

EN 12 195-2 **STANDARD**

March 2001

he European Committee of Normalization (CEN) have agreed and decided that lashing devices shall be manufactured according to the European Standard for lashing EN-12195-2. This standard provides the user with all information as regards to the products itself and its follow up which is similar to the regulation applied to lifting equipment.

Features:

- ▶ WLL or LC : Working Load Limit (WLL) or Lashing Capacity (LC) = Maximum direct tensile strength which a lashing device can withstand when used.
- ▶ Safety factor :
 - ≥ 2 times for the complete system.
 - ≥ 2 times for fittings.
 - ▶ 3 times for non woven webbing.
- ▶ **Test:** hooks and accessories including the lashing devices must not show any signs of deformation likely to affect their performance at a LC of 1.25: they must also withstand a safety factor of at least 2.
- ▶ **Elongation :** The webbing must not elongate more than 7% when subjected to the LC.

Product description and ordering:

The description of lashing systems must include all the following information:

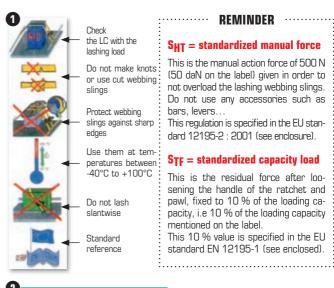
- ▶ the type of lashing device represented with its reference:
 - Doe part system (endless),
- ▶ Reference of type, according to the manufacturer,
- ▶ Working Load Limit (WLL) in daN,
- ▶ Length of the short part in meters,
- ▶ Total length (L) in meters,
- ▶ Reference to this standard

Marking:

End fittings, buckles, tensioning devices and load indicators must at least bear the name or the symbol of their manufacturer or supplier.

Each complete set of products or subset, in case components have to be separated, must bear the following information on a tag.

LASHING PRODUCT LABEL



$S_{HT} = standardized manual force$

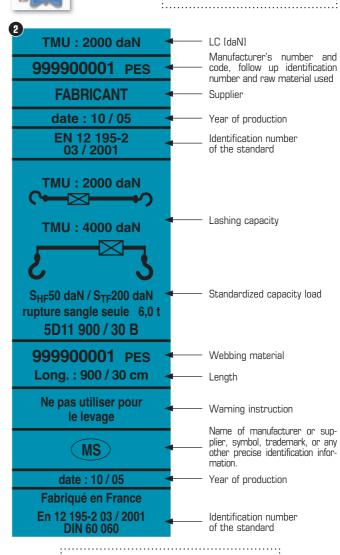
This is the manual action force of 500 N (50 daN on the label) given in order to not overload the lashing webbing slings. Do not use any accessories such as bars, levers...

This regulation is specified in the EU standard 12195-2: 2001 (see enclosure).

STF = standardized capacity load

This is the residual force after loosening the handle of the ratchet and pawl, fixed to 10 % of the loading capacity, i.e 10 % of the loading capacity mentioned on the label.

This 10 % value is specified in the EU standard EN 12195-1 (see enclosed).



LABEL COLOURS:

- O Blue for polyester webbing slings
- O Green for polyamide webbing slings
- O Brown for polypropylene webbing slings



LASHING SYSTEMS

OPERATING INSTRUCTIONS IN 25 POINTS

- The lashing systems must be used and selected according to:

 a > The required loading capacity, b > The kind of use, c > The type of load.
- This selection will be made according to:

 a > The size, the shape and the weight of the load, b > The expected method of use, c > Transportation, d > The type of load.
- The minimal lashing is made up of:

 a > A pair of lashing systems for a rubbing lashing, b > Two
 pairs of lashing systems, for a direct lashing.
- Selected lashing systems should be strong enough and should have the appropriate length for its use.
- Follow exactly the given instructions for the lashing: foresee the fixing and removing of the lashing systems before transportation starts.
- Remove all the lifting equipment before lashing the load.
- Remember that the loading can be partly unloaded in case of long distance transportation.
- Count the amount of lashing systems in accordance with the EN 12195-1 standard.
- Only the lashing systems meant for rubbing lashing with STF mentioned on the label can be used for this type of lashing.
- Different kinds of lashing systems (lashing chain and lashing webbing sling) must not be used to lash the same load because of their different performances and elasticity when they are loaded.
- Take into account the different fixing and secondary lashing devices; they must be compatible with the lashing systems.
- When using large hooks, ensure that the anchoring place is situated along the whole hook width.
- When releasing the load, make sure the load stability is independent from the lashing. Its releasing must not allow the load to fall out of the vehicle, which could be dangerous for the staff. For other means of transport, fix the lifting equipment in the load before releasing the buckles in order to avoid falls.
- Before unloading, lashing systems must be released in order to unload freely.
- While you load or unload, ensure that no high tension line is close to you.
- Lashing systems in accordance with the EN 12195 standard may be used between the following range of temperatures:
- a ► Between 40°C to + 80°C for polypropylène,
- **b** Between 40°C to + 100°C for polyamide,
- c ► Between 40°C to + 100°C for polyester.

These temperatures can change in a chemical environment. In this case, ask manufacturer or supplier for advice.

During the transportation, a variation of the ambient temperature can modify the strength of the lashing system. After entering heated areas, check the tension effort.

- Lashing systems are made up of materials which can resist chemical product attacks. Ask the manufacturer or supplier for advice if such hazardous conditions may occur. Chemical product effects can increase according to temperatures. See the resistance of some chemical textiles in chemical active environnements below.
- a > Polyamide does not react to alkalis effects. However, it is not resistant to mineral acids attacks:
- **b** Polyester resists mineral acids but not alkalis attacks ;
- **c** > Polypropylene is lightly altered by acids and alkalis: suitable for uses requiring high resistance to chemical products (other than organic solvents);
- **d** Innocuous acids or alkalis solutions can become concentrated by evaporation and can therefore damage the material. Remove the damaged lashing systems, clean it in cold water and let it dry in the open air.
- All damaged lashing systems must be sent back to the manufacturer for repairing. Products are considered damaged if any of the following is visible:
- **a** > For webbing slings (to reject): tears, cuts, snags or crushed web on carriying fibres, broken or worn threads in the stich patterns; distortion due to heat exposure;
- **b** For end fitting and buckles: when they are pitted, corroded, distorted, cracked or broken.

Repairing should only be carried out under the manufacturer's responsibility. Only the lashing systems which have an identification label can be repaired. After repairing, the manufacturer must guarantee that the original lashing system performances are maintained or restored. In case of accidental exposure to chemical products, lashing systems must be removed from service and the manufacturer or supplier asked for advice.

- Ensure that the lashing system is protected from any sharp corners on the load.
- Lashing systems, and all others fixing means, must be frequently inspected after a first detailed check which has to be carried out by a qualified technician; if there is any doubt about their state, they should be withdrawn from service immediately. Visual inspection is recommended after each use.
- Only use lashing systems with a legible capacity tag.
- Lashing systems must not be overloaded: only the maximal manual tension strength 50 daN (1 daN = 1 Kg) must be applied. Do not use any mechanical helps such as lever, bars... unless they have been especially made for the lashing system.
- Lashing systems should never be knotted.
- Avoid damaging capacity tag; protect it from any sharp corners on the load or the load itself.
- Lashing system should be protected against rubbing, abrasive wear and damage due to sharp edges on the load by using protection mantles and/or corner protectors.



№ Recommendations for use (EN 12 195-2)

- Lashing devices should be used according to the instructions for use supplied with the products.
- They can not be used for lifting loads.
- The forces used should not exceed the LC capacity indicated on both the labels and the products.
- The webbing slings should not be knotted.
- Protection against sharp edges, abrasive surfaces is necessary. Use appropriate protection equipment.
- Lashing devices should not be used at temperatures between 40°C or above + 100°C. When operating in an active chemical environnment, first check with the manufacturer.
- Connections of end fittings to fasten anchoring points must comply with the manufacturer's recommendations. These recommendations should be specified in case of tie-down accessories used for fastening to a vehicle (ie tie-down tracks inside trucks/trailers). The maximum distance between the fastening points to which
- the tie-down accessories have to be attached should be particularly specified, as well as the maximum tension and the shearing force which the fastening points can withstand. The use of any accessory which has not been approved by the manufacturer to operate the buckles, especially to amplify belt tension, is prohibited.
- Lashing devices should be stored in a cool and dry place. They must not be exposed to sunlight and also protected from a chemical environnement.

Maintenance, repair, limitation of use

- Lashing devices should be withdrawn from service or returned to the manufacturer for repair when they show any sign of damage.
- Remove from service if any of the following is visible: ▶ For lashings (to be scrapped): tears, cuts, snags,broken or worn thread in bearing fibres or in the stitch; deformations resulting
- from heat exposures; missing identification tags:
- For end fittings and buckles : distortion, cracks, excessive wear and corrosion.
- Repairs can only be carried out under the manufacturer's responsibility. Only lashing devices with legible identification labels can be repai-
- red. After repairing, the manufacturer should guarantee that the original performance of the device is restored.
- In case of accidental contact with chemicals, a lashing device can only be returned to service once it has been approved by the manufacturer.

3 General instructions

Calculation of forces occurring during transport

- The following values are generally accepted:
- a > for starting, accelerating, downhill braking: the load must be fastened with a force at least equal to 50 % of its dead weight;
- b for breaking, the load should be fastened with a force at least equal to its dead weight;
- For going round bends, the load must be fastened with a force at least equal to 50% of its dead weight (centrifugal force increases in tight bends and at high speeds).
- Make sure that you are using a suitable vehicle for each load. Your speed should be

adapted to the traffic, to the road conditions and comply with the admissible loading capacity and technical specifications of the vehicle.

IMPORTANT

- Fasten the load so that its centre of gravity is as close as possible to the centreline of the vehicle longitudinal axis (the centre of gravity must be as low as possible).
- When loading, make sur you respect the vehicle's total permissible weight and the maximum weight per axle. For part loading, share the weight evenly.
- Respect the vehicle's laden weight and other prescribed weight specifications
- Anchoring points on the floor should be avoided: fasten the load so that it cannot shift, turn over, roll, fall out or cause the vehicle to topple over (in normal driving conditions i.e. emergency braking, uneven road surface).
- It is possible that the packaging or anchoring points provided on the load can bear the forces generated by acceleration.

¥ Load capacity and corresponding systems?

Direct tension in daN	Width webbing in mm	LC system in daN	Double tension	Min. breaking strenght webbing in daN	Standard length in m
TMU 5 000 daN	75	5 000	10 000	15 000	9, 10
TMU 3 500 daN	75	3 500	7 000	11 000	9, 10
TMU 2 500 daN	50	2 500	5 000	7 500	8, 9, 10
TMU 2 000 daN	50	2 000	4 000	6 000	8, 9, 10
TMU 800 daN	45	800	1 600	3 000	4, 5, 6
TMU 900 daN	35	900	1 800	3 400	6, 7
TMU 400 daN	25	400	800	1 200	4, 5, 6

Note: A lashing system includes a sewn belt and metal components. **Lashing webbing refers only to the non sewn sling.**

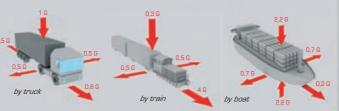
> Fastening in safety

Basic rules for fastening

Loading repartition plan



Loading taking into account the occurring forces



Loading blocking methods





▶ Hoopin

>>>>>>>>>>







LASHING SYSTEMS - LC 5 000 daN - 15 tons* FOR VEHICLE CARRIER - HEAVY DUTY LASHING SYSTEMS

Webbing 75 mm width – Ratchet load binder with secured opening (breaking strength of the webbing only: 15 Tons)

Complying with EN 12195-2 standard



Ref: 975T5/1

	Weight / 8 m	5 200 g
6	Weight / m +	230 g



Ref : 975T5/1069

8	Weight / 8 m	6 270 g
6	Weight / m +	230 g



Ref : 975T5/1067

8	Weight / 8 m	6 680 g
6	Weight / m +	230 g



Ref: 975T5/25502

	Weight / 8 m	7 850 g
6	Weight / m +	230 g



Ref: 975T5/DELTA

	Weight / 8 m	7 800 g
6	Weight / m +	230 g



Ref: 975T5/DELTA/CRO

	Weight / 8 m	9 450 g
6	Weight / m +	230 q



SO IMPORTANT: Using a lever to stretch the lashing system is strictly forbidden.

TECHNICAL FEATURES

- ▶ Marking
- ▶ Customized length upon request
- ▶ Polyester
- ▶ Traceability
- ▶ EAN13 bar code labelling
- Colour: Green " army "





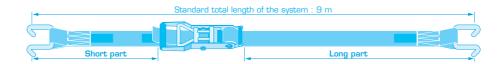






LASHING SYSTEMS - LC 2 500 daN - 7.5 tons* WITH AN ERGONOMIC RATCHET LOAD BINDER FEATURING A PROGRESSIVE RELEASE

Webbing 50 mm width - Ratchet load binder with secured opening, high performance (breaking strength of the webbing only: 7.5 tons) - Complying with EN 12195-2 standard



Ref: 811ALL2,5/1065

 Weight / 9 m
 3 130 g

 Weight / m +
 130 g



NOTICE: A standardized lashing system is a safe lashing system.

Ref: 811ALL2,5/1006

 Weight / 9 m
 3 195 g

 Weight / m +
 130 g



TECHNICAL FEATURES

- Marking
- ▶ Customized length upon request
- ▶ Polyester
- ▶ Traceability
- ▶ EAN13 bar code labelling
- ▶ Colours: Orange, Blue



 Weight / 9 m
 3 640 g

 Weight / m +
 130 g







>>>>>>>>>>

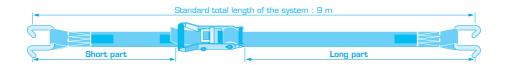






LASHING SYSTEMS - LC 2 000 daN - 6 tons* **HEAVY TRUCK**

Webbing 50 mm width - Ratchet load binder with secured opening (breaking strength of the webbing only: 6 Tons) Complying with EN 12195-2 standard





TECHNICAL FEATURES
Marking
▶ Customized length upon request
▶ Polyester
▶ Traceability
▶ EAN13 bar code labelling
▶ Colours: Black, Blue, Orange, Yellow, Red and Green

AVAILABLE FITTINGS ON YOUR LASHING SYSTEMS









LASHING SYSTEMS - LC 900 daN - 3.2 tons* SMALL BUSINESS

Webbing 35 mm width - Ratchet load binder with secured opening or tensioning strap buckle (breaking strength of the webbing only: 3.2 tons) - Complying with EN 12195-2 standard









LC : 400 daN

TECHNICAL FEATURES
▶ Marking
▶ Customized length upon request
▶ Polyester
▶ Traceability
▶ EAN13 bar code labelling
▶ Colours: Black, Blue, Orange, Red, Yellow, White, Green

* ADVICE: Prior to the use of your lashing systems, carefully check their condition.



















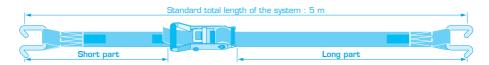






LASHING SYSTEMS - LC 400 daN - 1.2 tons* **LEISURE ACTIVITIES - TOURISM**

Webbing 25 mm width - Ratchet load binder or tensioning strap buckle (breaking strength of the webbing only: 1.2 tons) - Complying with EN 12195-2 standard Colours: Blue, Orange, Red, Green, Yellow















Ref: 909/1



1101 1 000/ 1017	
Weight / 5 m	450 g
Weight / m +	25 g



Ref : 909/1002		
Weight / 5 m	620 g	
Weight / m + 25 g		



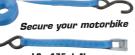
vveignt / m +	20 g
~	

Weight / 5 m	620 g
Weight / m +	25 g
0	
1	

Ref : 803/1202			
Weight / 5 m 330 g			
Weight / m +	25 g		



Ref : 909/1017	
Weight / 5 m	790 g
Weight / m +	25 g





490 g







Weight / 5 m



LC: 250 daN

A standardized lashing system is a safe lashing system.



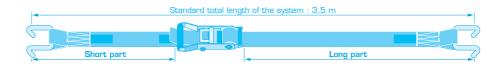


LASHING SYSTEMS - LC 800 daN - 3 tons* HEAVY TRUCKS & COMMERCIAL VEHICLES

Webbing 45 mm width - Ratchet load binder or load binder (breaking strength of the webbing: 3 tons)

Complying with EN 12195-2 standard





















ADVICE: Check the compatibility of your end fittings and your anchorages.

>>>>>>>



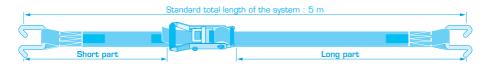






STAINLESS STEEL LASHING SYSTEMS FOR YACHTING ACTIVITIES

Webbing 50, 35 and 25 mm width - Standard lengths: 9 and 5 meters Complying with EN 12195-2 standard





Ref: 811PPI-1006I Width 50 mm Weight / 9 m 2 657 g Weight / m + 110 g LC: 1 500 daN

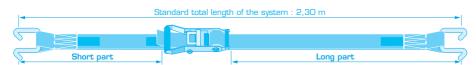


Ref : 9061-10021	
Width	25 mm
Weight / 5 m	414 g
Weight / m +	25 g



LASHING SYSTEMS FOR CARS CAR AND TRUCK TIE DOWN ON FLAT BED TRAILER

Webbing 50 and 35 mm width - Standard lengths: 2.30 and 2.50 meters Complying with EN 12195-2 standard





Ref: 811PP/3 1006M



Rel: 310/2 1014/13	
Length	50 mm
Weight / 2,3 m	2 658 g
Weight / m +	110 g



Ref : 908/2 1014/1J	
Width	35 mm
Weight / 2,3 m	1 823 g
Weight / m + 85 g	



Ref : 910/3J		
50 mm		
2 618 g		
110 g		
35		

Ref : 908/3J	
Width	35 mm
Weight / 2,3 m	1 973 g
Weight / m +	85 g



Ref : 910/3 1006	
Width	50 mm
Weight / 2,3 m	2 330 g
Weight / m +	110 g



*** INFORMATION:** As well as our entire product range, we propose custom-designed lashing systems.







TELESCOPIC BARS



Ref : 1811	
Length	2.21 to 2.59 m
Weight	7 500 g

CARGO CONTROL TRACKS AND LASHING END FITTINGS



Cargo control tracks used to support telescopic bars and the inner lashing systems fitted with hooks 1005 and 1827.







Ref : 3009	
Length	3 m
Thickness	2 mm
Weight	6 400 g

Universal cargo control tracks, to be used with the hooks 1826.









KARGO KEEPER



Stainless steel versionPlease contact us.

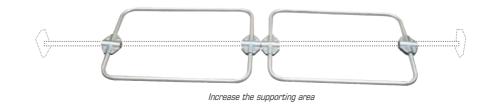
In case cargo control tracks are not available, the tensioning mechanism fitted with a spring enables to secure the loads by adjusting the length of the kargo keeper and holding both walls of the vehicle. The standard length is appropriate for wagon whose inner width is ranging from 2.35 m and 2.70 meters.



To be fixed between the walls in case cargo control tracks are not available, for securing your loads vertically or horizontally.

SPLITTING HOOPS FOR KARGO KEEPER









DECKING / SHORING BEAM AND BRACKETS

For assembling additional loading platforms





Appropriate for wagon whose inner width ranges from 2.31 to $2.53\ \text{meters}$. Frame made of high grade aluminium.

Ref : 1845

Ref: 1804



Brackets



Fit into cargo control tracks Ref. 3009 and 1806.

SHORE FOR TAUTLINER TRAILERS



ADJUSTABLE VERSION

Ref: BSR 262

 Length
 2,42 à 2,62 m

 Weight / m +
 7 700 g

We recommend the shore for tautliner trailers for the following reasons:

- ▶ Trailer loadings are more and more massive,
- ► Roads with roundabouts can increase the risks of damaging the goods,
- ▶ The goods can be strewn due to unloading by the side,
- ▶ Safety controls are more and more frequent regarding the securement of the goods.

Main advantages of the shore for tautliner trailers:

- ▶ Very easy to set up,
- ▶ Its whole body is in contact with the load,
- Made of aluminium, its weight is very light without compromising its resistance,
- ▶ Ideal for bundling the load,
- ▶ Adjustable clips for any board thickness,
- ➤ Two versions: fixed length (2.48m / 7.5kg) and adjustable length,
- ▶ Competitive solution.





CORNERS PROTECTIONS

Webbing protection

Ref : COLG P240	
Weight	5 000 g
Length	2,40 m
Inner dimensions	190 x 230 mm
Thickness	5 mm
Material	PVC
Colour	black

Ref : COLG 240					
Weight 5 000 g					
Length	2,40 mm				
Inner dimensions 220 x 190 mm					
Thickness	5 mm				
Material	polyethylene - ro- tational moulding				
Colour black, red, orange					







1.20 meter length available. Please contact us.

CORNER PROTECTORS

For 25 to 75 mm webbings





PROTECTIVE SLEEVE IN PVC

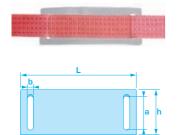




Ref : PVC/080		
Webbing width	80 mm	

Ref : DF

POLYURETHANE PROTECTION KEEPERS



Reference	Width L mm	Height h mm	a mm	b mm	For lifting slings with width in mm	For lashing webbing with width in mm	For round sling Tons
25	250	55	30	10	25	25	-
35	250	65	35	10	30	35	-
55	225	80	55	10	50	50	-
80	450	120	80	30	65/75	75	3



THE snow chain for heavy trucks which can be installed without moving the vehicle.

Handy and easy to fix in less than 10 minutes.

			-		
Ref.	Tires size*	Tire size (rim edge to rim edge) in cm		Ref.	Tire
7001	9 x R x 16	77,5		7001	445 x
7001	9 x R x 20	79		7001	445 x
7001	10 x R x 15	83,5		7002	7,5 >
7001	10 x R x 20	84,5		7002	8,25
7001	11 x R x 20	88,5		7002	8,25
7001	11 x R x 22	88,5		7002	8,25
7001	11 x R x 22,5	78		7002	9 x F
7001	12 x R x 20	95		7002	9,5 x
7001	12 x R x 22,5	84		7002	10 x l
7001	13 x R x 22,5	89,5		7002	10 x l
7001	14 x R x 20	113		7002	245 x
7001	275 x 80 x 22,5	75		7002	255 x
7001	295 x 75 x 22,5	-		7002	275 x
7001	295 x 80 x 22,5	80,5		7002	275 x
7001	305 x 70 x 19,5	76,5		7002	285 x
7001	315 x 60 x 22,5	77		7002	295 x
7001	315 x 70 x 22,5	78		7002	315 x
7001	315 x 75 x 22,5	-		7012	5 x
7001	315 x 80 x 22,5	84		7012	6 x
7001	335 x 80 x 20	90		7012	6,5 >
7001	365 x 80 x 20	99		7012	7 x
7001	385 x R x 22,5	93		7012	7 x
7001	400 x 70 x 20	-		7012	7 x F
7001	425 x 65 x 22,5	102,7		7012	7 x

		Tire size		
Ref.	Tires size*	(rim edge to rim edge) in cm		
7001	445 x 65 x 19,5	108		
7001	445 x 65 x 22,5	108		
7002	7,5 x R x 20	65		
7002	8,25 x R x 15	71		
7002	8,25 x R x 16	70,5		
7002	8,25 x R x 20	70		
7002	9 x R x 19,5	65		
7002	9,5 x R x 19,5	68		
7002 10 x R x 17,5 68		68,7		
7002 10 x R x 22,5 72,		72,5		
7002	245 x 70 x 19,5	61,8		
7002	255 x 70 x 19,5	-		
7002	275 x 70 x 22,5	69		
7002	275 x 70 x 25,5	-		
7002	7002 285 x 70 x 19,5 71			
7002	295 x 60 x 22,5	-		
7002	315 x 70 x 22,5	67		
7012	5 x R x 8	41		
7012	7012 6 x R x 9 48,5			
7012	7012 6,5 x R x 20 55			
7012	7 x R x 12	57,5		
7012	7 x R x 16	59,5		
7012	7 x R x 19,5	50,5		
7012	7 x R x 20	60		

Ref.	Tires size*	Tire size (rim edge to rim edge) in cm	
7012	7,5 x R x 15	62,1	
7012	7,5 x R x 16	62,5	
7012	8 x R x 17,5	56,2	
7012	8 x R x 19,5	58,5	
7012	8 x R x 22,5	59	
7012	8,5 x R x 17,5	58,9	
7012	9 x R x 22,5	63	
7012	9,5 x R x 17,5	65,6	
7012	175 x 75 x 16	-	
7012	185 x 75 x 16	-	
7012	195 x 75 x 16	-	
7012	205 x 65 x 17,5	49	
7012	205 x 75 x 16	-	
7012	205 x 75 x 17,5	53,5	
7012	205 x 80 x 15 55,5		
7012	215 x 75 x 17,5 55,6		
7012	225 x 75 x 10 58,4		
7012	225 x 75 x 16	-	
7012	225 x 75 x 17,5	58,9	
7012	235 x 75 x 17,5	61	
7012	245 x 70 x 17,5 61,5		
7012	255 x 70 x 22,5	64	
7012	265 x 70 x 17,5	58	
7012	265 x 70 x 19,5	66	

*Dimensions given for information only





Based on a new design, our snow chains for heavy trucks ensure easy, handy and fast installation in the most adverse conditions. Less than 10 minutes – without any particular effort – are needed to install SNOW CRAMP chains on your vehicle. Once fixed, SNOW CRAMP® chains become part of the tire without being subjected to any tension and, therefore, SNOW CRAMP chains are remarkably reliable in any situation.



Place the chain on the upper part of the tire, ratchet outside, webbing inside.



Thread the webbing through one of the rim holes



3 Insert the webbing in the ratchet.



4 Strain the chain (To maximize the efficiency and reliability, we recommend to strain a second time after having driven few meters). Up to 4 units can be installed on the same tire.

3 to 4 units per tire



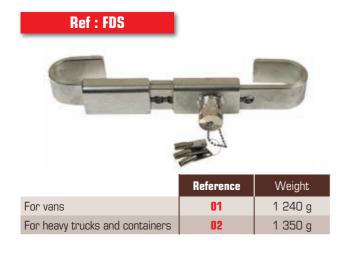
Don't let the snow affect

your performances and safety!





BARRIER SEAL LOCK





WEBBING WINDER



Ref : EDS

- \blacktriangleright Save time, just few seconds are necessary to rewind the webbing.
- ▶ Save space, trunks are more tidy.
- ▶ Easy to install, the webbing winder is provided along with its steel back-plate.

MANUAL WINCH

Opening from 50 to 100 mm. Suitable for webbing, cable, rope...

Ref : 1880		
Weight	1 600 g	
Webbing width	50 mm	

Ref : 1860/50			
Weight 3 800 g			
Webbing width 50 à 100 mm			





