

LOAD RESTRAINT



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LOAD MANAGEMENT WITH SILVERBACK

Secure and safe loads are vital for the trucking industry and ensure an operator is getting load management right, is following the correct procedures and is using the correct equipment.

The field of load restraint has become more complex in the last couple of years. First there was the revamp of the Load Restraint Guide, which cleared up some anomalies and made the load restraint guidelines easier to follow and more clearcut. This was followed by a major reform of the Chain of Responsibility law, making it clear the consignor and transport operator have to demonstrate they use best practice load restraint to comply with the rules.

The basic principles behind load restraint are simple, but complicated to get right. There is a need to understand the load itself, the surface it is sitting on and the specifications of the equipment used to hold and secure the load in place.

The Load Restraint Guide sets out the performance standards required. Any load needs to have a force equal to 80% of the load holding it back when braking. It also needs a force equal to 50% of the load holding it from moving side-to-side when cornering. The same force is needed to stop rearward movement. There is also a requirement for a force at 20% of load weight to hold the freight down, if the friction between the floor and the load is being used in the load restraint calculation.

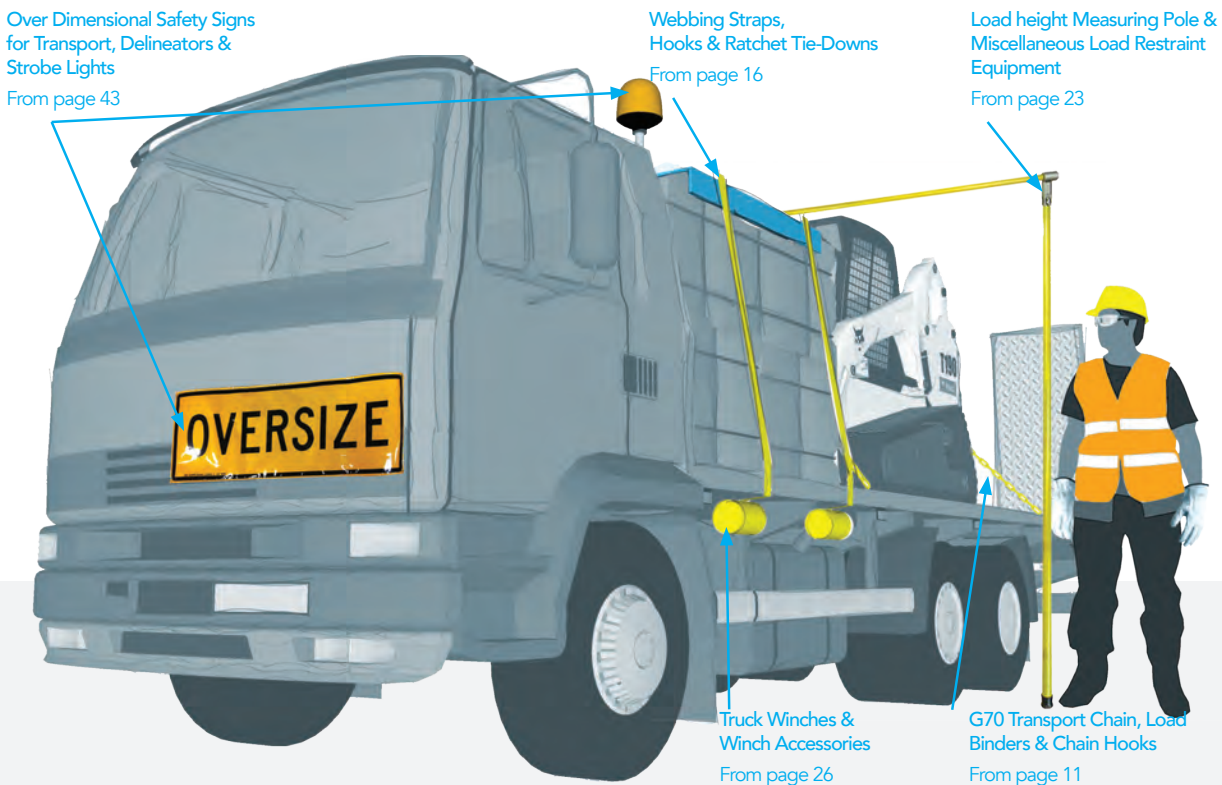
The load should be secure on the truck and not move under normal driving conditions. If it is secured to meet the standards it will not fall off or affect the stability of the vehicle under expected driving conditions. Importantly, this includes emergency braking and minor collisions.

Anyone involved in packing, loading, moving or unloading a vehicle, is deemed to be responsible for complying with load restraint laws. The load must stay securely on the vehicle under normal driving conditions and if it comes off, this is regarded as evidence the loader/operator has breached the law.

Not only are the load restraint rules laid out in the guide, but the Heavy Vehicle National Law (HVNL) has specific chain of responsibility provisions that relate to packing, loading and load restraint requirements and these are relevant to the entire transport supply chain.

Silverback load restraint equipment is branded, Silverback specified and as far as the relevant Australian Standards are concerned, we are the manufacturer. Where there is a relevant Australian Standard to be met, our products include a Silverback compliance tag and we supervise the test regime for the manufacture of the equipment. There are batch test certificates for every load restraint product we supply.

Anything which is specified by the Load Restraint Guide can be sourced from Silverback. Each item available exceeds, by some margin, the specifications required by the guide.



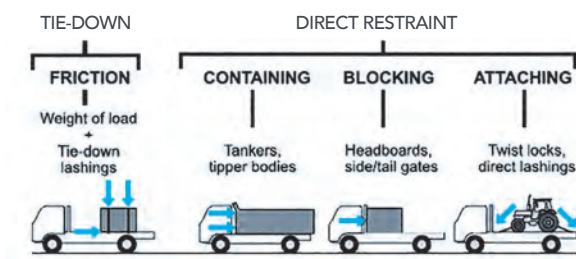
WHAT ARE THE DIFFERENT LOAD RESTRAINT METHODS?

Use a restraint system that is suitable for your Load

Choose the restraint method that is most suitable given your load and vehicle.

Loads can be restrained by two basic methods: tie-down or direct restraint (i.e. containing, blocking and attaching).

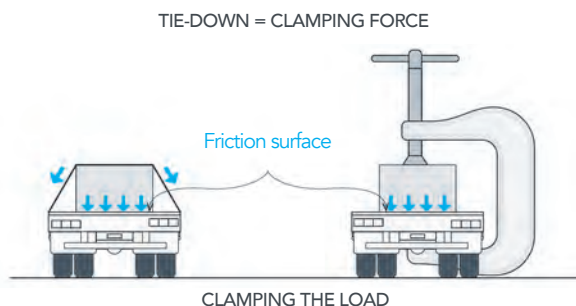
The following diagram shows the different restraint methods for controlling load movement in the forward direction. The same principles apply to backward and sideways movement.



Tie-down restraint

Under this method, friction stops the load from moving forwards, sideways and backwards. Friction force comes from both the weight of the load and the clamping force of tie-down lashings. The weight of the load alone does not provide adequate restraint.

For tie-down to be effective, the load must be in contact with the vehicle throughout its journey. Tie-down lashings clamp the load to the vehicle to maintain friction.



Understanding friction

Friction is the resistance to movement caused by the roughness of two surfaces in contact with each other.

Friction depends only on the type of surfaces and the force between them. A larger amount of contact surface area does not increase friction.

Friction between smooth surfaces can be increased using timber dunnage or anti-slip rubber matting between the surfaces.

Friction can be greatly reduced by:

- oil or water between metal surfaces
- dust, sand or other particles between surfaces.

Tie-down lashings include straps and chains. These normally pass over the top of a load and are attached to the vehicle on both sides.

Tie-down lashings need to be pretensioned to create the clamping force. This is usually done using mechanical tensioners suitable for the type of lashing you are using.

When a load is tied down and restrained using friction, it must also be restrained vertically to withstand a minimum force of 20% of its weight (i.e. $0.2W$); this stops it from shifting upwards (e.g. on rough roads) and keeps the load in contact with the vehicle throughout its journey.

Some loads are unsuitable for tie-down restraint. These include: -- crushable/fragile loads that can be damaged by lashings during tensioning -- offset loads (i.e. loads that aren't positioned along the centre line of the truck) where lashings can loosen if the load shifts sideways -- slippery loads because too many lashings are needed to create the necessary clamping force.

Want to know more?

See the vehicles and equipment module of the Load Restraint Guide 2018 for more information about restraint equipment, including tie-down lashings and tensioners.

UNDERSTANDING HOW TIE-DOWN WORKS

The amount of friction between the load and deck surfaces (and any surfaces in between) will affect how much weight each lashing can restrain. The greater the friction, the more weight that can be restrained by each tie-down lashing. Typical friction levels for common loads are outlined below:

Typical friction levels

LOAD	FRICTION
Wet or greasy steel on steel	VERY LOW
Smooth steel on smooth steel	LOW
Smooth steel on rusty steel	LOW TO MEDIUM
Smooth steel on timber	MEDIUM
Smooth steel on conveyor belt	MEDIUM
Rusty steel on rusty steel	MEDIUM TO HIGH
Rusty steel on timber	HIGH
Smooth steel on rubber load mat	HIGH

The amount of pretension that can be achieved in a lashing will also affect the lashing capacity. The greater the pretension, the more weight that can be restrained by each lashing.






The table below lists examples of average pretension that can be achieved by different tensioning items. However, it is important to know what tension you can get with your particular equipment.

Examples of average pretension

	LASHING SIZE (mm)	TENSIONER	PRETENSION FORCE (kg)
Rope	10	Single hitch	50
	12	Double hitch	100
Webbing	25	Hand ratchet	100
	35	Hand ratchet	250
	50	Truck Winch	300
	50	Hand ratchet (push up)	300
	50	Hand ratchet (pull down)	600
Chain	7 & above	Tumbuckle	1000

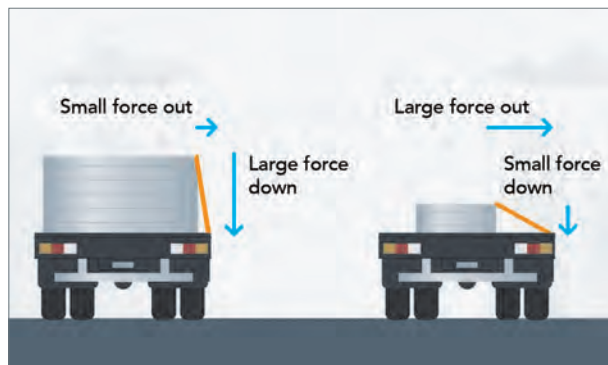
The tension in any lashing must not exceed the manufacturer's lashing capacity.

Tie-down lashings are most effective if they are vertical and tight. The more a lashing is angled away from the load, the less the clamping force. This is called the angle effect.

	APPROX ANGLE	ANGLE EFFECT	EFFECTIVENESS
	90°	1.00	100%
	60°	0.85	85%
	45°	0.70	70%
	30°	0.50	50%
	15°	0.25	25%

The lower the lashing angle, the more lashings are required to give the same clamping force. One strap at 90° is equivalent to four straps at 15°.

Whether or not a load is blocked also affects the number of lashings needed. If a load is blocked using rated equipment, some of the required restraint will be achieved by that equipment.



Want to know more?

See the "Load Restraint Guide 2018" Loads module for recommended restraint methods for particular types of loads.

For worked examples of the different restraint methods, see Working out load restraint.

For more information on how to design a tie-down restraint system, including how to calculate how many lashings you need, see Technical advice.

DIRECT RESTRAINT

Direct restraint can be used for most loads. It is particularly useful for loads that are difficult to tie down.

A load can be directly restrained by attaching, blocking or containing without any reliance on friction.

Attaching

Direct lashings are webbing straps, chains or twist locks that attach a load directly onto a vehicle.

Direct lashings are especially suitable for loads with little or no friction between the load and the loading deck, such as: - slippery loads - loads on wheels.

The required strength of the direct lashing depends on the weight of the load, the number of lashings and their direction.

The lashing strength is the lashing capacity or manufacturer's rating, which should be marked on the lashing.

Lashing capacity - webbing straps

LASHING (mm)	LASHING CAPACITY (kg)
12 (synthetic rope)	300
25 (webbing)	250/500
35 (webbing)	1000/1500
50 (webbing)	2000/2500
75 (webbing)	5000

Lashing capacity - chain

CHAIN SIZE (mm)	WITH CLAW HOOKS OR WINGED GRAB HOOKS (kg)	WITH GRAB HOOKS OR EDGE CONTACT (kg)
6 (G70)	2300	1700
7.3 (G70)	3000	2300
8 (G70)	3800	3000
10 (G70)	6000	4500
13 (G70)	9000	6700
13 (G80)*	10000	7500
16 (G80)*	16000	12000

Different hooks have different lashing capacities. Chains that pass over sharp edges have reduced lashing capacity. Total lashing capacity of a chain and hook should be regarded as the lowest rated value.

*Grade 80 chain, 'T' lifting chain or 'Herc-alloy'.

Direct lashings must be angled in the opposite direction to any expected load movement.

For example, the lashing angling down from the back of a car will stop the car from moving forwards.

When direct lashings are angled at less than 25° from the horizontal, and at 45° from the centre line of the vehicle when viewed from above, a simple rule is to select lashings with a combined lashing capacity of:

- in the forward direction = twice the weight of the load
- in the sideways direction = the weight of the load
- in the backward direction = the weight of the load. Chains should be of the same length and at the same angle to be considered working together.

Blocking

A headboard and side/tail gates can be used to block the load from moving horizontally (forwards, backwards or sideways) provided they are strong enough to withstand the forces indicated by the Performance Standards.

Containing

A load can also be contained within a vehicle where the load is restrained against horizontal movement by the vehicle structure or by other parts of the load. For more information see Contained loads.

Contained, for heavy loads, means simultaneously fully blocked forwards, rear ways and sideways.



Want to know more?

See the "Load Restraint Guide 2018" Loads module for recommended restraint methods for particular types of loads. For worked examples of the different restraint methods, see Working out load restraint.

Rules on load restraint

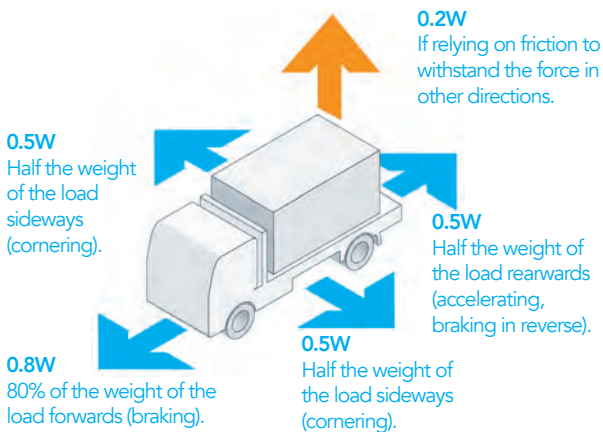
You are legally responsible for restraining your load so that:

- It does not come off your vehicle under normal driving conditions, including heavy braking and minor collisions. If it comes off, this is evidence you have breached the law.
- It does not negatively affect the stability of the vehicle, which can cause the vehicle to roll over or swerve uncontrollably, and cause an accident.
- It does not stick out of the vehicle in a way that could injure people, damage property or obstruct others' paths.

You must pick up any fallen load if it is safe to do so, or arrange for someone to retrieve it.

The law sets out performance standards for load restraint

The Performance Standards set out the minimum amount of force a restraint system must be able to withstand in each direction. For heavy vehicles, these forces are:



(W = weight of load)

If a load is restrained to meet these Performance Standards it will not fall off or affect the stability of the vehicle under expected driving conditions. This includes emergency braking and minor collisions.

Want to know more?

- The Technical advice module of the Load Restraint Guide 2018 includes more information on the Performance Standards, including how to apply them when designing a load restraint system.

Who has committed an offence?

When a Heavy Vehicle National Law loading or load restraint offence is proven, each party in the chain of responsibility could be found guilty of committing an offence. This includes:

- The employer of the driver.
- The prime contractor.
- The operator.
- The consignor of any loaded goods.
- The packer of any loaded goods.
- The loading manager.
- The loader of any goods in the vehicle.
- The driver.

Remember:

- You can have more than one duty.
- More than one person can have the same duty.
- You cannot rely on any other person to 'make the checks', do your job or take the reasonable actions required to meet your lawful obligations.

You can choose how to restrain your load to meet these standards.

The Performance Standards define what is required but not how to do it. This guide provides general information to help you choose a load restraint system suitable for your load.

You can use alternative load restraint methods provided you can show that they meet the Performance Standards. The best way to do this is to get your restraint system certified by a qualified engineer (Certification).

You must pick up any fallen load if it is safe to do so, or arrange for someone to retrieve it.

Everyone shares the responsibility for compliance.

The Heavy Vehicle National Law has specific chain of responsibility provisions that relate to packing, loading and load restraint requirements relevant to the entire transport supply chain (equivalent provisions apply in WA and NT).

Any person (including a corporation) who can control or influence transport activities, including packing, loading or restraining a load, must ensure, as far as is reasonably practicable, the safety of transport activities, including implementing safe systems and practices that remove risks and prevent any Heavy Vehicle National Law breaches.

TIE-DOWN CHECKLIST

As a minimum, reasonable actions include methods to identify, assess, control, monitor, review and remedy potentially unsafe situations or situations that could result in loading or load restraint breaches.

Every person in the chain must satisfy themselves that the vehicle, load and driver are compliant and safe. Most importantly, the entire supply chain needs to be sure that the load restraint system meets the Performance Standards.

Visit the National Heavy Vehicle Regulator website for more information on chain of responsibility.

Loading performance standards

1. A load on a heavy vehicle must be restrained by a load restraint system that prevents the load from moving in relation to the heavy vehicle.
2. However, a load may move in relation to a heavy vehicle if:

(a) The vehicle's stability and weight distribution are not adversely affected by the movement; and

(b) The load does not become dislodged from the vehicle.

Examples of load movement that may be permitted under (2) are:

1. Load contained within the sides or enclosure of the heavy vehicle that is restrained from moving horizontally may be able to move vertically;
2. A load of very light objects, or a loose bulk load, that is contained within the sides or enclosure of the heavy vehicle may be able to move horizontally and vertically;
3. A bulk liquid load contained within the sides or enclosure of the heavy vehicle.

The load restraint system must prevent the load from moving in relation to the heavy vehicle (other than movement allowed under (2)) if the loaded vehicle were subjected to:

0.8 g deceleration in a forward direction;

0.5 g deceleration in a rearward direction;

0.5 g acceleration in a lateral direction; and

If friction or limited vertical displacement is relied on to comply with, 0.2 g acceleration in a vertical direction relative to the load.

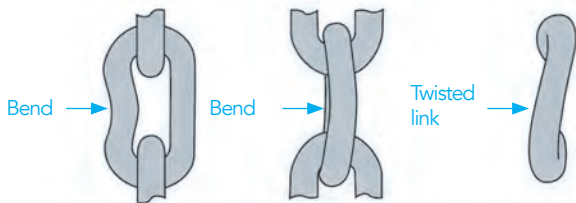
Tie-down checklist

1. Work out the total weight of your load.
2. Check the level of friction on your load (use interlayer packing to increase friction levels where necessary).
3. Make sure the vehicle deck and load are free from oil, grease, water, dirt or other contaminants that can reduce friction.
4. Choose your tie-down lashing equipment.
5. Tension your lashings. To correctly pre-tension lashings: - use smooth, rounded corner protectors to prevent lashings losing tension during the journey - where practical, place every second tensioner on the opposite side of the vehicle to maintain even load restraint OR use two tensioners on each lashing (one on each side of the load).
6. Check the angle of your lashings. If your load is too low to use tie-down lashings you can use dunnage to increase the angle by placing it: - under the load to lift it - on top of the load to increase the load height - between parts of the load.
7. Check you have enough tie-down lashings to restrain all parts of your load.
8. Use timber dunnage correctly.
9. Check it's strong enough for your load.
10. Make sure the dunnage is a suitable type and thickness for your load. Hardwoods of at least 65mm thickness should be used.
11. Check the timber is relatively free of knots and splits.
12. Place the timber on its widest face.
13. Stack it at right angles (so the higher layer is square to the one below it) if the height of the dunnage needs to be raised.
14. Don't place timber dunnage on its narrow face or stack it directly on top of itself. Dunnage can roll under heavy braking if placed incorrectly. This is extremely dangerous because it can cause lashings to loosen and all restraint can be lost.
15. Check your dunnage is lashed and secured. Unsecured dunnage can work loose and become a dangerous missile to other road users.

Inspection before use

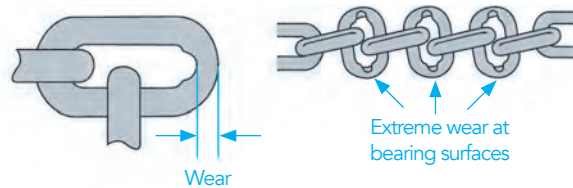
The pre-use inspection for chain should take note of the following:

1. Clean chain before inspection.
2. Every chain link should be individually inspected for any signs of wear, twisting, stretching, nicks, gouging, heat damage, chemical attack or excessive corrosion.



EXAMINE ALL CHAIN LINKS

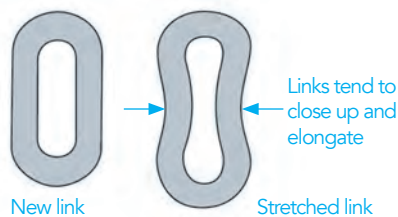
3. Any worn links should be measured to determine the degree of wear, which should not exceed 10% in any plane.
4. Upper and lower terminal links, hooks, etc. should be inspected for any signs of distortion, e.g. widening of any hook throat opening.
5. Connecting links or chain connectors should be inspected for any signs of wear at their load-bearing points and for any excessive play of the load pin.
6. Wear may be tolerated until the thickness of any worn section has been reduced by 10% of the



CHECK FOR WEAR AT BEARING SURFACES

nominal section in any plane.

7. Chain links or fittings having any defects or excessive wear should be replaced.
8. Chain with damaged fittings may be repaired by replacing the fittings before being returned to service.



LOOK FOR CHAIN STRETCH



G70 TRANSPORT CHAIN

Transport chain is a highly durable lashing type with low-stretch characteristics.

Silverback lashing chain is made from high tensile grade 70 steel and electroplated with a gold passivated finish to ensure resistance to oxidation for a longer life. Specifically designed and tested for strength and durability, to suit the rigorous requirements of the transport industry.

Grade 70 transport chain is used in heavy duty load restraining and lashing applications, including steel products, machinery, logs, bob cats, graders and other plant, pipe and concrete prefab sheets.

All Silverback Grade 70 transport chain is made to AS 4344 and stamped at least every 500mm with its lashing capacity.

Complies with AS/NZS 4344:2001

Not suitable for lifting applications



Using G70 chain

- Always use transport chain that complies with AS 4344.
- Chains manufactured from low-strength materials are heavier, bulkier and more prone to damage and wear than higher tensile steel.
- Sharp edges and rough surfaces prevent the lashing tension from equalising on both sides of the load. Smooth, rounded corner protectors enable high tension on both sides of the load, increasing the load restraint.
- Straighten out any twists in larger chains before tensioning it.
- Make sure the chain under tension is free of knots.
- Make sure the chain is attached to anchor points using appropriate hooks.
- **DO NOT** attach the chain to anchor points using knots.
- **DO NOT** use chain that has been joined with wire or bolts, or with joining links that do not match the lashing capacity of the chain assembly.



G70 Lashing Chain

Plain high tensile G70 lashing chain sold per metre or in bulk standard lengths contained within a steel drum for storage and handling.

P/N:	CHAIN SIZE (mm)	LENGTH (m)	LASHING CAPACITY (kg)	BREAKING STRENGTH (kg)	DIMENSIONS		
					A (mm)	B (mm)	C (mm)
10009	6	per metre	2300	4600	21	18	6
10019	8	per metre	3800	7600	28	24	8
10011	8	350	3800	7600	28	24	8
10029	10	per metre	6000	12000	35	30	10
10020	10	225	6000	12000	35	30	10
10039	13	per metre	9000	18000	38	42.5	13
10030	13	130	9000	18000	38	42.5	13

G70 Lashing Chain Kits

Supplied in a plastic bucket with handle for easy storage and handling

- Fitted with two winged grab hooks.
- Batch test certificate available upon request.
- Complies with AS 4344.



P/N:	CHAIN SIZE (mm)	LENGTH (m)	LASHING CAPACITY (kg)	BREAKING STRENGTH (kg)	DIMENSIONS		
					A (mm)	B (mm)	C (mm)
10060	8	9	3800	7600	28	24	8
10063	10	9	6000	12000	35	30	10
10061	Other chain sizes and lengths available upon request.						



Using load binders

- Easy and efficient means of tightening chain used for lashing purposes.
- They are durable and designed specifically for heavy transport use.
- All Silverback Load Binders are manufactured and tested for compliance with AS/NZS 4344:2001.
- Ratchet Dogs are screw tensioners operated by either a ratchet or sliding lever, they have no kickback when released and can achieve high tensions.
- Make sure the Ratchet Dog can rotate freely otherwise it will cause the chain to twist and prevent it from fully tightening.

Ratchet Dog with Winged Grab Hooks

An inexpensive option for safety applying pretension to a chain, avoiding the risk of injury that comes with “kick-back” from lever style dogs.



P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10131	6	2300
10135	8	3800
10140	10	6000
10145	13	9000

- Drop forged/cast steel, quenched and tempered with a painted finish.
- Minimum breaking load is 3.5 times the lashing capacity.
- Marked with size, lashing capacity and manufacturers mark.
- Fitted with two winged grab hooks.

Lever Dog with Winged Grab Hooks

Lever style dogs apply the required pretension to a chain being used to restrain a load.

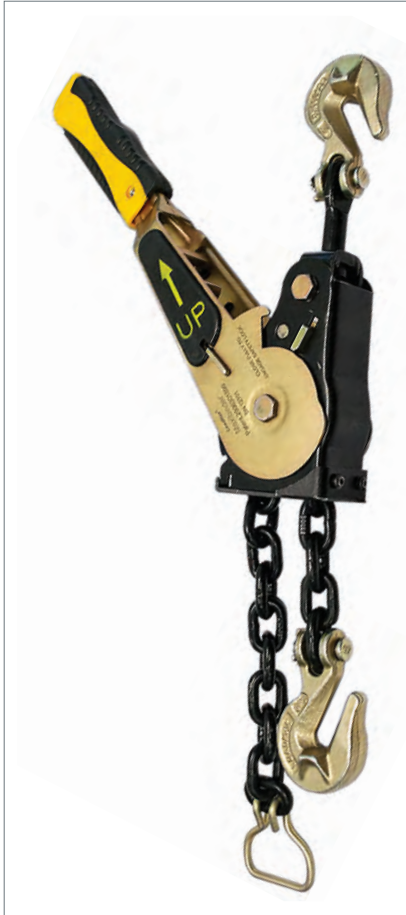


P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10100	6	2300
10105	8	3800
10115	10	6000
10120	13	9000

- Drop forged/cast steel, quenched and tempered with a painted finish.
- Minimum breaking load is 3.5 times the lashing capacity.
- Marked with size, lashing capacity and manufacturers mark.
- Fitted with two winged grab hooks.



LOAD BINDERS (CHAIN TENSIONERS)



Maxibinder

A unique unit that combines the actions of a ratchet tie-down, ratchet or lever dog all in one complete package.

P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10150	8	3800
10151	10	6000

- Made from alloy steel and heat treated for durability.
- Highly efficient, quick and easy to use chain tensioning device.
- Designed for a higher pre-tensioned strength.
- Fitted with two winged grab hooks.
- BlueScope approved.
- Conforms with AS/NZS 4344.



Web Dog with Winged Grab Hooks

Web dogs overcome the dangerous kick-back associated with lever dogs and are a safer alternative. The **SpanSet** version has the additional **Tension Force Indicator**, allowing the operator to check the amount of tension force being applied to the load.

P/N:	SUITS CHAIN SIZE (mm)	BRAND	BREAKING STRENGTH (kg)	LASHING CAPACITY (kg)
10160SCE	8	Standard	7600	3800
10160	8	SPANSET with Tension Force Indicator	7600	3800



SpanSet Tension Force Indicator. Allows the operator to check the amount of tension force being applied to the load.



- 50mm webbing assembly fitted with 8mm swivel winged grab hooks.
- Controlled Release – allowing pretension force to be released in small steps.
- Self-locking ratchet handle – prevents ratchet handle from subsequently jumping out, even the greatest vibrations and jolts have no effect.
- Durable in all conditions.
- Double Latch allows for more tension in less time.
- Extended handle – for greater leverage.
- Ample tension – Less than 10% stretch under full tension, meaning no unnecessary re-tensioning during operation.
- Reverse action ratchet – maximises ergonomic efficiency.
- BlueScope approved.
- Conforms with AS/NZS 4344.



G70 Clevis Winged Grab Hook

Winged grab hooks have cradles on both sides of the outer jaws, thus preventing any deformation to the chain during tensioning and allowing for 100% lashing capacity.

Use winged grab hooks wherever possible because they will prevent the chain link from bending and will not weaken the chain. Plain grab hooks (Without wings) weaken the chain by bending the links they contact, reducing the lashing capacity of the chain by 25%.

P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10200	8	3800
10201	10	6000
10203	13	9000

- Supplied with bolt and split pin.
- Marked with chain size, lashing capacity and grade.
- Manufactured from drop forged steel.
- Zinc passivated, gold colour.
- Complies with AS/NZS 4344 standard.



G70 Clevis Claw Hook

Clevis claw hooks provide a 100% rating as per AS/NZS 4344. The bending and shearing effect on the chain link of standard grab hooks without cradle or wings can reduce the lashing capacity of the system by up to 25%. No reduction of the lashing capacity is required with clevis claw hooks.

PLEASE NOTE: Claw hooks distribute the force evenly into the chain; however, they can distort and fail before the chain breaks. Claw hooks can become uncoupled if the chain slackens when the load settles during a journey. Claw hooks have a shallow slot, making them more likely to fall off.

P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10220	8	3800
10221	10	6000
10223	13	9000

- Supplied with bolt and split pin.
- Marked with chain size, lashing capacity and grade.
- Manufactured from drop forged steel.
- Zinc passivated, gold colour.
- Complies with AS/NZS 4344 standard.

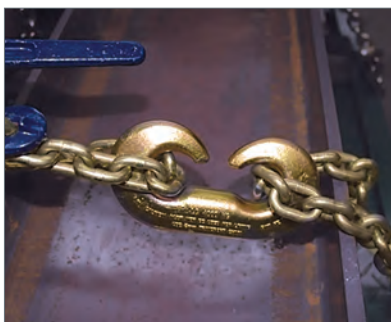


G70 Clevis Slip Hook

Clevis slip hooks are designed to enable the chain to slide through the hook and choke down as necessary. Clevis slip hooks are a general purpose, versatile and traditional shaped hook fitting for all sorts of lashing applications.

P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10210	8	3800
10211	10	6000
10213	13	9000

- Supplied with bolt and split pin.
- Marked with chain size, lashing capacity and grade.
- Manufactured from drop forged steel.
- Zinc passivated, gold colour.
- Complies with AS/NZS 4344 standard.



Chain Load Choker

Engineered and designed for application with 8mm G70 transport chain. Ideal for restricting load movement when transporting belly wrapped loads of steel or lumber. Significantly faster unloading times.

P/N:	SUITS CHAIN SIZE (mm)	LASHING CAPACITY (kg)
10271	8	4000

- Drop forged alloy steel for strength and durability.
- Zinc passivated, gold colour.
- Complies with AS/NZS 4344 standard.

Webbing is a lightweight restraint system used throughout the transport industry. Webbing assemblies include load-rated webbing material with specified stitching and sewing patterns, together with end fittings, tensioning devices and a rating tag.

Webbing assemblies with either attached or in-line ratchet winches must comply with Australian Standard AS/NZS 4380.

The lashing capacity is displayed on each assembly that complies with the relevant Australian Standard. The lashing capacity of a webbing assembly does not equal the pretension force. Typical lashing capacity for a 50mm webbing strap is 2000kg, whereas pretension is only 300kg.

When to use webbing

Use webbing to restrain:

- Palletised goods
- Loads that can settle or deform during transport (e.g. bags and sacks)
- Loads that can damage easily from lashings
- Loads that don't have sharp edges.

Webbing is more elastic than chains or steel strapping. Webbing will retain some of its initial tension during transport if a load deforms slightly or settles.

How to protect webbing straps

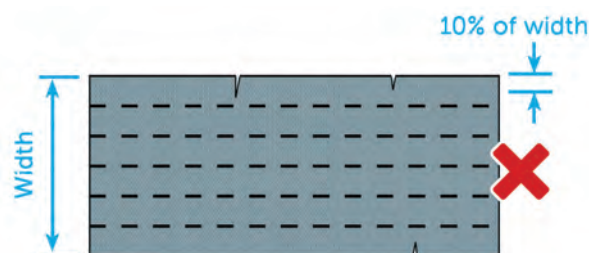
Always check for sharp edges and rough and high friction surfaces because they prevent the lashing tension from equalising on both sides of the load.

Corner protectors, sleeves or other packing material should be used where lashings and loads contact each other, especially on sharp or abrasive loads.

Smooth, rounded corner protectors enable high tension on both sides of the load.

Longer, rigid corner protectors are also useful in distributing the load across compressible or bendable products.

Figure 1. Worn Webbing Example



What to look for when using webbing

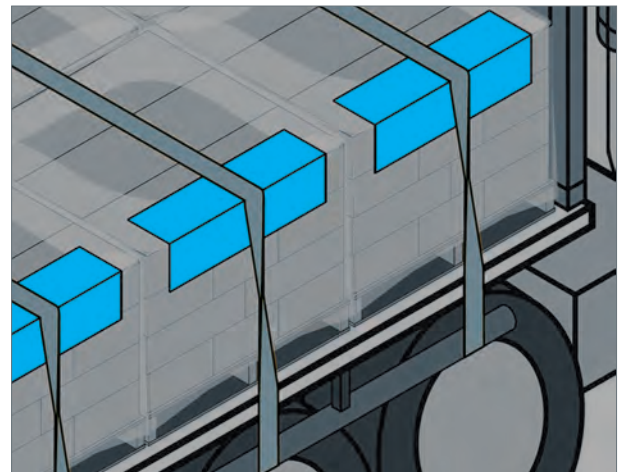
Check there are no knots or twists in the strapping.

While webbing straps should not be excessively twisted, a half-turn may help to prevent vibration and flapping.

Check strapping is not attached to anchor points using knots.

Look out for webbing that appears furry as this indicates the webbing is worn and can lead to broken load-bearing fibres.

Look out for any damage caused by cuts and abrasions, particularly where the webbing contacts the load and the coaming rails.

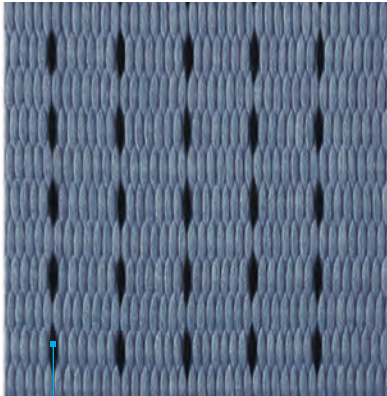


Checklist for certifiers & designers

When assessing the serviceability of webbing and attachments in relation to AS4380, if any of the following conditions exist, replace the webbing or attachment. Webbing weakened by 10% or more of its original minimum breaking strength by any of the following:

- Wear, damage or stitching failure caused by excessive loading, knotting and bending.
- Exposure to chemicals, including acid and alkaline solutions and organic solvents.
- Exposure to high temperatures.
- Prolonged exposure to sunlight or ultraviolet light (fibres will appear hairy). Webbing that appears hairy or furry indicates the webbing is worn, and may indicate that load bearing fibres are broken. See figure 1.

Also be aware of any attachments (tensioner, hook and keeper, etc.) weakened by 10% or more, or prevented from functioning by wear, damage or corrosion.



Each black stitch on a webbing strap indicates 500kg lashing capacity. In this example the strap has 5 stitches, which suggests a total maximum lashing capacity of 2500kg.

Using webbing straps

- Webbing is more elastic than chains or steel strapping. Webbing will retain some of its initial tension during transport if a load deforms slightly or settles.
- Check there are no knots or twists in the strapping.
- While webbing straps should not be excessively twisted, a half-turn may help to prevent vibration and flapping.
- Check strapping is not attached to anchor points using knots.
- Look out for webbing that appears furry, as this indicates the webbing is worn and can lead to broken load-bearing fibres.
- Look out for any damage caused by cuts and abrasions, particularly where the webbing contacts the load and the coaming rails.
- **DO NOT** use webbing assemblies with chemicals or at high temperatures without referring to the manufacturer's instructions.
- All Silverback straps are designed, manufactured and tested for compliance with AS/NZS 4380:2001.
- The lashing capacity is displayed on each assembly.

Winch Strap, Hook & Keeper

These straps are the industry standard for securing general cargo of all types. Suitable for slide or clip on truck winches.



Non-fitting end of strap is folded & stitched

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10620	3	50	2500
10621	4	50	2500
10626	9	50	2500
10628	11	50	2500
10630	13	50	2500
10631	9	50	3000
10680	9	75	5000

- Loops for hardware include inner wear strips for extra strength and durability.
- Silver strap colour.
- Fitted with two standard Silverback wear sleeves.

Ratchet Replacement Strap, Hook & Keeper

These ratchet replacement straps are the industry standard for securing general cargo. To be used as a replacement strap in a ratchet tie-down system.



P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10621-R	4	50	2500
10626-R	9	50	2500
10628-R	11	50	2500
10630-R	13	50	2500

- Loops for hardware include inner wear strips for extra strength and durability.
- Silver strap colour.
- Fitted with two standard Silverback wear sleeves.

Ratchet Replacement Strap, Single Wire J-Hook

Straps with a J-Hook can be used in the car carrying industry or any application where a standard Hook & Keeper will not do the job due to reduced access.



P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10650	3	50	2500
10681	4.5	50	2500
10656	9	50	2500

- Loops for hardware include inner wear strips for extra strength and durability.
- Silver strap colour.
- Fitted with two standard Silverback wear sleeves.

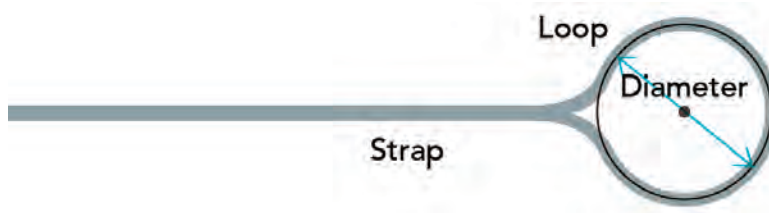


Ratchet Strap, Single Loop

Used as a replacement strap for a tire tie-down system on a tow truck deck. Also perfect for use with a ratchet buckle as a continuous ratchet tie-down for "belly strapping" cargo.

- Fitted with two standard Silverback wear sleeves.
- Standard strap colour is Silver.
- Loops for hardware include inner wear strips for extra strength and durability.
- *P/N: 10682O available in Orange.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LOOP DIAMETER (mm)	LASHING CAPACITY (kg)
10682	2.6	50	85	2500
10682O*	2.6	50	85	2500
10635	3	50	100	2500
10636	4	50	130	2500
10641	9	50	140	2500



Ratchet Replacement Strap, Deck Cleat, Pack Hook, J-Hook or T-Hook

Replacement straps used with matching ratchet and tail and a floating j-hook, deck cleat or pack hook. Silverback car carrying straps form the perfect system for securing a vehicle to a car transport deck over its tyres.

- Fitted with two standard Silverback wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.
- PU coating for increased UV protection.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	END FITTING	LASHING CAPACITY (kg)
10650	3	50	J-Hook	2500
10666	3	50	T-Hook	2000
10665	3	50	Deck Cleat	2500
10669	3	50	Pack Hook	2500

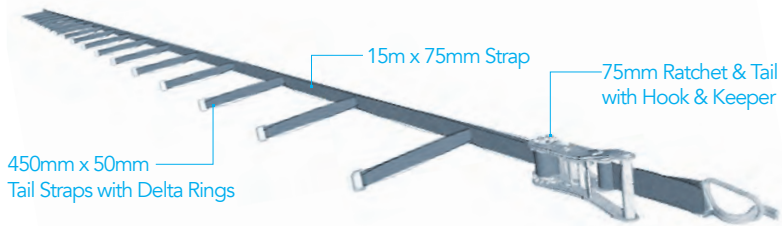
CUSTOM STRAPS

Silverback supply custom coloured and branded straps to many transport companies Australia wide. Minimum quantities apply.

Ask in-store for more details.



MISCELLANEOUS STRAP TIE-DOWNS



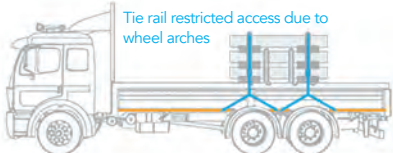
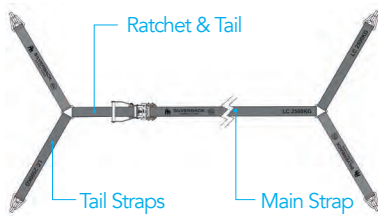
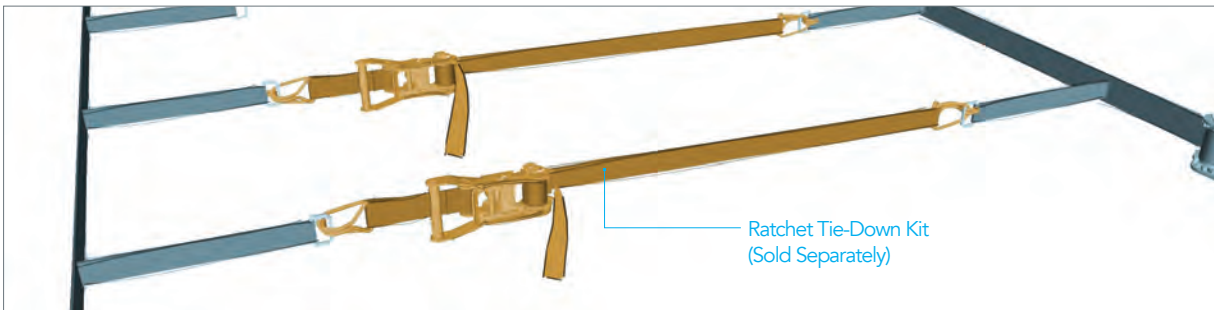
Segmented Trailer Strap System

Suitable for 24 pallet curtain side trailers, as an alternate restraining method to using vertical shoring bars. The main strap is connected to head board with rated hammerlock, shackle or custom headboard design and tail is connected to corner post using same methods. Cross over kits are connected to the tails with a rated delta hook from main strap. These are secured over the top of each pallet and tensioned to secure the cargo.

The main strap is pre-fitted to the ratchet so it remains intact during handling or should it loose tension.

- 15m x 75mm strap with hook & keeper and 75mm ratchet buckle with 500mm tail, hook & keeper LC 5000kg.
- Main strap is fitted with 17 tail straps at 800mm centre to centre distances, each tail is fitted with a LC 2500kg rated Delta Ring.
- The main strap and each tail has its own compliance tag attached.
- Sold as 1 x strap for one side of trailer.
- For use with ratchet tie-down kits to provide cross over cargo restraining.

P/N:	MAIN STRAP			17 x TAIL STRAPS		
	WIDTH (mm)	LENGTH (m)	LASHING CAPACITY (kg)	WIDTH (mm)	LENGTH (mm)	LASHING CAPACITY (kg)
10347	75	15	5000	50	450	2500



Over Arch Restraint System®

Silverback's unique Over Arch Ratchet Tie-Down design works best where combing rails end at the wheel arch on utes, rigid trucks and some trailer designs. The unique design contributes to positioning load restraint straps over loads where they need to be without having to use multiple straps, diagonally placed straps or uneven strap position. Main strap fitted with 2 additional straps with hook & keeper connected via a triangular delta-ring. The standard action ratchet buckle with tail strap has 2 additional straps with hook & keeper connected via a triangular delta-ring, all with a lashing capacity of 2500kg.

- Used to restrain loads over wheel arches.
- Silverback designed and registered product.

P/N:	RATCHET & TAIL		MAIN STRAP		TAIL STRAPS		LASHING CAPACITY (kg)
	WIDTH (mm)	LENGTH (mm)	WIDTH (mm)	LENGTH (mm)	WIDTH (mm)	LENGTH (m)	
10330-90A	50	300	50	870	50	600	2500



Single Wire J-Hook

Popular as it can be used to secure straps in horizontal, vertical or round trailer slots as well as securing straps to shipping container lashing points.

- Wire thickness of 16mm.
- Zinc passivated, gold colour.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10260	50	2500



Double Wire J-Hook

Intended for use as an end fitting on a ratchet lashing or other webbing strap shipping container lashing points.

- Wire thickness of 8mm.
- Zinc passivated, gold colour.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10262	50	2000



Hook & Keeper

Used for a tie-down accessory combined with webbing, generally for the transport industry.

- Wire thickness of 8mm.
- Zinc passivated, gold colour.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10252	50	2500



T-Hook

Designed to fit into vertical slotted car carrying trailer decks.

- Wire thickness of 16mm.
- Zinc passivated, gold colour.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10241	50	2000



Deck Cleat

Designed to fit into the trailer deck of car carrying transporters, for horizontal slots.

- Zinc passivated, gold colour.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10240	50	2500



Pack Hook

Designed to fit into the trailer deck of car carrying transporters, for horizontal slots.

- The extra bar enables the hook to slide up and down the strap without falling off.
- Zinc passivated, gold colour.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10242	50	2500



Container Hook

Choose between standard 8mm or thicker 9mm wire hooks.

- Retainer roller hook.
- Zinc passivated, gold colour.

P/N:	WIRE (mm)	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10243	8	50	1000
10244	9	50	1200

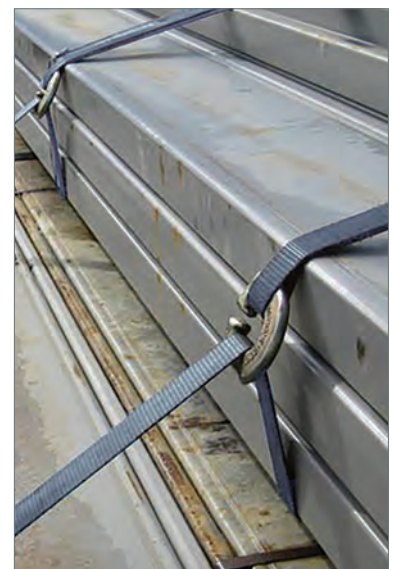


Strap Load Choker

Ideal for restricting load movement when transporting belly wrapped loads of steel or lumber.

- Zinc passivated, gold colour.
- Conforms with AS/NZS 4380.

P/N:	SUITS STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10270	50	2500





Ratchet Tie-Down Kit, Hook & Keeper

Ratchet tie-downs are commonly used for tying down loads during transportation, replacing traditional jute ropes, chains and wires. Extremely quick and efficient tie-down method and release of load, thus saving time. Available in a variety of configurations of different ratchets of various capacities. Hook & keeper kits work best on under mounted combing/tie rails on trucks, trailers and utes.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10300	5	25	500
10315	6	35	1500
10330	9	50	2500
10342	11	50	2500
10343	13	50	2500
10345	9	75	5000

- Ratchet buckle with moulded or metal handle.
- Tail strap and main strap fitted with hook & keeper.
- Silver strap colour.
- Fitted with two standard Silverback wear sleeves.
- Loops for hardware include inner wear strips for extra strength and durability.



Ratchet Tie-Down Kit, Single Wire J-Hook

Versatile ratchet tie-down for use in containers, trailers and situations where hook & keeper can't be attached.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10336	9	50	2500

- Ratchet buckle with moulded handle.
- Fitted with two standard Silverback wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.



Ratchet Tie-Down Kit, Double Wire J-Hook

Suitable for use in shipping containers, due to J-Hook fitting.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10316	6	35	1000
10344	9	50	2000

- Ratchet buckle with moulded handle.
- Fitted with two standard Silverback wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.



Ratchet Tie-Down Kit, Reverse Action, Hook & Keeper

The extra long handle provides opportunity to achieve greater pre-tension and reduces fatigue on the operator by achieving tension with the pull down action of the ratchet. Hook & keeper kits work best on under mounted combing/tie rails on trucks, trailers and utes.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10337	9	50	2500

- 'Reverse Action' long handle ratchet buckle with moulded handle - pull down to tension.
- Tension force 6.3kn.
- Fitted with two standard Silverback wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.

All Silverback ratchet tie-downs are designed, manufactured and tested for compliance with AS/NZS 4380:2001.



Ratchet Tie-Down Kit, S-Hook

Versatile unit for work utes, small trucks and restraining inside containers.

- Ratchet buckle with moulded handle.
- 2.5m tail strap and 3.5m main strap fitted with plastic coated S-Hooks.
- Fitted with two standard wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10318	6	35	500

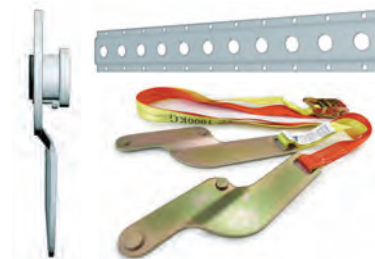


Universal Ratchet Tie-Down Kit, S-Hook & D-Ring

Versatile unit for work utes, small trucks and restraining inside containers.

- Ratchet buckle with moulded handle.
- 2.5m tail strap with rubberised S-Hook.
- 3.5m strap with D-Ring.
- Fitted with two standard wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10301	6	25	500



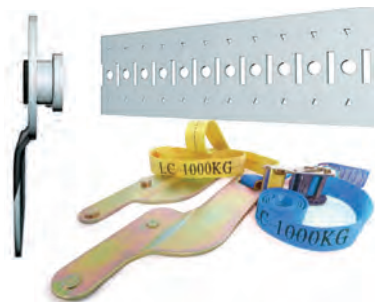
These kits can be used in conjunction with shoring bars for added restraint. Suitable for Pantech trailers and other refrigeration trucks and vans.

F-Track Ratchet Tie-Down Kit

Compatible with standard surface mount f-track profile. Provides maximum horizontal load restraint (belly strap) to prevent cargo from forward and rearward movement during transport.

- Central buckle position for ease of operation.
- F-track plate is 365mm length.
- Pin/lug centres 152mm, suits F-Series track.
- Yellow strap, 1.5mL with buckle.
- Orange strap, 1.5mL pre-fitted through buckle.
- Ratchet buckle with moulded handle.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10317	3	35	1000



Provides maximum horizontal (belly strap) load restraint to prevent cargo from forward and rearward movement during transport. These kits can be used in conjunction with shoring bars for added restraint.

F-Track Ratchet Tie-Down Kit (Schmitz)

Compatible with recessed E/F track profile. Suitable for Schmitz brand 'Cargo Bull' Pantech trailer or E/F-Series track fitted in refrigeration trucks and vans.

- Central buckle position for ease of operation.
- Yellow strap, 1.5mL with buckle.
- Blue strap, 1.5mL pre-fitted through buckle.
- F-track 'Inverted' plate 365mm length.
- Pin/lug centres 120mm.
- Ratchet buckle with moulded handle.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10317-SMTZ	3	35	1000



E-Track Ratchet Tie-Down Kit

Compatible with standard surface mount E-track profile.

- Ratchet buckle with moulded handle.
- Tail strap 400mm length and main strap 5.6m length, both with E-track end fittings.
- Straps fitted with two standard wear sleeves.
- Silver strap colour.
- Loops for hardware include inner wear strips for extra strength and durability.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10322	6	35	1000

All Silverback ratchet tie-downs are designed, manufactured and tested for compliance with AS/NZS 4380:2001.

RATCHET TIE-DOWN ACCESSORIES



F-Track & E-Track Connectors

The F-Series or E-Series connector is a perfect addition to any cargo system when your load restraints do not have the combination fittings.

- Allows straps, ropes or tie-downs to connect to the D-Ring.
- F-Track connector strap colour is blue.
- E-Track connector strap colour is yellow.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	CONNECTOR TYPE	LASHING CAPACITY (kg)
10976-F	150	50	F-Track	750
10976-E	150	50	E-Track	750



Ratchet & Tail Assembly, J-Hook or Deck Cleat

Suitable for use with a number of vehicle restraint options. Wheel straddle straps or straps with J-Hooks or Deck Cleats and as a replacement ratchet and tail for any J-Hook or Deck Cleat ratchet tie-down kit.

- Compact ratchet buckle suitable for use in restricted applications.
- Moulded handle.
- Silver strap colour.
- PU coating for increased UV protection.
- Loop for hardware includes inner wear strip for extra strength and durability.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	END FITTING	LASHING CAPACITY (kg)
10386	300	50	J-Hook	2500
10387	300	50	Deck Cleat	2500



Ratchet & Tail Strap Assembly, Hook & Keeper

Standard action ratchet buckles with tail strap and fitted with hook & keeper.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10370	400	50	2500
10390	500	75	5000

- Ratchet buckle with moulded or metal handle.
- Silver strap colour.
- Loop for hardware includes inner wear strip for extra strength and durability.



Reverse Ratchet & Tail Strap Assembly, Hook & Keeper

'Reverse Action' long handle ratchet buckle with moulded handle.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10372	500	50	2500

- Ratchet buckle with moulded handle.
- Silver strap colour.
- Loop for hardware includes inner wear strip for extra strength and durability.

Ratchet Buckles

Gold plated ratchet buckles with moulded or metal handles.

P/N:	STRAP WIDTH (mm)	TYPE	HANDLE TYPE	LASHING CAPACITY (kg)
10329	35	Standard	Moulded	1500
10398	50	Standard	Moulded	2500
10397	50	Reverse Action	Moulded	2500
10393	75	Standard	Metal	5000

All Silverback ratchet tie-downs are designed, manufactured and tested for compliance with AS/NZS 4380:2001.

MISCELLANEOUS LOAD RESTRAINT EQUIPMENT



Cargo Separation Safety Net

Used for segregating loads in trucks and containers or tying inside the doors of loaded containers to prevent loose loads from falling on the un-loader.

P/N:	LENGTH (m)	WIDTH (m)
19800	2.2	2.2



- Corner tie straps are 1.5m long.
- Cam buckles fitted at each corner for easy adjustment and tensioning.
- Made of polyethylene strands.
- The net is 50mm squares of 1.8mm gauge netting secured to a 5mm rope on the outer edge.
- Also suitable for securing loads on trailers or utilities.



Container/Trailer Door Safety Strap

Connect the Double Wire J-Hooks of the strap to a vertical bar on each of the doors of a container or trailer rear doors prior to opening. The strap will prevent the door from "flying" open should the have shifted during transport.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10698	600	50	500

- Silver strap colour.
- Double Wire J-Hooks.



Container Reefer Safety Strap

Designed with refrigerator containers (or Reefers) in mind, as there is not a lot of space behind the door bar and the insulated door. The 'reefer' container safety door strap is made of Silverback's 50mm quality webbing and is 900mm long with soft loop & quick release hook rated to 2000kg. This item is made to order so lead times apply.

- Black strap colour is standard.
- Quick Release Hook.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10698-Reefer	900	50	2000





Vertical Paper Roll Restraint System

Efficient restraint application for transporting large quantity rolls of paper in vertical position.

P/N:	STRAP LENGTHS (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10800	4	50	2500

- Specially designed top plate.
- Compatible with truck winch or ratchet & tail assembly.
- 2 x 4m long silver coloured straps.
- Loop for hardware includes inner wear strip for extra strength and durability.



Over Centre Buckle

Stainless steel over centre buckle with black plastic push button on bottom. Typically the buckle is part of a side curtain assembly used on taught liner trucks or trailers and shipping containers.

P/N:	SUITS STRAP WIDTH (mm)
10399	50

- Locking release mechanism has hard wearing black plastic cover.
- Compatible with webbing up to 50mm wide.
- Stainless steel.



Curtain Puller Strap

This simple device enables workers to pull curtains open or shut with ease. The strap hooks into the buckle and allows workers to keep their arms close to their body as they pull, using core strength and reducing the risk of over-stretching.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10327	470	35	500

- Rubber coated hook, soft grip handle.
- Silver strap colour.
- Loop for hardware includes inner wear strip for extra strength and durability.



CUSTOM RATCHET TIE-DOWNS

Silverback supply custom coloured and branded ratchet tie-downs to many transport companies Australia wide.

Minimum quantities apply.

Ask in-store for more details.





Load Restraint Guide

Provides transport drivers, operators, and other participants in the transport chain of responsibility with basic safety principles which should be followed for the safe carriage of loads on road vehicles.

P/N:	SIZE
10999	A5

- The NTC constantly reviews and updates the Load Restraint Guide in close consultation with stakeholders.
- Available to purchase as a hardcopy.



Silicone Lubricant

High performance multi-purpose silicone spray that protects, waterproofs and lubricates. It provides a thin, clear protective film which is non-staining and non-corrosive. Can be used in extreme temperatures of -40°C and +260°C. For use on metal, plastic, rubber and wood. Recommended for use on load restraint moving parts. The lubricant prevents dust and debris build up from increasing wear and tear.

P/N:	TYPE	SIZE (g)
23171	Aerosol	350

- Lubricates and revives
- Waterproof and protects
- Prevents parts from sticking
- Innovative 2 way actuator with locking tab.
- Uses a 360° valve for upright and inverted applications.



Penetrating Oil

High speed penetrant and lubricant that quickly penetrates rusted and seized metal parts. It has a low viscosity that creeps into cracks, seams, threads and joints, loosening and freeing them instantly. Wipe off any excessive oil to prevent dust and debris build up in working parts.

P/N:	TYPE	SIZE (g)
23180-W	Aerosol	400

- Frees corroded nuts and bolts
- Penetrates rust
- Helps to prevent further corrosion.
- Innovative 2 way actuator with locking tab.
- Uses a 360° valve for upright and inverted applications.



Portable Strap Winder

This device makes winding up straps quick and easy. Insert strap and wind. Then remove front face from strap winder and store.

P/N:	STRAP WIDTH (mm)	MAX STRAP LENGTH (m)
10972	Up to 50	13

- Light weight full metal construction with plastic handle for comfort.
- Corrosion protection passivated yellow.
- Designed to fit in gate pocket on most trailer decks.

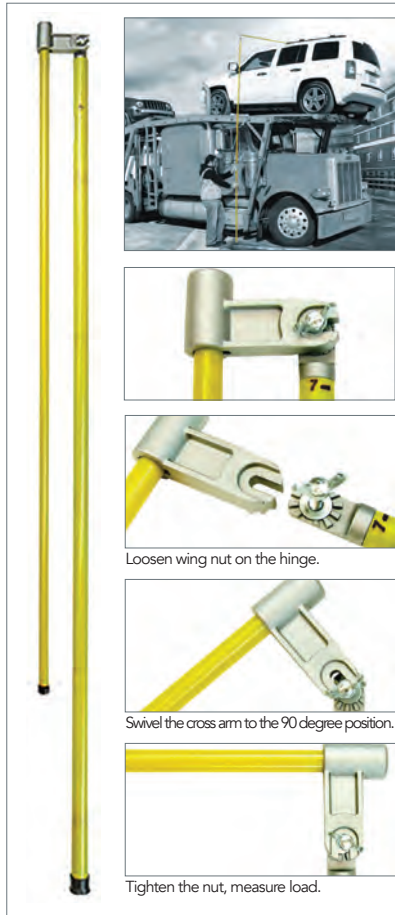


Bolt on Strap Winder

This device makes winding up straps quick and easy. The strap winder simply clamps to your truck or trailer. Slip the end of the strap through the fork and wind the handle. Slide the winder off the rail and store.

P/N:	STRAP WIDTH (mm)	MAX STRAP LENGTH (m)
10975	50 to 100	13

- Made from steel & painted black.
- Winds 50mm - 100mm straps.
- Disassembles for easy storage.



Load Height Measuring Pole

Under the latest Heavy Vehicle National Law (HVNL) and Chain of Responsibility (CoR) rules, every party in the heavy vehicle supply chain is responsible and may be held liable for safety breaches committed anywhere along the chain. The Load Height Measuring Pole is a vital safety device in compliance with (HVNL) and (CoR), to ensure maximum load heights are not exceeded for intended travel routes. Ideal item for vehicle carriers, law enforcement, heavy haulers and oversize load transporters, also useful for anywhere height measurements up to 4.57m is required.

P/N:	HEIGHT MEASUREMENT (m)
90092	1.8 to 4.57



- Extend pole, lock into position with spring.
- The strong fibreglass construction and accurate easy-to-read metric numbers, make this an invaluable safety item.
- This basic height stick has a two piece hinge, a wing nut and metric measurement markings, allows for measuring from the centre of the truck/trailer not just the visible edge when the load height might be uneven.
- The forged metal hinge secures with an easy-to-use wing nut (included), and the body of the stick is made from strong, non-conductive fibreglass.
- Length is 1.37m when fully collapsed.



Trident Pallet Angle & Strap Placement Tool

Enables pallet angles to be placed on high loads without the need to climb onto the back of the truck. Used by an average height adult to place a load angle on top of loads 3.5 - 4m high.

P/N:	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)
11073	1100	1850
11074	1450	2500

Developed and manufactured in Australia.

- Spring steel wire formed head with guide to centre and guide strap.
- Lightweight aluminium handle. <900g
- 300mm head width.
- Robust twist action to lock at any length.
- Compatible with Silverback's pallet angles.



Trident Chain Knuckle & Chain Placement Tool

Designed to enable chain knuckle protective angles to be placed on high loads without the need to climb onto the back of the truck. Used by an average height adult to place a chain knuckle on top of loads 3.5 - 4m high.

P/N:	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)
11080	1100	1850

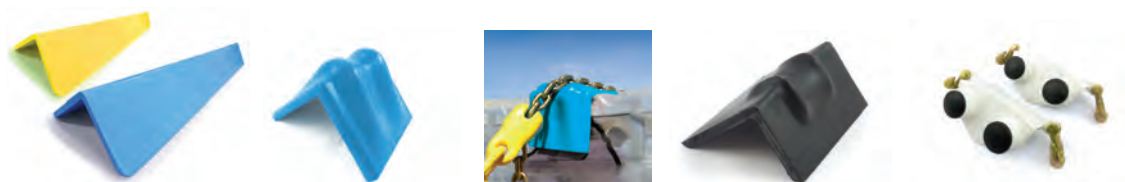
Developed and manufactured in Australia.

- Spring steel wire formed head with guide to centre and guide chain.
- Lightweight aluminium handle. <900g
- Robust twist action to lock at any length.
- Head designed to take 11041 or 11040SCE Silverback chain knuckles or other industry equivalents.



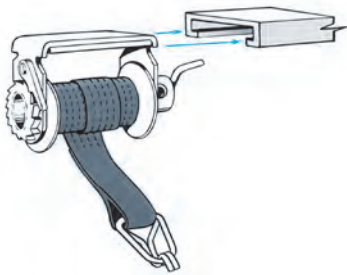
CARGO PROTECTION

Refer to our **Cargo Protection Catalogue** for additional load protection angles, accessories and products used during the load restraint process.



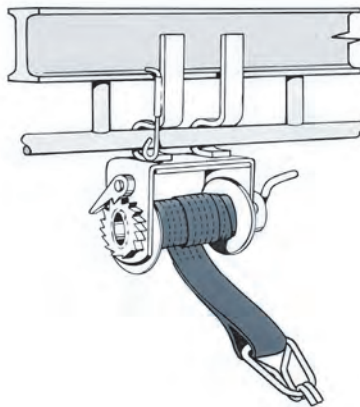
Slide-on truck winch

Fitted to a winch track.



Clip-on truck winch

Fitted to truck tie rails.

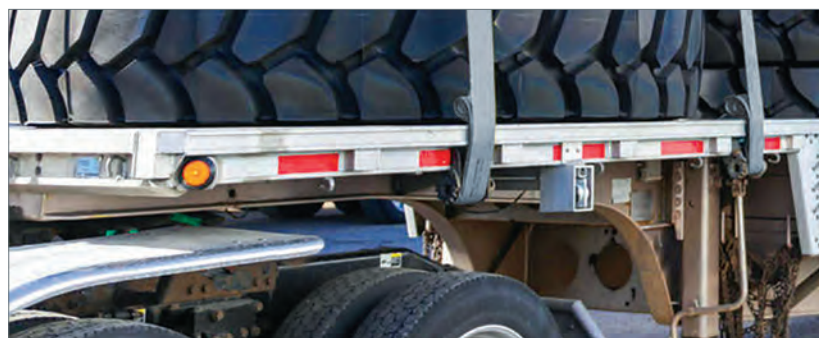
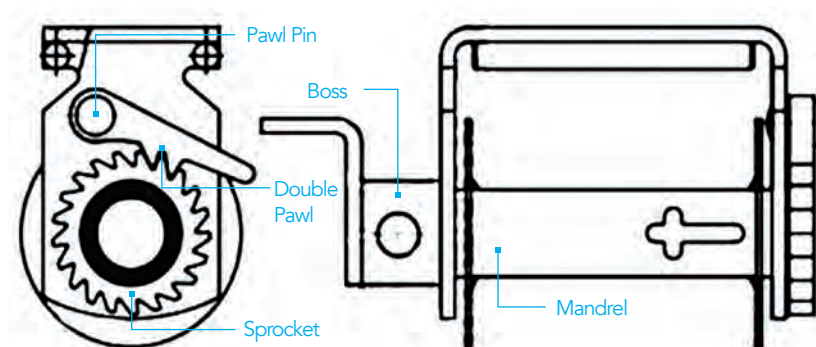


Truck winch maintenance

Though winches don't actually come in contact with the load, their function of tightening and anchoring the webbing is critical to the safety of the load restraint system. With their versatility, winches and straps can secure nearly every kind and shape of load and even allow periodic tightening of the load as necessary.

They operate in all types of extreme weather and rarely fail. Yet in spite of their importance, winches are often neglected and abused. To give the winches the care they deserve, a quick inspection before each use will insure they are undamaged and working properly. Damaged or non-operational winches should be replaced immediately.

For optimum performance, winches should be cleaned to remove dirt, mud, road salt, and ice. Dry lubrication ensures that gravity will allow the winch pawl to drop freely into the sprocket teeth, and the sprocket will rotate freely. When not in use, portable winches should be cleaned and stored in a dry location.



Truck winch guidelines

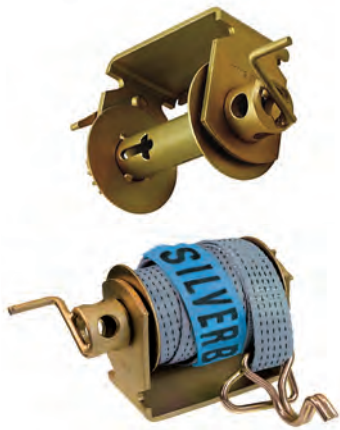
- Keep it tight - not loose.
- Make sure gear teeth are in good working order.
- Make certain appropriate winch is used.
- If you are using a clip-on winch ensure the arms are straight and not bent.
- When in use, ensure that at least 3 loops of webbing remain on winch mandrel.
- Winch bars enable the truck winch to be pre-tensioned to desired level.

Advantages:

- Less loading time.
- Quicker turnaround time.
- Less damage to cargo or paintwork.
- Maximum payload.
- Adaptability.
- On-board storage.

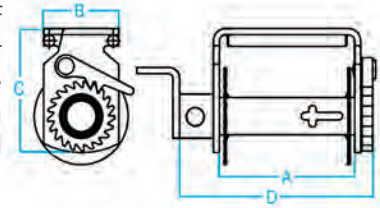
Specifications

- High pretension with less effort for easy operation.
- Used with webbing straps or G70 chain.
- Manufactured from medium grade hi-tensile steel
- Zinc passivated for corrosion protection.
- Seamless solid-steel mandrels.
- High-strength alloy pawl pins.
- Marked with lashing capacity and batch number.
- 21 teeth sprocket, double pawl patent design as standard.
- Complies with AS/NZS 4380.

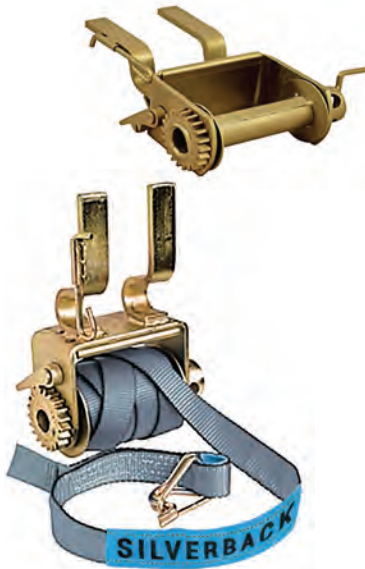


Slide-On Single Boss

Fitted to winch track with the benefit of a high pretension and with less effort for easier operation making them an effective way of restraining heavy loads during transport. Designed to fit under mounted channel. Slide to required position

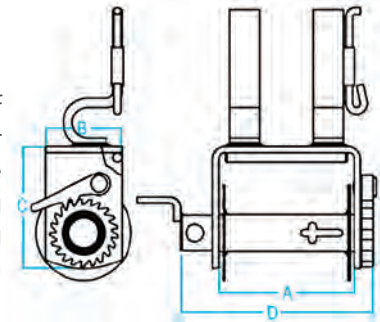


P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)	DIMENSIONS			
				A (mm)	B (mm)	C (mm)	D (mm)
10731	Bare		3000	180	100	160	254
10721-9	9	50	2500				
10721-11	11	50	2500				
10721-13	13	50	2500				
10731-9	9	50	3000				



Clip-On Single Boss

Fitted to truck tie rails with the benefit of a high pretension and with less effort for easier operation making them an effective way of restraining heavy loads during transport. Designed for use with combing rail. Easy to remove and store when not in use. Position to suit load.



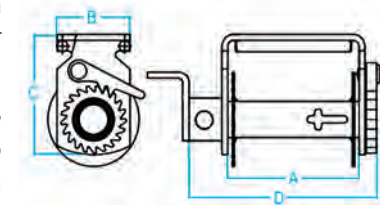
P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)	DIMENSIONS			
				A (mm)	B (mm)	C (mm)	D (mm)
10732	Bare		3000	180	100	160	254
10722-9	9	50	2500				
10722-11	11	50	2500				
10722-13	13	50	2500				
10732-9	9	50	3000				



Slide-On Ratchet Single Boss

Designed to fit under mounted channel. Slide to required position. Benefit of a high pretension and with less effort for easier operation.

The ratchet head design which gives the benefits of quick take up of strap also provides limited ratchet angles when in operation.

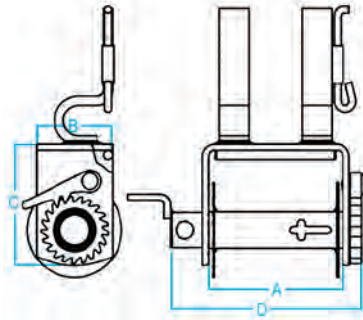


P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)	DIMENSIONS			
				A (mm)	B (mm)	C (mm)	D (mm)
10730	Bare		3000	180	100	160	275
10720-9	9	50	2500				
10720-11	11	50	2500				
10720-13	13	50	2500				
10730-9	9	50	3000				



Clip-On Ratchet Single Boss

Designed for use with combing rails. Easy to remove and store when not in use. Position to suit load. Benefits of a high pretension and with less effort for easier operation. The ratchet head design which gives the benefits of quick take up of strap also provides limited ratchet angles when in operation.

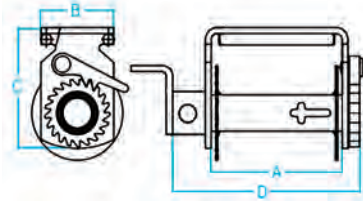


P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)	DIMENSIONS			
				A (mm)	B (mm)	C (mm)	D (mm)
10733		Bare	3000	180	100	160	275
10723-9	9	50	2500				
10723-11	11	50	2500				
10723-13	13	50	2500				
10733-9	9	50	3000				



Ratchet Cap Slide-On Single Boss

Designed to fit under mounted channel. Slide to required position. Benefit of a high pretension and with less effort for easier operation. The ratchet head design which gives the benefits of quick take up of strap also provides limited ratchet angles when in operation.

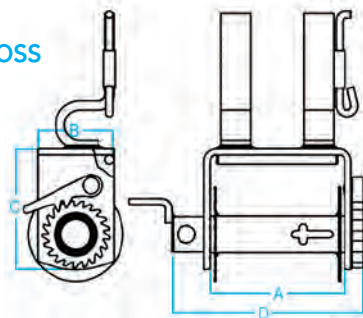


P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)	DIMENSIONS			
				A (mm)	B (mm)	C (mm)	D (mm)
10735		Bare	3000	180	100	160	275
10725-9	9	50	2500				
10725-11	11	50	2500				
10725-13	13	50	2500				
10735-9	9	50	3000				



Ratchet Cap Clip-On Single Boss

Designed for use with combing rails. Easy to remove and store when not in use. Position to suit load. Benefits of a high pretension and with less effort for easier operation. The ratchet head design which gives the benefits of quick take up of strap also provides limited ratchet angles when in operation.



P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)	DIMENSIONS			
				A (mm)	B (mm)	C (mm)	D (mm)
10734		Bare	3000	180	100	160	275
10724-9	9	50	2500				
10724-11	11	50	2500				
10724-13	13	50	2500				
10734-9	9	50	3000				



Combination Winch & Dog Bar Breaker

Feature a knurled, non-slip handle. Tapered and angled carbon-steel slip resistant tip for secure operation.

P/N:	LENGTH (mm)
10780	900

- Modified end for breaking the tension on lever style load binders.
- Manufactured from heat treated steel for extra strength.



Bent Winch Bar

A great tool to achieve pretension for webbing straps.

- Manufactured from heat treated steel for extra strength.
- Chrome plated.
- Moulded handle.

P/N:	LENGTH (mm)
10782	550



Mini Winch Bar

A great tool to achieve pretension for webbing straps in tight spaces.

- Manufactured from heat treated steel for extra strength.
- Knurled handle for improved grip, tapered and angled at the end for easy operation.

P/N:	LENGTH (mm)
10784	420



Winch Track

Used for slide on truck winches. Practical solution for load restraint applications as winches are tucked away under the deck of the trailer.

- Made from 4mm gauge steel thickness.
- Manufactured from steel.

P/N:	LENGTH (m)
10974	2.4





Standard Length F-Track Shoring Bar

Made to fit standard size truck trailers.

- Made from 2.3mm galvanised steel.
- 80mm spring travel distance
- Weight: 6.3 - 6.4kg

P/N:	DIAMETER (mm)	TYPE	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)	SWL (kg)
10500	42	No Handles	2390	2470	300
10510	42	Handles	2390	2470	300



Heavy Duty Adjustable Length F-Track Shoring Bar

Made from heavier duty steel. Comes with the added benefit of up to 530mm of extra length over standard shoring bar when required.

- Made from 3mm galvanised steel.
- 80mm spring travel distance
- 9 x 50mm increments of adjustment.
- Weight: 8.0 - 8.1kg

P/N:	DIAMETER (mm)	TYPE	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)	SWL (kg)
10503	42	No Handles	2215	2625	300
10514	42	Handles	2215	2625	300



Extra Long Heavy Duty Adjustable Length F-Track Shoring Bar

Extra length for vertical or horizontal applications. Maximum extended length achieved from extending the spring end.

- Made from 3mm galvanised steel.
- 80mm spring travel distance
- 10 x 50mm increments of adjustment.
- Weight: 8.3kg

P/N:	DIAMETER (mm)	TYPE	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)	SWL (kg)
10505	42	No Handles	2190	2890	220/300

SHORING BARS, CARGO BARS & LOAD BARS



Short Length F-Track Shoring Bar

Used when a half width application is desirable. Can be used horizontally, held up by a temporary wall with f-series track. Or vertically to hold up a temporary floor within a truck trailer.

- Made from 2.3mm galvanised steel.
- Weight: 4.2kg
- 80mm spring travel distance

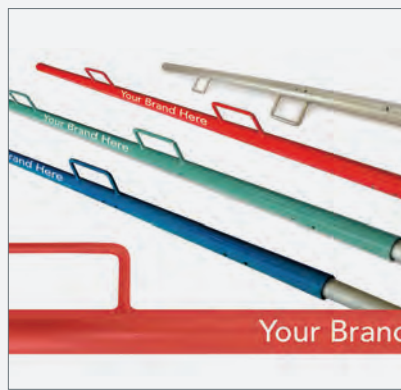
P/N:	DIAMETER (mm)	TYPE	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)	SWL (kg)
10504	42	No Handles	1150	1230	300

CUSTOM SHORING BARS

Silverback supply custom coloured and branded shoring bars to many transport companies Australia wide.

Minimum quantities apply.

Ask in-store for more details.



Shoring Bar Removal Tool

Safe and convenient way to remove shoring bars from their track.

P/N:	LENGTH (mm)
10550	300



Cargo Bar with Square Rubber Feet

Provide a fast and easy way to secure cargo when there is no E or F-track in place. The bar is adjusted to fit within the space and a ratchet system is used to extend or contract the length to suit. Perfect for fitting inside the corrugations in shipping container walls or roof, reefers, truck trailers, vans or utes.

P/N:	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)	BREAKING POINT (kg)
10530	2200	2900	

- Fitted with variable black rubber grip pads at each end.
- Suitable for vertical or horizontal use.
- 40mm x 40mm square tube.
- Galvanised finish.



E-Track Load Bar (Decking Beam)

Adjustable E-Track aluminium standard Load Bars can be used to secure cargo or maximize your trailer cargo capacity by using them to double deck your trailer. These E-Track Load Bars use high strength aluminium and adjustable e-fitting ends that lock into e-tracks.

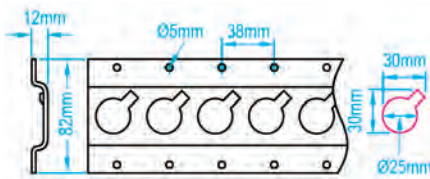
P/N:	CONTRACTED LENGTH (mm)	EXTENDED LENGTH (mm)	SWL (kg)
10525	2350	2600	

- Zinc plated finish end fittings.
- Main bar body aluminium.
- Non-slip finish on top of bar.
- Spring loaded clips.
- Weight: 8.5kg



About Logistics Track

- Logistics track is available in series E, F or E/F combination styles and have been designed to provide a secure attachment point for your interior truck cargo control systems.
- Will accept the appropriate logistic end fittings, sockets, beams or bars.
- Note: all logistic track comes standard in 3m or 6m lengths. Secure your load in your container, truck or trailer with these easy to use logistics track cargo systems.
- Combine a tie-down strap with a specialised fitting and your choice of fittings on the other end like ratchets, cam buckles, D-Rings or Hooks.
- Can be made from steel, aluminium or stainless steel.
- Surface treatment can be powder coated, zinc plated, polished, galvanised and aluminium alloy.

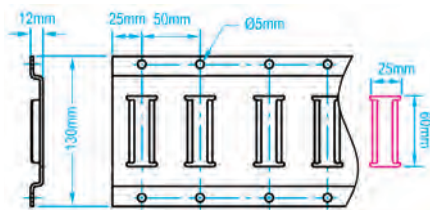


F-Series Cargo Track

Will accept the appropriate F-Series end fittings and shoring bars.

P/N:	LENGTH (m)	WIDTH (mm)
10970-3	3	82
10970-6	6	82

- High strength 12-gauge heat treated galvanised steel.
- Can be attached with screws, rivets or welding.
- No fittings supplied.

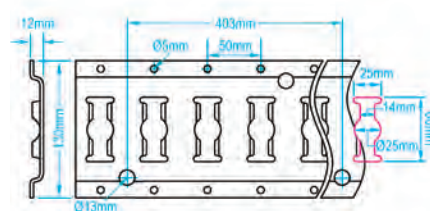


E-Series Cargo Track

Will accept the appropriate E-Series end fittings and load bars.

P/N:	LENGTH (m)	WIDTH (mm)
10978-3	3	130
10978-6	6	130

- High strength 12-gauge heat treated galvanised steel.
- Can be attached with screws, rivets or welding.
- No fittings supplied.



E/F Combination Series Cargo Track

Versatile track that accepts both E-Series and F-Series end fittings, shoring bars and load bars.

P/N:	LENGTH (m)	WIDTH (mm)
10979-3	3	130
10979-6	6	130

- High strength 12-gauge heat treated galvanised steel.
- Can be attached with screws, rivets or welding.
- No fittings supplied.

Silverback are a leading supplier of restraint equipment for the car carrying and towing industry.

Modern light vehicles are equipped with special underbody brackets to enable lashings to be attached; some brackets are designed for vertical lashings and are only suitable for use with purpose-built car carriers. A car carrying company provides a comprehensive range of vehicle transport services and solutions to car manufacturers and importers, fleet operators, dealerships, car rental companies and the general public.

Transportation solutions may include on-wharf and off-wharf sites and a mixture of road and rail transportation for new and used vehicles.



Car Carriers

- The most common method used for transporting new or used cars, trucks, boats, caravans around Australia.
- Vehicles are driven up on ramps using hydraulics for top or bottom decks and secured to the trailer.
- Most double deck car carriers can carry 10 vehicles.



Tilt Tray

- Common method used for loading single cars.
- The tilt tray truck is positioned in front of the vehicle to be loaded. The tray is then tilted so that the back of the tray is at ground level.
- A winch cable is attached to the load using a sling or other means of attachment. The operator uses the hydraulic controls of the winch to draw the load on to the truck.
- When the load is completely supported by the tray of the truck the tray is returned to the flat position and the load secured for transport.



Autotainer

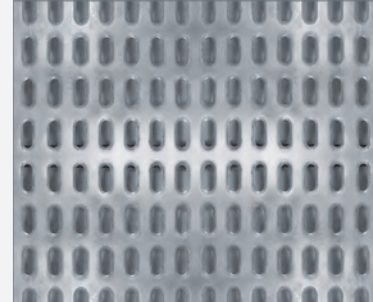
- Another method used for transporting new or used cars, around Australia via rail and road.
- Vehicles are driven up on ramps using hydraulics for top or bottom decks in the shipping container and are secured to the container with straps.



Trailer deck holes running vertical along the deck.

Using a J-Hook Vehicle System

- Used when trailer slots run vertically along the trailer deck.



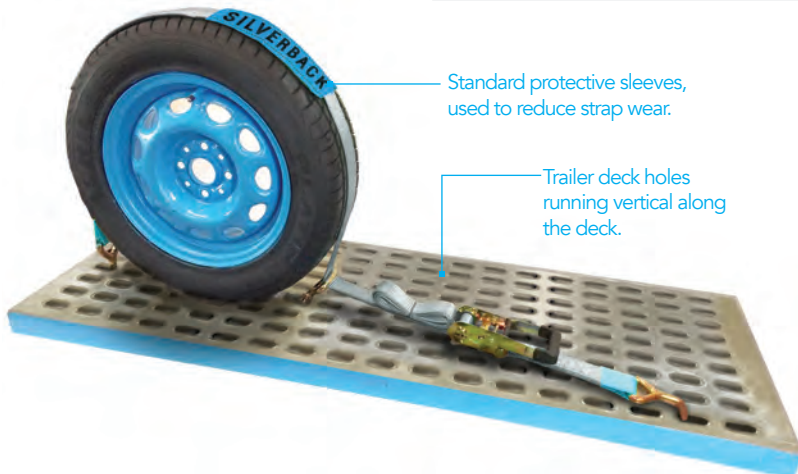
- The j-hook on the 3m strap goes in front of the tyre and the floating j-hook goes directly behind.
- The 3m strap goes over the wheel. This holds the wheel securely to the deck of the trailer.
- Compact design ratchet buckle is used due to restricted tensioning space around vehicles.
- Designed, manufactured and tested for compliance with AS/NZS 4380:2001.

Vehicle Tie-Down System, J-Hooks

Complete vehicle tie-down kit, ready to use on slotted vehicle carrying transporters.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10332	3	50	2500

- Compact ratchet buckle with moulded handle, for use in tight, restricted spaces.
- Tail strap and main strap fitted with single wire j-hooks.
- Fitted with two standard Silverback wear sleeves.
- Silver strap colour.
- PU coating for increased UV protection.
- Loops for hardware include inner wear strips for extra strength and durability.
- One floating single wire j-hook.



Standard protective sleeves, used to reduce strap wear.

Trailer deck holes running vertical along the deck.



Replacement Products

Available for replacing damaged, worn or lost parts.



P/N: 10260
Single Wire J-Hook



P/N: 10386
Ratchet & Tail Assembly with J-Hook



P/N: 10650 - 3m
Ratchet Strap with J-Hook.

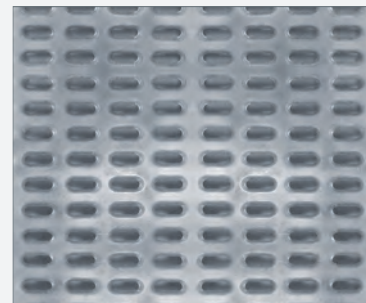
VEHICLE TIE-DOWN SYSTEMS



Trailer deck holes running horizontally across the deck.

Using a Deck Cleat Vehicle System

- Used when trailer slots run horizontally along the trailer deck.



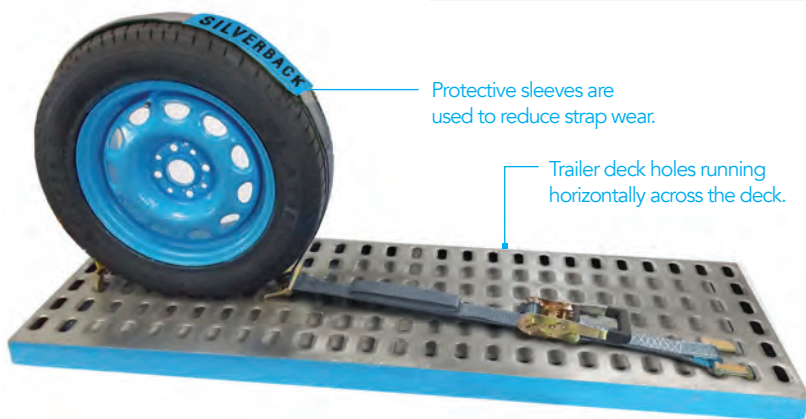
Vehicle Tie-Down System, Deck Cleats

Complete vehicle tie-down kit, ready to use on slotted vehicle carrying transporters.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10333	3	50	2500

- Compact ratchet buckle with moulded handle, for use in tight, restricted spaces.
- Tail strap and main strap fitted with deck cleat.
- Main strap fitted with Deck Cleat.
- Fitted with two standard Silverback wear sleeves.
- Silver strap colour.
- PU coating for increased UV protection.
- Loops for hardware include inner wear strips for extra strength and durability.
- One floating Pack Hook.

- The deck cleat on the 3m strap goes in front of the tyre and the floating hardware goes directly behind.
- The 3m strap goes over the wheel. This holds the wheel securely to the deck of the trailer.
- Compact design ratchet buckle is used due to restricted tensioning space around vehicles.
- Designed, manufactured and tested for compliance with AS/ NZS 4380:2001



Protective sleeves are used to reduce strap wear.

Trailer deck holes running horizontally across the deck.



Replacement Products

Available for replacing damaged, worn or lost parts.



P/N: 10242
Pack Hook.



P/N: 10240
Deck Cleat.



P/N: 10387
Ratchet & Tail Assembly with
Deck Cleat



P/N: 10665
Ratchet Strap with Deck Cleat.

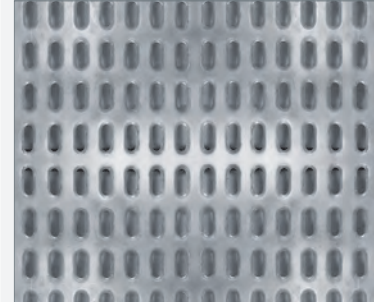
VEHICLE TIE-DOWN SYSTEMS



Trailer deck holes running vertical along the deck.

Using a T-Hook Vehicle System

- Used when trailer slots run vertically along the trailer deck.



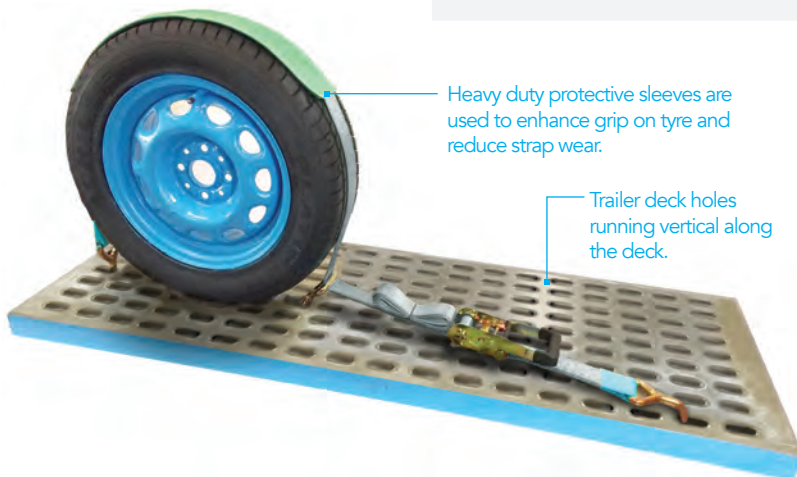
Vehicle Tie-Down System, T-Hooks

Complete vehicle tie-down kit, ready to use on slotted vehicle carrying transporters.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10334	3	50	2000

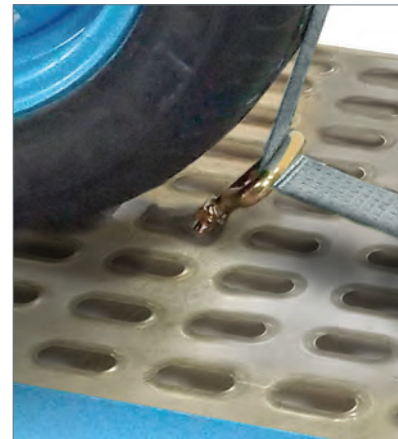
- Compact ratchet buckle with moulded handle, for use in tight, restricted spaces.
- Tail strap fitted with single wire j-hook.
- Main strap fitted with T-hook.
- Fitted with one 600mm long heavy duty protective wear sleeve.
- Silver strap colour.
- PU coating for increased UV protection.
- Loops for hardware include inner wear strips for extra strength and durability.
- One floating T-hook.

- The T-hook on the 3m strap goes in front of the tyre and the floating t-hook goes directly behind.
- The 3m strap goes over the wheel. This holds the wheel securely to the deck of the trailer.
- Compact design ratchet buckle is used due to restricted tensioning space around vehicles.
- Designed, manufactured and tested for compliance with AS/NZS 4380:2001



Heavy duty protective sleeves are used to enhance grip on tyre and reduce strap wear.

Trailer deck holes running vertical along the deck.



Replacement Products

Available for replacing damaged, worn or lost parts.



P/N: 10241
T-Hook



P/N: 10386
Ratchet & Tail Assembly with J-Hook



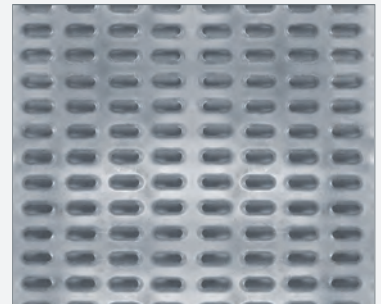
P/N: 10666
Ratchet Strap, T-Hook, standard wear sleeve.

VEHICLE TIE-DOWN SYSTEMS



Using a Pack Hook Vehicle System

- Used when trailer slots run horizontally along the trailer deck.



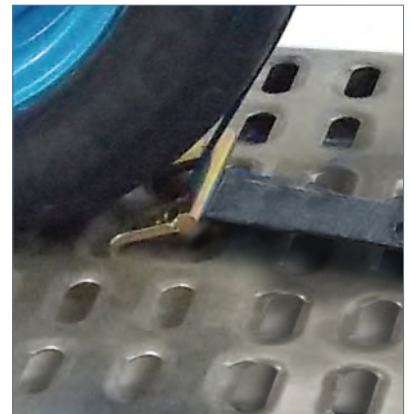
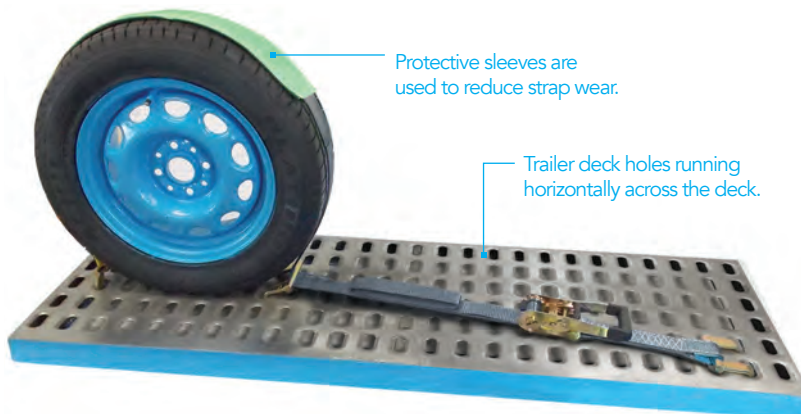
Vehicle Tie-Down System, Pack Hooks

Complete vehicle tie-down kit, ready to use on slotted vehicle carrying transporters.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10338	3	50	2500

- Compact ratchet buckle with moulded handle, for use in tight, restricted spaces.
- Tail strap fitted with deck cleat.
- Main strap fitted with Pack Hook.
- Fitted with one 600mm long heavy duty protective wear sleeve.
- Silver strap colour.
- PU coating for increased UV protection.
- Loops for hardware include inner wear strips for extra strength and durability.
- One floating Pack Hook.

- The pack hook on the 3m strap goes in front of the tyre and the floating hardware goes directly behind.
- The 3m strap goes over the wheel. This holds the wheel securely to the deck of the trailer.
- Compact design ratchet buckle is used due to restricted tensioning space around vehicles.
- Designed, manufactured and tested for compliance with AS/ NZS 4380:2001



Replacement Products

Available for replacing damaged, worn or lost parts.



P/N: 10242
Pack Hook.

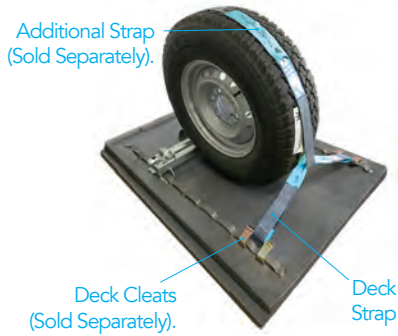


P/N: 10387
Ratchet & Tail Assembly with Deck Cleat.



P/N: 10669 - 3m
Ratchet Strap, Pack Hook, standard sleeve.

VEHICLE TIE-DOWN SYSTEM ACCESSORIES



Deck Strap with 130mm Loops

Use with deck cleats, strap with loop and tensioning device (all sold separately) to secure vehicles to compatible ripple strip trailer decks.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10679	670	50	2500

- 130mm diameter loop at each end.
- Fitted with one standard Silverback wear sleeve.
- Strap colour silver.
- PU coating for increased UV protection.

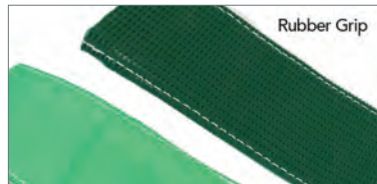


Standard Duty Wear Sleeve

Standard duty wear sleeve used to help protect straps and the load.

- Position at various wear contact points. Eg: pallet angles, trailer deck edges.

P/N:	LENGTH (mm)	WIDTH (mm)
10697	250	50
10697-35	250	35



Heavy Duty Wear Sleeve

Has a rubber grip on one side for increased friction when positioned over the tyre.

- Suits up to 75mm webbing strap.

P/N:	LENGTH (mm)	WIDTH (mm)
10697-HD-S	300	100
10697-HD	600	100



CUSTOM VEHICLE TIE-DOWN SYSTEMS

Silverback supply custom coloured and branded vehicle tie-down kits to many transport companies Australia wide.

Ask in-store for more details.





Using Towing Bridles

- Used with a electric or manual drum winch systems.



Towing Bridle, Snap Hooks

Assists tow truck drivers in pulling cars up onto the tilt tray.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY PER STRAP (kg)
10616-5	500	50	2500
10616-50*	500	50	2500
10616-7	700	50	2500
10616-70*	700	50	2500

- Fitted with two snap hooks.
- One master link.
- Loop for hardware includes inner wear strip for extra strength and durability.
- Standard strap colour silver.
- *Orange strap colour.
- PU coating for increased UV protection.



Towing Bridle, J-Hooks

Specially designed bridle for the VE Commodore due to its chassis shape and connection points. Assists tow truck drivers in pulling VE Commodore's up onto the tilt tray.

P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY PER STRAP (kg)
10617	500	50	2500
106170*	500	50	2500

- Fitted with two single wire j-hooks.
- One master link.
- Loop for hardware includes inner wear strip for extra strength and durability.
- Standard strap colour silver.
- *Orange strap colour.
- PU coating for increased UV protection.



Soft Eye Axle Strap

Works with a strap behind the tyre and the axle strap in front of the tyre, this way when you tension the ratchet you are pulling the tyre to the side of the trailer or tray instead of downwards. Minimises the risk of damage and wear to rims and hubcaps.



P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10685	450	50	2500
106850*	450	50	2500
10686	630	50	2500
106860*	630	50	2500

- The inner of the soft-eye strap ends have an additional inner sleeve sewn in to provide additional strength and wear against use.
- Standard strap colour silver.
- *Orange strap colour.
- PU coating for increased UV protection.



Metal D-Ring Axle Strap

Works with a 4m or 9m strap behind the tyre and the axle strap in front of the tyre, this way when you tension the ratchet you are pulling the tyre to the side of the trailer instead of downwards.



P/N:	STRAP LENGTH (mm)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10685D	450	50	1000

- The loops have an additional sleeve sewn in to provide additional strength and wear.
- Silver strap colour.
- PU coating for increased UV protection.

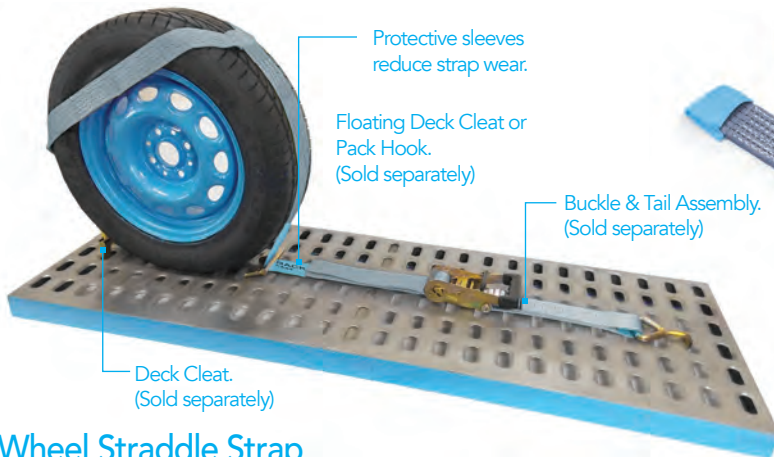
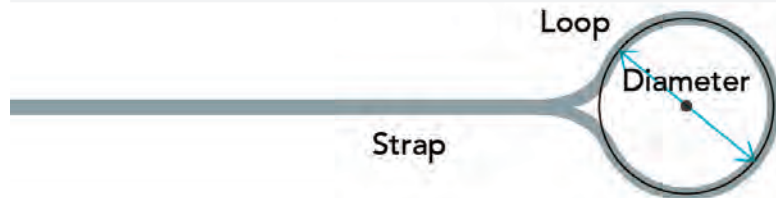


Ratchet Strap, Single Loop

Used as a replacement strap for a tire tie-down system on a tow truck deck. Also perfect for use with a ratchet buckle as a continuous ratchet tie-down for "belly strapping" cargo.

- Fitted with two standard Silverback wear sleeves.
- Loops for hardware include inner wear strips for extra strength and durability.
- Standard strap colour silver.
- *Orange strap colour.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LOOP DIAMETER (mm)	LASHING CAPACITY (kg)
10682	2.6	50	85	2500
10682O*	2.6	50	85	2500
10635	3	50	100	2500
10636	4	50	130	2500
10641	9	50	140	2500

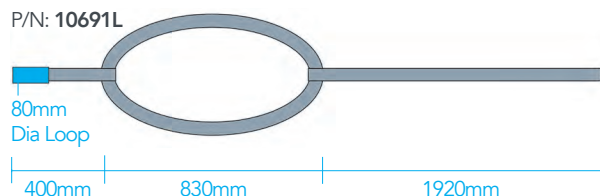
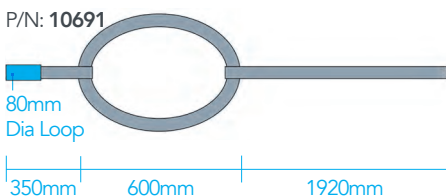


Wheel Straddle Strap

Used to secure a single tyre to the deck of a truck or trailer.

- 10691 suits most standard small to medium size car tyres.
- 10691L is suitable for large wheel diameters or wider profiles.
- PU coating for increased UV protection.
- The inside of the 80mm diameter loops have an additional inner sleeve sewn in to provide additional strength and wear against use.
- Strap colour is Silver.

P/N:	TYPE	TOTAL LENGTH (m)	STRAP WIDTH (mm)	LOOP SIZE (mm)	LASHING CAPACITY (kg)
10691	Standard	2870	50	80	2500
10691L	Large	3150	50	80	2500





Towing Skates

When a wheel of a car is so badly damaged, locked or twisted, it becomes problematic to winch the car up onto the tilt tray or trailer. The skate is placed under the damaged wheel used to slide/skate the vehicle.

P/N:	LENGTH (mm)	WIDTH (mm)	WEIGHT (kg)
10611	400	90	0.9

- Charcoal colour.
- Wire handle attached is only for storage and handling purposes.



Tyre Puller Strap

Used to align wheels on vehicles when steering alignment is compromised.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
106830	1	25	250

- Loop for hardware includes inner wear strip for extra strength and durability.
- Strap colour is orange.



Safety Tow Strap

Used as a safety strap on tilt tray tow trucks connecting tow vehicle to tow truck in case of winch failure.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10690	9	75	5000

- Strap with 200mm folded eye loop at each end.
- The inside of the loops have an additional inner black sleeve sewn in to provide additional strength and wear against use.
- Standard strap colour is silver.
- PU coating increased UV protection.

6 Loop Tow Strap

This strap is generally used in the towing industry for vehicles in carparks.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
106840	4.5	50	2500



- Loop at each end is 120mm long with edges folded and wear strip sewn in.
- First loop from each end is 600mm from the end and 35mm long with edges folded and sewn.
- Second loop from each end is 1050mm from the end and 35mm long with edges folded in and sewn.
- PU coating increased UV protection.
- Standard strap colour is orange.

Motorbike Cam Buckle Tie-Down (2 per pack)

Motorbike Cam Buckle Tie Down assemblies are the complete lashing system purposely made for Motorbike lashing requirements.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10303	1.7	25	250

- Manufactured from high tenacity polyester webbing, with Cam Buckles, S-Hooks and Snap Hooks.
- Batch test certificate available upon request.
- Complies with AS/NZS 4380.



2nd Hitch System

Silverback's 2nd Hitch Systems are designed to meet the ruggedness of the Towing, Vehicle Recovery and Car Carrying industry. Silverback straps are reliable and give peace of mind that your load is secure. This product is designed to work on 2nd Hitch or Under Lift Systems where the vehicle is fixed and secured around the wheels.

2nd Hitch Tie-Down Systems are sold as two separate items and both are needed to make a complete system ready to use.



2nd Hitch Strap

Main strap fitted with one D-Ring, plus one protective Silverback wear sleeve all rated to LC 2500kg.

P/N:	STRAP LENGTH (m)	STRAP WIDTH (mm)	LASHING CAPACITY (kg)
10614	2.4	50	2500



2nd Hitch Buckle

Compact gold plated ratchet buckle with moulded handle, fitted with bow shaped ring rated at LC 2500kg.

P/N:	STRAP WIDTH (mm)	TYPE	HANDLE TYPE	LASHING CAPACITY (kg)
10395	50	Standard/Compact	Moulded	2500



Towing Snatch Block for 11mm Wire Rope

Off Road Block with Vinyl Bag. Minimum Breaking Strain of 8000kg, Sheave 125mm for 11mm wire rope only.

P/N:	WIRE WIDTH (mm)	MINIMUM BREAKING STRAIN (kg)
10612	11	8000

- Used for 11mm wire rope.
- Minimum breaking Strain of 8000kg
- Strap colour is orange.

LIFTING EQUIPMENT

Refer to our **Lifting Equipment Catalogue** for additional accessories and products used within the automotive towing industry.





SHIPPING CONTAINER TWIST LOCKS

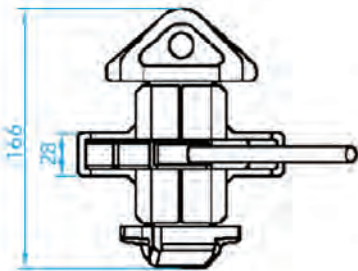


Intermediate Twist Lock

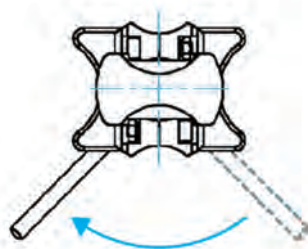
A twist lock and corner casting together form a standardised rotating connector for securing shipping containers. The primary uses are for locking a container into place on a container ship, semi-trailer truck or railway container train and for lifting of the containers by container cranes and side lifters.

P/N:	LOCKED POSITION	LOAD RATING (kg)	WEIGHT (kg)
10973-L	Left	50,000	4.5
10973-R	Right	50,000	4.5

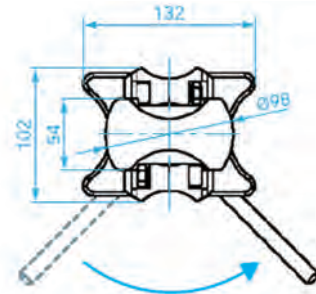
- Heat treatable steel.
- Galvanised finish.



Side View



Top View
Left Locked



Top View
Right Locked



Double-Ended Twist Lock

Double-ended twist locks are designed to stack shipping containers vertically. Using this method containers can be stacked 16 high if they are empty. These double-ended twist locks are an integral part of any shipping container securing solution.

Once locked into position the direction of the handle gives an indication as to whether the two containers are locked into place. One double-ended twist lock is required for each of the four corners of the shipping container. And, if the shipping container is sandwiched between two other vertically stacked containers, another four double-ended twist locks may be required on top of the existing container.

P/N:	LOAD RATING (kg)	WEIGHT (kg)
10973-S	50,000	4.5

- Made from forged steel.
- Galvanised finish.



Bridge Fittings

Bridge Fittings, also known as Bridge Clamps, are used to secure shipping containers horizontally. Used in conjunction with Corner Castings and Twist Locks, they make up the core components of the shipping container securing system. They can also be used in container yards to increase safety and stability of stacked shipping containers.

- Made from forged steel.
- Galvanised finish.



P/N:	LENGTH (mm)	SWL (kN)	LOAD TEST (kN)	BREAKING LOAD (kN)	WEIGHT (kg)
10978-S	260	50	63	100	3
10978-L	380	50	63	100	4

OVER DIMENSIONAL SAFETY SIGNS FOR TRANSPORT



Oversize Overmass (OSOM) Vehicles

OSOM vehicles are heavy vehicles that are carrying, or are specially designed to carry, a large indivisible item. Therefore they pose greater risks in terms of both road safety and damage to road infrastructure than normal heavy vehicle movements.

Oversize Signs

Class 2 reflective signs. Different configurations available when obstructed space is present.

P/N:	TYPE	MATERIAL	FIXINGS	APPLICATION	LENGTH (mm)	WIDTH (mm)
14178	Single piece	Aluminium	No fixings	Permanent	1200	450
14901A	Single piece horizontal centre hinge	Aluminium	No fixings	Permanent	1200	450
14901B	Two piece horizontal centre hinge	Aluminium	No fixings	Permanent	1200 (2 x 600)	450
14901	Single piece	Vinyl banner	Corner ropes	Temporary	1200	450



Long Vehicles

"Long Vehicle" means a vehicle that, together with any load or projection, is 7.5 metres long, or longer.

Long Vehicle Signs

Class 2 reflective signs. Different configurations available when obstructed space is present.

P/N:	TYPE	MATERIAL	FIXINGS	APPLICATION	LENGTH (mm)	WIDTH (mm)
14897	Single piece	Aluminium	No fixings	Permanent	1200	300
14900	Single piece horizontal centre hinge	Aluminium	No fixings	Permanent	1200	300
14901B	Two piece horizontal centre hinge	Aluminium	No fixings	Permanent	1200 (485) & (715)	300
14898	Single piece	Vinyl banner	Corner ropes	Temporary	1200	250



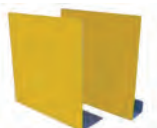
Oversize Flags

Suitable for wide loads and oversize truck recognition. Heavy duty day bright fluorescent red & yellow nylon or polyester mesh.

P/N:	FIXINGS	SIZE (mm)
14903	Pre-fitted with sticks	450 x 450
14904	Pre-fitted with eyelets	450 x 450
14927	Pre-fitted bungee cord with light duty plastic snap catch	450 x 450
14927R	Pre-fitted with heavy duty rubber bungee straps & hooks	450 x 450

Delineators

Class 2 reflective, reusable metal frames.



P/N:	SIZE (mm)
14902	300 x 300

Strobe Lights (Revolving)

Various power and vehicle attachment options available.



P/N:	TYPE
31903	Various

LOAD RESTRAINT

Melbourne

86 Strzelecki Avenue,
Sunshine West VIC 3020 Australia
T: 1300 858 858
E: melbourne@silverback.com.au

Sydney

26 Sleigh Place,
Wetherill Park NSW 2164 Australia
T: 1300 858 858
E: sydney@silverback.com.au

Brisbane

Unit 1, 12 Boolarra Street
Hemmant QLD 4174 Australia
T: 1300 858 858
E: brisbane@silverback.com.au

Adelaide

27 Pambula Street,
Regency Park SA 5942 Australia
T: 1300 858 858
E: adelaide@silverback.com.au

Auckland

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