



FALLGUARD®

# CARGO SAFETY PRODUCTS

# CARGO SAFETY - PRODUCTS

FALLGUARD's range of lashing straps offers tailor-made solutions for securing every cargo. We make the lashing strap from polyester (PES) with an average extension of max.5%. Tensioners (SE) and connectors (VE) are coordinated with the respective lashing systems. FALLGUARD's lashing straps are produced at both of our locations in Stuttgart and Erfurt in Germany according to EN 12195-2.

## Identification Label



Traceability code  
(to be sewn)

Fixed end (FE) and loose end (LE) as well as one-part polyester lashing straps must be identified with a blue label according to EN 12195-2. FALLGUARD lashing straps also have their [instructions for use sewn](#) to their loose and fixed ends.

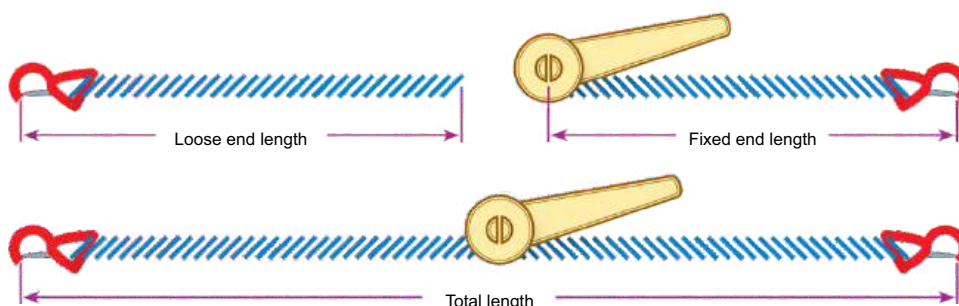
## Information on the label

- LC** = Lashing Capacity (**permissible tension force**)  
Maximum force for straight-line use and for which a lashing strap has been designed for use.
- S<sub>HF</sub>** = Standard Hand Force (**normal hand force**)  
Manual tension force of 50 daN applied on the tensioning element.
- S<sub>TF</sub>** = Standard Tension Force (**normal tension force**)  
Remaining force after the grip of a ratchet has been released = **pre-tension force**.

## Basics of lashing strap systems

### Two-part lashing straps

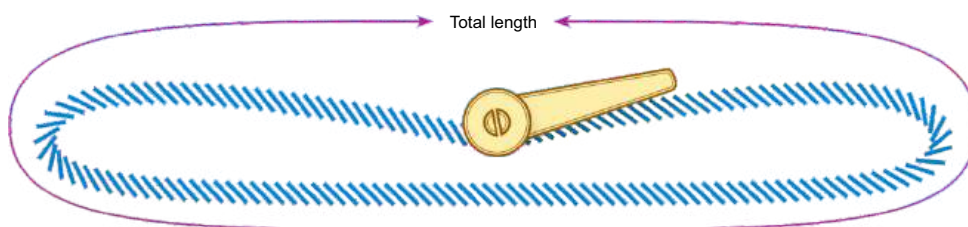
- A 2-part lashing strap consists of two **components**: The fixed end with ratchet and connecting element (hook) and the loose end with hook as connecting element.



### One-part lashing straps

- A 1-part lashing strap consists of **one strap band** with a ratchet as tensioning element.

**Use:** Bundling or strapping.



### Lashing straps in tandem technique

- A 1-part lashing strap with double strap position. A double pulling force is achieved with it during strapping.

- A lashing strap system that shows its advantages especially in heavy-duty strapping.



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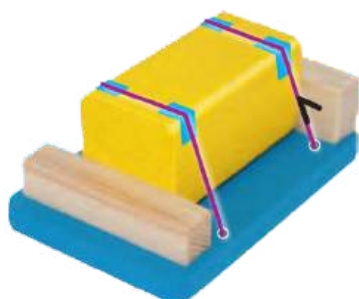
## Cargo Securing Methods

There are two kinds of securing a cargo: friction-fitted and form-fitted.

Friction-fitted securing is achieved by lashing straps that press the cargo onto the loading surface.

This leads to a higher frictional force, giving the part to be secured a better hold.

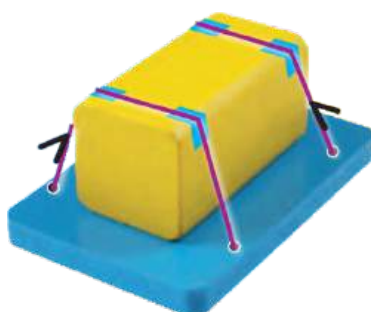
Form-fitted cargo securing is achieved by supports such as front or side wall supports that hold the cargo



### Lashing down

When lashing down, the cargo is not secured by the lashing straps but by the clamping and frictional forces.

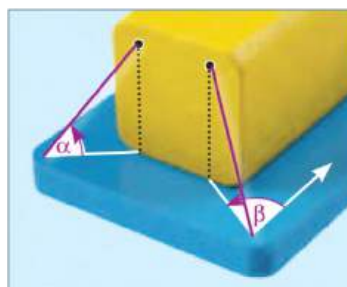
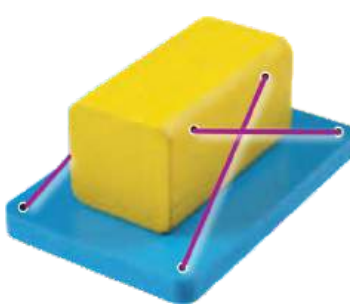
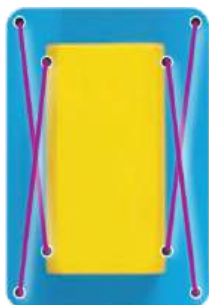
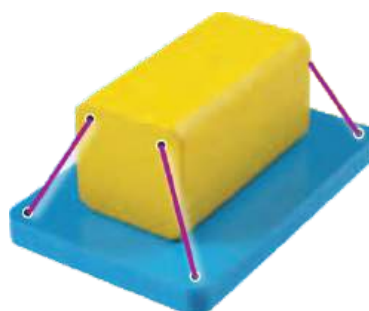
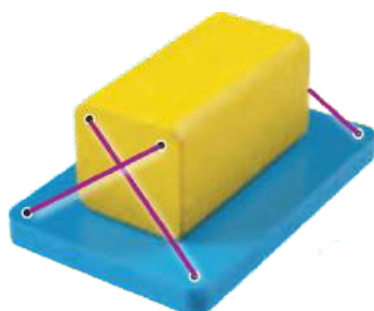
The pre-tension force is essential here.



### Diagonal strapping

Prerequisite: Four lashing straps. From the corners, they are clamped diagonally onto the loading surface.

In this case, each one of the four corners is secured by one lashing strap.



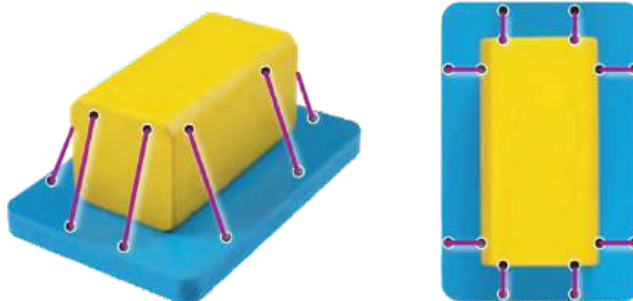
When strapping diagonally, both lashing angles  $\alpha$  and  $\beta$  must be measured for determining the course of the lashing strap.



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## Oblique lashing

Prerequisite: Eight lashing straps. The tension of the lashing straps from the cargo to the loading surface takes place in a way that they are perpendicular to all four edges of the loading surface.



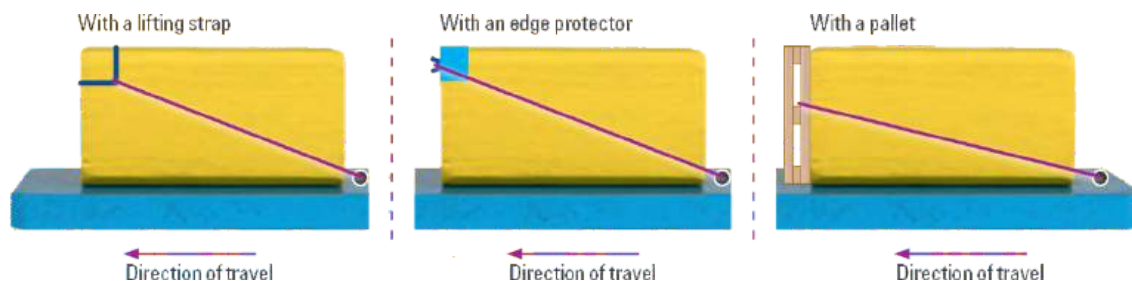
## Sling lashes

The sling lash is a type of direct lash.

The lashing devices are located in front, behind or on the side of the cargo and then fixed to the anchoring points on the vehicle. This type of securing the cargo originated in marine transport, where it is also described as head lashing or bight lashing.

## Sling lashes with head slings

The head slings serve as a 'substitute for bulkheads' if the cargo cannot be loaded longitudinally because of the distributed load. A head sling can secure the cargo in the direction of travel or in the opposite direction. The lashing devices must be positioned in front of the cargo or behind it and fixed to the anchoring points on the vehicle in the case of head slings.

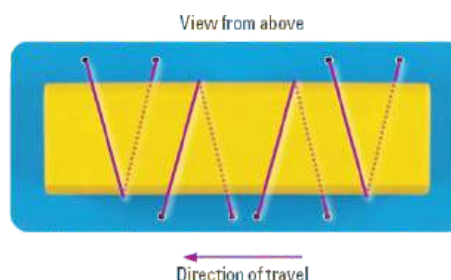


The head sling serves to secure the cargo in the direction of travel in this case. The cargo must be secured separately on the side and back.

## Sling lashes with lateral slings

Sling lashes serve as a 'substitute for bulkheads' if the cargo cannot be loaded on the side in an interlocking manner.

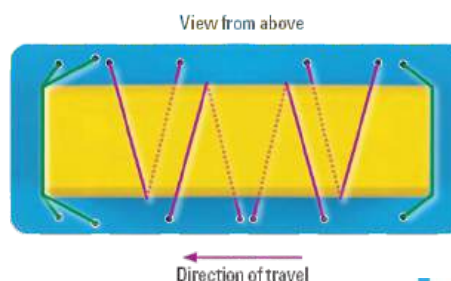
A lateral sling can only secure the cargo on the side. The lashing devices are positioned around the cargo and fixed to the anchoring points on the vehicle.



The lateral slings are intended for securing the cargo on the side. The cargo has to be secured separately in the direction of travel and in the opposite direction.

## Combination of head slings and lateral slings

A combination of head slings (green) and lateral slings (lilac) offers the possibility of securing the cargo by lashing it directly if it does not have any anchoring points for the lashing devices.



# CARGO SAFETY - PRODUCTS

## 2-part 75mm Ratchet Lashing Strap



Width: 75 mm  
 Fixed end length: 0.70m  
 Max. elongation lashing strap: 5%  
 Permitted tensile force LC in the strapping: 10000 daN  
 Permissible LC tensile force when pulled directly: 5000 daN  
 Pre-load: 500 daN  
 Hand force with ratchet: 50 daN  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Yellow / Orange / Gray / Red  
 Standards: EN 12195-2, EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C

\*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



FG-RS01



FG-RS02



FG-RS03



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
10000-04-FG-RS01	Two Part	5000 kg	75	4.0	10000 kg

\*\* also available length : 5m, 6m, 8m, 9m, 10m, 12m, 15m, 20m

Width: 75 mm  
 Fixed end length: 0.70m  
 Max. elongation lashing strap: 5%  
 Permitted tensile force LC in the strapping: 8000 daN  
 Permissible LC tensile force when pulled directly: 4000 daN  
 Pre-load: 500 daN  
 Hand force with ratchet: 50 daN  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Yellow / Orange / Gray / Red  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C

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FG-RS01



FG-RS01



FG-RS01

Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
8000-04-FG-RS01	Two Part	4000 kg	75	4.0	8000 kg

\*\* also available length : 5m, 6m, 8m, 9m, 10m, 12m, 15m, 20m

# CARGO SAFETY - PRODUCTS

## 2-part 50mm Ratchet Lashing



Width: 50 mm  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Permitted tensile force LC in the strapping: 5000 daN  
 Permissible LC tensile force when pulled directly: 2500 daN  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Yellow / Orange / Gray / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
5000-04-FG-RS01-50	Two Part	2500 kg	50	4.0	5000 kg

Width: 50 mm  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Permitted tensile force LC in the strapping: 4000 daN  
 Permissible LC tensile force when pulled directly: 2000 daN  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Yellow / Orange / Gray / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
4000-04-FG-RS01-50	Two Part	2000 kg	50	4.0	4000 kg

\*\* also available length : 5m, 6m, 8m

Width: 50 mm  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Permitted tensile force LC in the strapping: 2000 daN  
 Permissible LC tensile force when pulled directly: 1000 daN  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Yellow / Orange / Gray / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
2000-04-FG-RS01-50	Two Part	1000 kg	50	4.0	2000 kg

\*\* also available length : 5m, 6m, 8m

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# CARGO SAFETY - PRODUCTS

## 2-part 35mm Ratchet Lashing Strap



Design: 2-part  
 Width: 35 mm  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Blue / Orange  
 Standards: EN 12195-2  
 Min./max. temperature conditions: -40 to 100 °C

\*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
2000-04-FG-RS01-35	Two Part	1000 kg	35	4.0	2000 kg
3000-04-FG-RS01-35	Two Part	1500 kg	35	4.0	3000 kg

\*\* also available length : 5m, 6m, 8m

## 35mm Ratchet Lashing Strap - Endless

Width: 35 mm  
 Fixed end length: 4m  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Blue Label: Yes  
 Colour: Blue / Gray  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C

\*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
3000E-04-FG-RS01	Endless	1500 kg	35	4.0	3000 kg
4000E-04-FG-RS01	Endless	2000 kg	35	4.0	4000 kg

\*\* also available length : 5m, 6m, 8m

# CARGO SAFETY - PRODUCTS

## 2-part 25mm Ratchet Lashing Strap



Width: 25 mm  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Orange / Gray / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



\*\* also available length : 5m, 6m



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
1500-04-FG-RS01-25	Two Part	800 kg	25	8.0	1600 kg

Width: 25 mm  
 Ratchet Handle type: Sheet Metal  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Shape of the hook: Double J-hook  
 Blue Label: Yes  
 Colour: Yellow / Orange / Gray / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



\*\* also available length : 5m, 6m



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
1000-04-FG-RS01-25	Two Part	500 kg	25	4.0	1000 kg



Width: 25 mm  
 Fixed end length: 0.50m  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Shape of the hook: S-hook, PVC coated  
 Blue Label: Yes  
 Colour: Gray / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
1000SK-04-FG-RS05-25	Two Part	500 kg	25	4.0	1000 kg

\*\* also available length : 5m, 6m

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# CARGO SAFETY - PRODUCTS

## 25mm Endless Ratchet Strap



Design: Endless  
 Width: 25 mm  
 Ratchet Handle type: Sheet Metal  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Blue Label: Yes  
 Colour: Blue  
 Standards: EN 12195-2  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
1500-04-FG-RS01-25	Endless	800 kg	25	6.0	1600 kg

\*\* also available length : 4m, 5m

## 25mm Endless Ratchet Strap

Design: Endless  
 Width: 25 mm  
 Ratchet Handle type: Sheet Metal  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Blue Label: Yes  
 Colour: Blue  
 Standards: EN 12195-2  
 Min./max. temperature conditions: -40 to 100 °C  
 \*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
1000-04-FG-RS01	Endless	500 kg	25	4.0	1000 kg

\*\* also available length : 5m, 6m, 8m

# CARGO SAFETY - PRODUCTS

## CAM Buckle Lashing Straps



Width: 25 mm  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Blue Label: Yes  
 Colour: Orange / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C

\*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.

\*\* available lengths : 2m, 3m, 4m, 5m, 6m



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
300-25-03	Endless	150 kg	25	3.0	300 kg

Width: 35 mm  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Blue Label: Yes  
 Colour: Orange / Blue  
 Standards: EN 12195-2; EC machine directive (2006/42/EG)  
 Min./max. temperature conditions: -40 to 100 °C

\*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.



\*\* available lengths : 2m, 3m, 4m, 5m, 6m



Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
500-25-05	Endless	250 kg	35	5.0	500 kg

Width: 50 mm  
 Max. elongation lashing strap: 5%  
 Material: 100% PES - Polyester  
 Blue Label: Yes  
 Colour: Blue  
 Standards: EN 12195-2  
 Min./max. temperature conditions: -40 to 100 °C

\*\* Lashing Webbing is made up with 100% Dope-dyed High Tenacity Polyester Yarn, hence maintains the colour life time.

\*\* available lengths : 2m, 3m, 4m, 5m, 6m



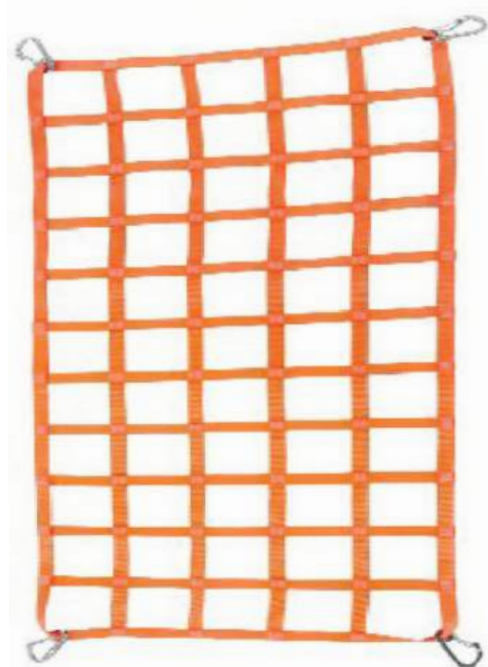
Code	Description	Lashing Capacity (LC)	Width (mm)	Length (m)	Min. breaking force
800-25-05	Endless	400 kg	50	5.0	800 kg

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## Cargo Securing Net



Material: 100% PES - Polyester  
Shape of the hook: Triangle D-rings  
Colour: Yellow / Orange / Green  
Standards: EN 12195-2  
Min./max. temperature conditions: -40 to 100 °C

\*\* Customized Sizes available





# CARGO SAFETY - PRODUCTS

## Metal Components - Ratchet Tensioners, CAM Buckle, J-Hooks



**FG-CM3501**

Size. 35mm

BS: 500 kg / 1100 lbs



**FG-CB5001**

Size. 50mm

BS: 800 kg / 1765 lbs



**FG-RB2501**

Size. 25mm

BS: 1500 kg / 3300 lbs



**FG-RB3501**

Size. 35mm

BS: 1500 kg / 3300 lbs



**FG-RB3502**

Size. 35

BS: 1500 kg / 3300lbs



**FG-RB5001**

Size. 50mm

BS: 5000 kg / 11000 lbs



**FG-RB5002**

Size. 50mm

BS: 4000 kg / 8800 lbs



**FG-RB5003-LH**

Size. 50mm

BS: 5000 kg / 11000 lbs



**FG-RB5004-GH**

Size. 50mm

BS: 2500 kg / 5500 lbs



**FG-RB5000-ERGO**

Size. 50mm

BS: 5000 kg / 11000 lbs



**FG-RB8000**

Size. 75mm

BS: 8000 kg / 17650 lbs



**FG-RB10000**

Size. 75mm

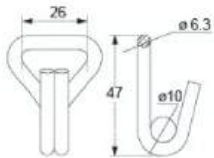
BS: 10000 kg / 22000 lbs

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## Wired J-Hooks for Ratchet Lashing Straps

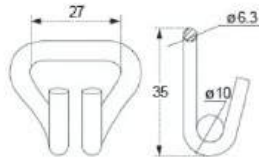
**FG-DH2501**

Size. 27mm



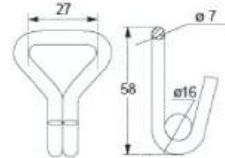
**FG-DH2501-1**

Size. 27mm



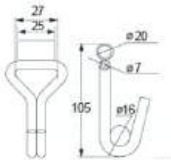
**FG-DH2702**

Size. 27mm



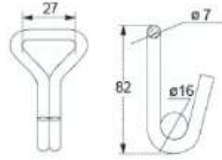
**FG-DH2703**

Size. 27mm



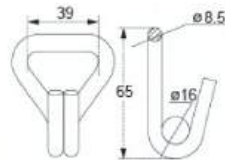
**FG-DH2704**

Size. 27mm



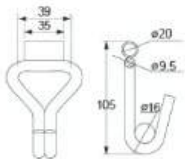
**FG-DH3801**

Size. 38mm



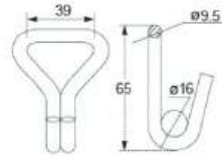
**FG-DH3802**

Size. 38mm



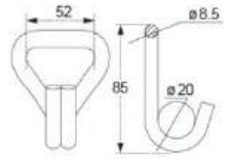
**FG-DH3803**

Size. 38mm



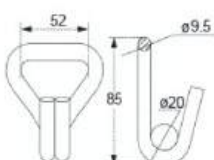
**FG-DH5002**

Size. 52mm



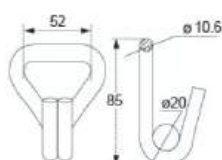
**FG-DH5003**

Size. 52mm



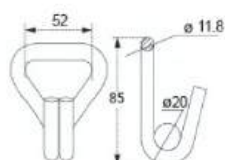
**FG-DH5004**

Size. 52mm



**FG-DH5005**

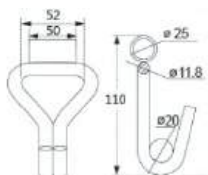
Size. 52mm



# CARGO SAFETY - PRODUCTS

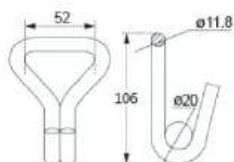
## FG-DH5006

Size. 52mm



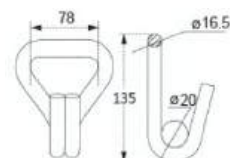
## FG-DH5007

Size. 52mm



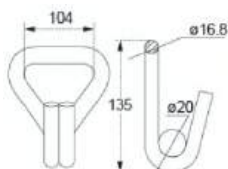
## FG-DH7501

Size. 78mm



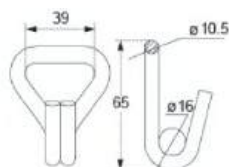
## FG-DH1001

Size. 104mm



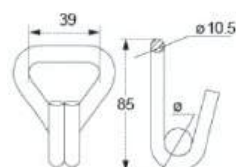
## FG-DH3801

Size. 38mm



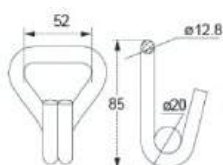
## FG-DH3802

Size. 38mm



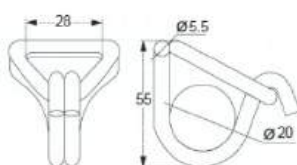
## FG-DH5001

Size. 52mm



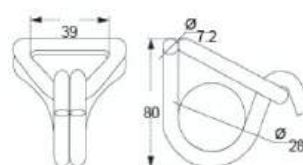
## FG-DH2501

Size. 28mm



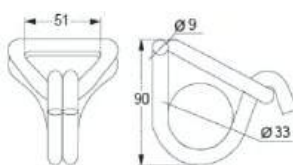
## FG-DH3802

Size. 38mm



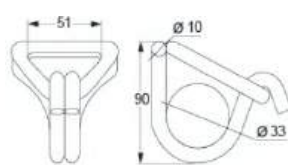
## FG-DH5001

Size. 51mm



## FG-DH5002

Size. 51mm



## FG-DH5005

Size. 51mm

