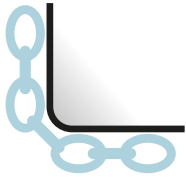
		2.6t WLL	4t WLL
<b>Master links</b>	 UMS UMTS	UMS18 UMTS22	UMS22 UMTS28
<b>Connecting links</b>	 UMJT UMJ	GPUMJT15	GPUMJT20
<b>Shorteners</b>	 UCRCT	GPUCRCT15	GPUCRCT20
<b>Chain</b>	 FCHLIFT	FCHLIFT1115	FCHLIFT1120
<b>Hooks</b>	 UCSCT	GPUCSCT15	GPUCSCT20

	5t WLL	6.8t WLL
	UMS22 UMTS28	UMS25 UMTS36
	UMJ13	GPUMJT30
	GPUCRCT25	GPUCRCT30
	FCHLIFT1525	FCHLIFT1330
	GPUCSCT25	GPUCSCT30

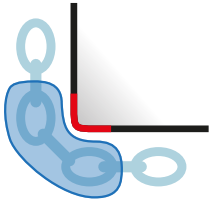
Always take into account; the maximum load of the configuration is limited by the component with the lowest WLL. The recommended components in combination with Green Pin Tycan® Lifting Chain are approved to use up to the chain WLL.

## Instructions for use

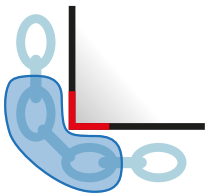
In case of contact between Green Pin Tycan® Lifting Chain and the load or operating material, protective sleeves must be used when the surface edge is "less" than 6mm radius.



Edge radius more than 6mm:  
**No** protective sleeve  
required **but** recommended

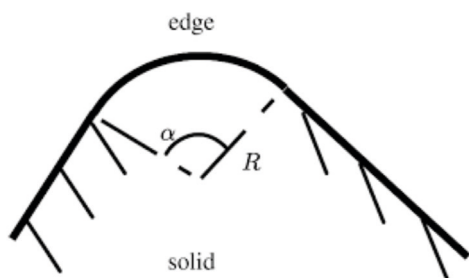


Edge radius less than 6mm:  
Protective sleeve **required**

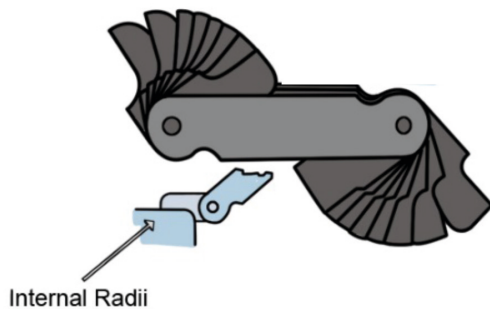


No obvious edge radius or in  
doubt: Protective sleeve  
**required**

Edges that are in contact with Green Pin Tycan® Lifting Chain must be checked for sufficient radius. A radius gauge is a good way to verify this. If in doubt, a protective sleeve should always be used to protect Green Pin Tycan® Lifting Chain.



We recommend the use of a radius gauge.



## Green Pin Tycan® Lifting Chain



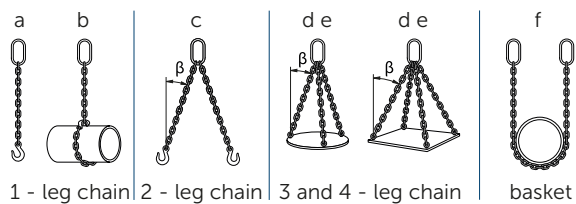
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A VAN BEEST BRAND

## Approved lifting hitches for Green Pin Tycan® Lifting Chain

Green Pin Tycan® can be used in multiple lifting configurations.  
Safety Factor 4:1



Working Load Limit table for Green Pin Tycan® Chain Slings generally to EN818-4

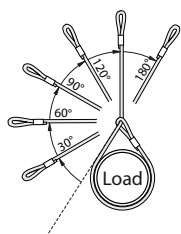
Type of hitch		a	b	c	c	d e	d e	f
Angle of inclination ( $\beta$ )		-	-*	0°-45°	45°-60°	0°-45°	45°-60°	-**
Load factor		1	0.8	1.4	1	2.1	1.5	1.5
Working load limit (t)	11x15	2.6	2.08	3.6	2.6	5.46	3.9	3.9
	11x20	4.0	3.2	5.6	4.0	8.4	6.0	6.0
	15x25	5.0	4.0	7.0	5.0	10.5	7.5	7.5
	13x30	6.8	5.44	9.52	6.8	14.28	10.2	10.2

Working Load Limit table for Green Pin Tycan® Chain Slings generally to ASME B30.9

Type of hitch		a	b	c	c	c	d e	d e	d e	f
Angle of inclination ( $\beta$ )		-	-*	0°-30°	30°-45°	45°-60°	0°-30°	30°-45°	45°-60°	-**
Load factor		1	0.8	1.73	1.4	1.0	2.6	2.1	1.5	1.5
Working load limit (t)	11x15	2.6	2.08	4.49	3.64	2.6	6.76	5.46	3.9	3.9
	11x20	4.0	3.2	6.92	5.6	4	10.4	8.4	6	6
	15x25	5.0	4.0	8.65	7.0	5.0	13	10.5	7.5	7.5
	13x30	6.8	5.44	11.76	9.52	6.8	17.68	14.28	10.2	10.2

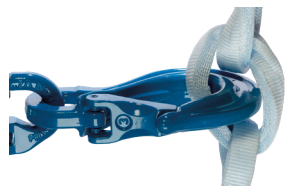
\* See below capacity reduction table of angles of choke less than 120°.

\*\* See below capacity reduction table for non-vertical chain sling legs.



Angle of Choke	Rated load % of single leg chain sling	Rated load (t) of single leg chain sling			
		11x15	11x20	15x25	13x30
120°-180°	80%	2.08t	3.20t	4.00t	5.44t
90°-119°	65%	1.69t	2.60t	3.25t	4.42t
60°-89°	55%	1.43t	2.20t	2.75t	3.74t
30°-59°	40%	1.04t	1.60t	2.00t	2.72t

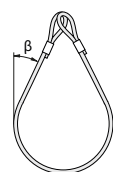
In a choker configuration you can use two different choker connections;



- The hook attached to a link, called anchored basket hitch.



- The hook around link, called traditional choker hitch.



Angle $\beta$	Rated load %	Min Dia.	Rated load (t)			
			11x15	11x20	15x25	13x30
0°-5°	150%	120mm	3.90t	6.00t	7.50t	10.20t
6°-30°	135%	120mm	3.51t	5.40t	6.75t	9.18t
31°-45°	120%	120mm	3.12t	4.80t	6.00t	8.16t
46°-60°	100%	120mm	2.60t	4.00t	5.00t	6.80t

## Configuration examples

1 - leg chain



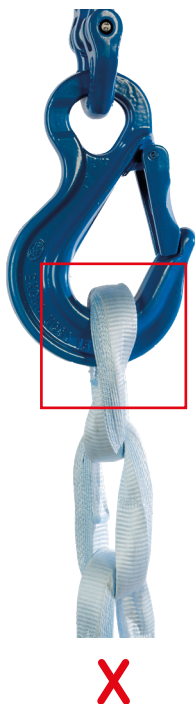
2 - leg chain



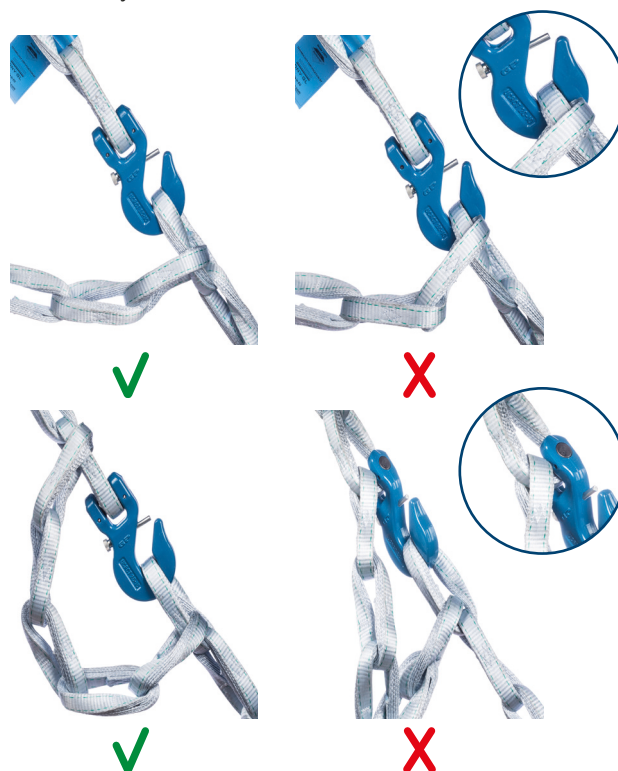
3 and 4 - leg chain



Connecting Green Pin Tycan® Lifting Chain directly into hooks (components) where the width/clevis is more than required minimum clevis width is not acceptable. Doing so can cause the layers to spread apart, which in the utmost consequence could have a negative effect on the strength of the chain. The only exception is when it is not an open end-link and both load bearing-points of the link is under tension from the adjacent chain links. An example of this is the anchored basket hitch showed in this manual.



The unloaded link must never be placed between the loaded link and the body hook.



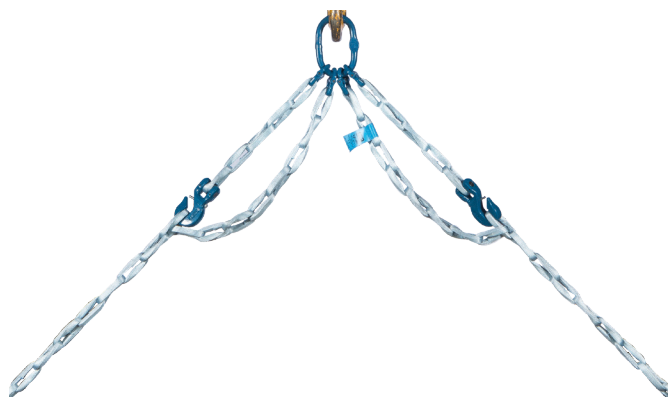
#### Storage

- Storage area should be clean, dry, dark and free of mechanical and environmental damage.
- Storage temperature should be no more than +70 degrees Celsius (158°F) for short term storage (less than one week) and no more than +30 degrees Celsius (86°F) for long term storage.

## Shortening Green Pin Tycan® Lifting Chain

Shortening Green Pin Tycan® Lifting Chain can be attained by using:

- Green Pin Tycan® Grab Hook CL GR10 - GPUCRCT15; WLL 2.6t
- Green Pin Tycan® Grab Hook CL GR10 - GPUCRCT20; WLL 4t
- Green Pin Tycan® Grab Hook CL GR10 - GPUCRCT25; WLL 5t
- Green Pin Tycan® Grab Hook CL GR10 - GPUCRCT30; WLL 6.8t



The Green Pin Tycan® Grab Hook CL GR10 must be assembled with (at least 5) links of chain to the master link with a connecting link (UMJ(T)). Do not connect two Green Pin Tycan® Lifting Chain ends into one connecting link (UMJ(T)).

## Inspection and Removal from Service Criteria

**Inspect individual Chain Links thoroughly before each use for abrasion, tears, cuts or other damage which might affect the performance of Green Pin Tycan® Lifting Chain.**



The pictures show defined areas of Green Pin Tycan® Chain Link, such as the Link Leg and Interface. Which allows for different amounts of wear and tear:

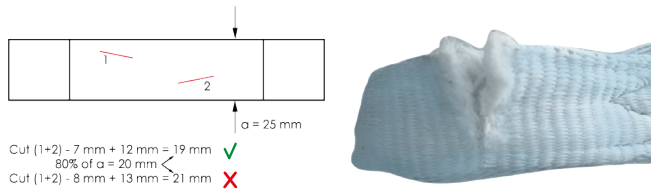
- Zero tolerance for damage allowed in Link Bearing Point.
- No folding or spreading out of layers allowed in Link Bearing Point.





## Details wear/tear damage

- If at any place on the exterior layer of the link leg has been torn, cut or abraded all the way through (in one or more places), and the length of the cut(s) (individually or accumulated) is longer than 80% of the link-width, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.



- If at any place on the exterior layer of the link are torn, cut or abraded away more than 50% trough, and the area(s) is longer than 160% of the link width, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.
- If there are visible cuts or abrasion of more than 1mm deep, across all numbers of layers on the side of the link leg, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.
- If there are visible cuts or abrasion of more than 2mm deep, across more than 75% of numbers of layers on the side of the link leg, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.
- If there are visible cuts or abrasion of more than 3mm deep, across more than 50% of numbers of layers on the side of the link leg, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.

- If there are visible cuts or abrasion of more than 4mm deep, across two layers or more on the side of the link leg, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.



- If stitching is torn/ abraded to the extent that the layers of webbing can unravel, Green Pin Tycan® Lifting Chain must be removed from service immediately and shall be destroyed and not used for any application.



- If it is known that Green Pin Tycan® Lifting Chain has been exposed to temperatures exceeding 110°C (230°F), Green Pin Tycan® Lifting Chain must be destroyed and not used for any application.

## Green Pin Tycan® Lifting Chain



- If it is known that Green Pin Tycan® Lifting Chain has been in contact with damaging chemicals, Green Pin Tycan® Lifting Chain must be destroyed and not used for any application.
- If there is any doubt that Green Pin Tycan® Lifting Chain has met or been exposed to the limits of the mentioned discard criteria's, Green Pin Tycan® Lifting Chain should be discarded.
- If the manufacturer's label(s) has been removed, or is no longer legible, Green Pin Tycan® Lifting Chain shall be removed from service.

In case you do not use the products yourself but are reselling these as part of a manufactured product, please take our general cautions and warnings into account and make these known to your customers as well. In any case, we do not accept any responsibility or liability, nor can we be held responsible for any misuse or damage with, by or at your customers due to negligent use.