

### 12. Load Restraint

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### 12.1 Webbing Tie Downs



### **Webbing Tie-Downs**

Ratchet Webbing Tie-Downs are now widely used in the transport industry. Webbing tie-downs are light-weight, easy to handle and easy to use. Although not as durable as Grade 70 chain and components webbing tie-downs are kind on the cargo and are well suited to many types of lashing applications. Webbing lashings are more elastic than chains and therefore retain more tension than a chain assembly if the load moves or settles during transport.

Advantages of Ratchet Webbing Tie-Downs include:

- Less Loading Time. Quicker turnaround time. Less Damage to cargo or paintwork.
- Less Durnage to earge of par
- Maximum pay load
- Adaptability.
- On-board storage.

Nobles RESTRAINT-MATE Ratchet Webbing Tie-Downs are manufactured to AS 4380.

25mm tie downs have J hooks wheras 35, 50 and 75mm feature hook and keeper end fittings for high strength and security to hold onto the tie rail.





### **Product Specifications**

Name	ITEM #	Strap Width (mm)	Strap Length (m)	Lashing Capacity (kg)	End Fittings	Weight (kg)
Ratchet Lashing Assembly 75mm 5000kg 9m	16461	75	9	5000	Hook & Keeper	7.5
Ratchet Lashing Assembly 50mm 2500kg 9m	19102	50	9	2500	Hook & Keeper	3.5
Ratchet Lashing Assembly 35mm 1500kg 6m	12361	35	6	1500	Hook & Keeper	1.5
Ratchet Lashing Assembly 25mm 400kg 4m	11267	25	4	400	J Hook	0.8



### **General Information**

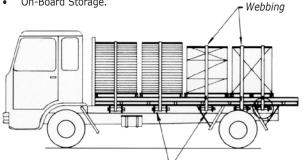
**RESTRAINT-MATE WEBBING LOAD RESTRAINT SYSTEMS** TO AS/NZS 4380

#### **Clip on Truck Winches & Ratchet** Webbing Tie Downs

Webbing Tie Downs are now widely used in the transport industry. Webbing tie downs are lightweight, easy to handle and easy to use. Although not as durable as Grade 70 chain and components webbing tie downs are kinder on the cargo and are well suited to many types of lashing applications. Webbing lashings are more elastic than chains and therefore retain more tension than a chain assembly if the load moves or settles during transport.

#### Advantages of webbing tie downs include:

- Less Loading Time.
- Quicker Turnaround Time.
- Less Damage to Cargo or Paintwork.
- Maximum Pay Load.
- Adaptability.
- On-Board Storage.



Winches



The load above is well lashed for transport. The individual timber packs are lashed together and then the entire load is lashed to the truck. Dunnage is also used to limit movement of the load during transport.



The base of the load broke from the webbing tie-down force. The webbing tie-down should have been positioned above the dunnage supporting the load.

#### **Inspection Before Use**

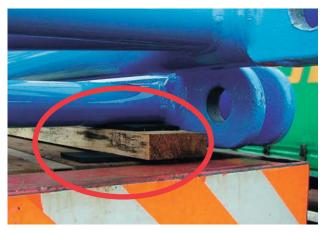
Webbing tie downs should be regularly checked as follows:

- 1. Check webbing for cuts, contusions, damage to seams or abrasive wear, especially if used with rough or sharp cargoes.
- 2. Check tensioner and end fittings for signs of deformation due to overload or excessive wear or corrosion.

#### Care In Use

#### WARNING

- Webbing type tie downs should always be used in line with good lashing and load restraint practice.
- Failure to use Webbing Tie Downs correctly could result in property damage, serious injury or death.
- Never use a webbing tie down if the webbing has cuts, 1. contusions, damage to seams or abrasive wear.
- 2. Never use a webbing tie down if the winch body, ratchet assembly or end fittings have signs of deformation due to overload or excessive wear or corrosion. The recommended maximum allowable wear on webbing tie down fittings is 5%.
- 3. Never heat or attempt to heat-treat any hardware or fittings associated with a webbing tie down.
- 4. If there is malfunction or deformation to the ratchets they should be replaced.
- 5. Do not twist or knot the webbing.
- 6. Use protective sleeves, load corner protectors or other packing material if the webbing passes over sharp or rough edges or corners.
- 7. Ensure the webbing is evenly loaded.
- When the webbing is tensioned ensure the force does not 8. exceed the lashing capacity of the webbing.
- 9. Ensure there is a minimum of one and half turns of webbing on the ratchet spindle or truck winch drum.
- 10. Anti-slip mat is recommended to reduce friction and slippage of the load during transport.



Anti-slip mat used with dunnage is an effective means of stabilising the load and reduces the likelihood of the load moving during transport.

### 12.2 Clip On Truck Winch



### **Clip on Truck Winch**

Nobles RESTRAINT-MATE Clip-On Truck Winches are manufactured to AS 4380 and have reinforced legs to cope with the high loads that can be achieved under tension. These Clip-On Truck Winches come complete with a 50mm x 9m strap as standard. These straps also feature a hook and keeper assembly for high strength and secure attaching to the tie rail.

Replacement straps available as per below.



### **Product Specifications**

Name	ITEM #	Strap Width (mm)	Strap Length (m)	Lashing Capacity (kg)	End Fittings	Weight (kg)
Truck Winch Replacement Strap 50mm x 9M With Hook & Keeper	10218	50	9	2500	Hook & Keeper	0.9
Truck Winch Clip On 50mm 9m Complete Inc Strap 50mmx9M With Hook & Keeper	12700	50	9	2500	Hook & Keeper	7.5

### 12.3 Chain & Components



### **Grade 70 Chain Kits**

8mm x 6m and 8mm x 9m Restraint-Mate chain assemblies are available pre-packed in convenient carry boxes.

Restraint-Mate chain assemblies are fitted with cradle grab hooks to 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 Nobles Restraint-Mate cradle grab hooks.



### **Product Specifications**

Name	ITEM #	Chain Size (mm)	Length (m)	Lashing capacity (kg)	Weight (kg)
8mm 9m Gr70 Restraint Mate Chain In Bucket	29760	8	9	3800	13.98
8mm 6m Gr70 Restraint Mate Chain In Bucket	29759	8	6	3800	9.6



### **Grade 70 Clevis Grab Hooks**

Restraint-Mate cradle grab 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 Nobles Restraint-Mate cradle grab hooks.



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Hook Clevis Grab 6mm G70	16592	6	2300	0.2
Hook Clevis Grab 8mm G70	14288	8	3800	0.32
Hook Clevis Grab 10mm G70	18636	10	6000	0.52
Hook Clevis Grab 13mm G70	15802	13	9000	0.82

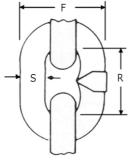


### Grade 70 Chain

Nobles Grade 70 Transport Chain is gold passivated for corrosion protection and cleanliness. Grade 70 transport chain and components comply with AS/NZS 4344, which specifies a lashing capacity and a minimum breaking force. All chain is proof tested and subjected to batch testing to confirm compliance with specification.

Nobles Grade 70 Transport Chain is available per m as required.





### **Product Specifications**

Name	ITEM #	Size S (mm)	F (mm)	R (mm)	Lashing Capacity (kg)	Weight per m (kg)
Chain 6mm Gr70 Gold	11535	6	22.3	20.8	2300	0.82
Chain 8mm Gr70 Gold	17690	8	23.5	23.5	3800	1.46
Chain 10mm Gr70 Gold	10605	10	33.8	29.8	6000	2.06
Chain 13mm Gr70 Gold	15435	13	43	38	9000	3.49



### **Grade 70 Clevis Claw Hooks**

Restraint-Mate 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 Nobles Restraint-Mate clevis claw hooks.



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Hook Clevis Claw 6-8mm G70	17985	6-8	2300	0.34
Hook Clevis Claw 10mm G70	17997	10	6000	0.67



### **Grade 70 Clevis Slip Hooks**

Restraint-Mate 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 that are also commonly used on grade 70 chains in 4WD recovery. Nobles clevis slip hooks provide a 100% rating as per AS/NZS 4344.



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Hook Clevis Slip 6mm G70	11251	6	2300	0.25
Hook Clevis Slip 8mm G70	11094	8	3800	0.34
Hook Clevis Slip 10mm G70	12683	10	6000	0.57
Hook Clevis Slip 13mm G70	15065	13	9000	1.31



### **Grade 70 Clevis Lug Links**

Restraint-Mate clevis lug links are designed to enable the chain to slide through the link and choke down as necessary. Clevis lug links are a versatile traditional shaped hookfitting that are also commonly used on grade 70 chains in 4WD recovery. Nobles clevis lug links provide a 100% rating as per AS/NZS 4344.



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Lug Link 8mm G70	10022	8	3800	0.45
Lug Link 10mm G70	12464	10	6000	0.65
Lug Link 13mm G70	11891	13	9000	1.3



### **General Information**

LOAD RESTRAINT

The safe and correct restraint of a load to be transported is vitally important to prevent property damage, injury or death. Nobles offer a comprehensive range of quality load restraint products under the **RESTRAINT-MATE** brand. Nobles RESTRAINT-MATE

range of grade 70 chains, fittings, load binders and webbing tie downs comply with the requirements of the relevant AS/NZS standards.



#### How to carry a load safely

#### 1. Choose a suitable vehicle

The vehicle must be suitable for the type and size of the load.



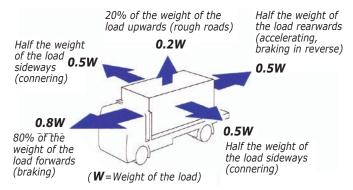
- 2. Position the load correctly The load must be correctly positioned on the vehicle.
- **3. Use suitable load restraint equipment** The load restraint equipment and the vehicle body must be appropriate for the load to be carried and must be in good working condition.

#### 4. Provide adequate load restraint

Every load must be restrained to prevent unacceptable movement during all expected conditions of operation. Load restraint equipment must comply with AS/NZS 4344 and or AS/NZS 4380.



Users must be aware that the load restraint systems will meet the required performance if the load does not shift when subjected to the forces illustrated below.



#### 5. Use appropriate driving methods

If the load is correctly restrained it will not shift or fall off in all expected driving conditions including a full braking stop. A loaded vehicle is likely to drive differently to an unloaded vehicle and as such the driver must take into account any changes in the vehicles stability, steering and braking caused by the size, type and position of the load.

The driver should also check the load and its restraints during the journey. Some loads can settle and should be checked regularly.

Correct load restraint procedures will eliminate the risk associated with shifting loads.





LOAD RESTRAINT

#### Chain & Components

Grade 70 chain assemblies provide a highly effective means of lashing a load. Chain and load binder systems are suited to more rigid loads and are not recommended for loads that can crush or settle during transport. Grab hooks and claw hooks enable the length of the lashing chains to be adjusted while slip hooks and lug links will slide along the length of chain for efficient choking.

Nobles Grade 70 components are gold passivated for corrosion resistance and cleanliness and the components have the chain size and grade forged into them.

#### **Inspection Before Use**

- 1. Grade 70 transport lashing chains and components should be regularly inspected to ensure they do not show any signs of deformation, elongation, nicks, cracks, gouges or excessive wear or corrosion.
- 2. If necessary clean the lashing chain and components before inspection.

#### Care In Use

- 1. Chains should only be lashed at tray support points.
- Use load corner protectors or padding on loads with sharp edges or corners. The lashing capacity of the chain is reduced by 25% if the corner radius is less than the nominal chain size.
- 3. Ensure chains are not twisted or knotted when under tension.
- 4. Do not tie knots in the lashing chain as a means of shortening or terminating the chain.
- Chains should not be joined with wire, bolts or any other means that does not match the strength of the chain.
- 6. Lashing chains should be evenly loaded during use.
- Ensure the lashing chain cannot become crushed under the load.
- 8. When the lashing chain is tensioned ensure the force does not exceed the lashing capacity of the chain.
- Do not use chain or components showing any signs of deformation, elongation, nicks, cracks, gouges or excessive wear or corrosion.
- 10. Ensure that components are matched to the correct chain size. The chain size is embossed into Nobles Grade 70 components.
- 11. Ensure components are used correctly and that no unusual bending forces are applied.
- 12. Never heat or attempt to heat treat Grade 70 chain or components.

#### **Load Binders**

Load binders are used as a means of tensioning Grade 70 lashing chains. Nobles range of load binders are designed to be compatible with the strength of Grade 70 lashing chain and components and are fitted with a care in use safety tag.

Nobles Restraint-Mate load binders have the lashing capacity forged into the handle and grab hook load binders are fitted with cradle grab hooks. The cradle grab hooks provide a 100% rating in accordance with AS/NZS 4344:2001.

#### **Inspection Before Use**

- 1. Clean load binders if necessary prior to inspection.
- 2. Routinely check load binders for deformation, bending, cracks, nicks, gouges and excessive wear or corrosion.

#### Care In Use

- Do not use load binders that show any signs of deformation, bending, cracks, nicks, gouges and excessive wear or corrosion.
- 2. Do not operate load binder while standing on the load.
- 3. When the load binder is under tension release the handle with caution as there is a great deal of energy in the tensioned chain. The handle may whip so be sure to keep clear of the moving handle.
- To release the handle by hand, use an open hand under the handle and push upward. Do not close your hand around the handle.
- 5. While under tension the load binder must not bear against any object, as this will cause side loading.
- Nobles recommends against the use of handle extenders (cheater pipes). The increased leverage, by using a cheater pipe can cause deformation and failure of the chain and load binder.
- During and after tensioning the chain check the load binder handle position to be sure it is locked.
- 8. Chain tensioning may decrease due to the load shifting during transport. To be sure the load binder remains in the correct position secure the handle to the lashing chain by wrapping the loose end of the chain around the handle and the tight chain. Alternatively the handle can be tied off with soft wire.

For a full and detailed guide to the correct restraint of loads Nobles recommend the National Transport Commision (NTC) publication Load Restraint Guide.



#### WARNING

- Grade 70 lashing chain, components and load binders should always be used in line with good lashing and load binding practice.
- Failure to use Grade 70 lashing chain, components and load binders correctly could result in property damage, serious injury or death

### 12.4 Loadbinders



### **Ratchet Loadbinders**

Ratchet load binders are well suited to tensioning short chains and for loads such as rubber tired vehicles. Very high tensioning forces can be achieved, even on short chains, and more precise adjustment is available. Ratchet load binders have no whip when released and come complete with cradle grab hooks for 100% rating. (\*6mm load binders are derated by 25%)



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Load Binder Ratchet 6mm Gr70 With Cradle Grab Hooks	13754	6	1700	1.6
Load Binder Ratchet 7.3-8mm Gr70 With Cradle Grab Hooks	17043	8	3800	4.8
Load Binder Ratchet 10mm Gr70 With Cradle Grab Hooks	18309	10	6000	5.9
Load Binder Ratchet 13mm Gr70 With Cradle Grab Hooks	10491	13	9000	6.6



### **Indirect Loadbinders**

Nobles Restraint-Mate load binders are drop forged and heat treated for high strength, the hooks swivel 360 degrees for easy positioning and application and each load binder is individually proof load tested at manufacture.

Supplied with instructions. The INDIRECT load binder is designed to reduce handle "whip" when releasing a tensioned load binder. Indirect load binders reduce whip with a double action release that limits the lever movement.



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Load Binder Lever Indirect 8mm Gr70 With Cradle Grab Hooks	14413	8	3800	4.2
Load Binder Lever Indirect 10mm Gr70 With Cradle Grab Hooks	15046	10	6000	6.1
Load Binder Lever Indirect 13mm Gr70 With Cradle Grab Hooks	13653	13	9000	6.3



### Lever Loadbinders

Nobles Restraint-Mate load binders are drop forged and heat treated for high strength, the hooks swivel 360 degrees for easy positioning and application and each load binder is individually proof load tested at manufacture.

Supplied with instructions. Nobles Restraint-Mate grab hook load binders are fitted with cradle grab hooks to provide a 100% rating as per AS/NZS 4344.

\*6mm load binders are derated by 25%



### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Load Binder Lever 6mm Gr70 With Cradle Grab Hooks Derated By 25%	15149	6	1700	1.6
Load Binder Lever 7.3-8mm Gr70 With Cradle Grab Hooks	11293	8	3800	3.8
Load Binder Lever 10mm Gr70 With Cradle Grab Hooks	16047	10	6000	5.5
Load Binder Lever 13mm Gr70 With Cradle Grab Hooks	10391	13	9000	5.7

### 12.5 Quikbinder



### Quikbinder

Available in 3 sizes: 8mm, 10mm and 13mm. All have 150mm of take up.

Patented three position pawl with "free-spin" setting for fast adjustment in either direction.

Twice as fast as a traditional ratchet binder.

Folding handle for safety and storability.

Anti-Theft: The QuikBinderTM Plus can be locked in the folded position with a long shank padlock.

The vinyl coated barrel offers a good grip for fast spinning in the free-spin position.

Security grab hooks to prevent chain dislodging.

Certified according to AS/NZS4344.





### **Product Specifications**

Name	ITEM #	Suits Chain Size (mm)	Lashing Capacity (kg)	Weight (kg)
Quickbinder Ratchet 8mm Gr70 With Grab Hooks	17703	8	4000	5.5
Quickbinder Ratchet 10mm Gr70 With Grab Hooks	17544	10	6400	7
Quickbinder Ratchet 13mm Gr70 With Grab Hooks	19434	13	10000	7.25

## **PWB<sup>®</sup> QuikBinder Plus**

The patented SCC QuikBinder Plus is now available through PWB Anchor Limited.



#### AS/NZS 4344

The PWB<sup>®</sup> QuikBinder Plus is clearly identified carrying the relevant lashing chain size capacities.

### Call us today on 1300 792 262

PO Box 77, 441 Grimshaw Street, Bundoora VIC Australia 3083 **Phone** 03 9467 2933 **Fax** 03 9467 7290 www.pwbanchor.com.au



# **PWB<sup>®</sup> QuikBinder Plus**

This easy to install ratchet loadbinder offers a 3-position pawl setting for extension, take-up and a free spin setting, for fast adjustment in any direction.

Designed and tested to comply with the requirements of AS/NZS 4344.

#### **Product Features:**

- Twice as fast as traditional ratchet loadbinders thanks to the third 'free spin' ratchet pawl allowing hand tensioning and release.
- > Folding handle for safety and easy storage.
- > Can be locked and secured with long-shank padlock.
- > Vinyl coated barrel for an easy grip when adjusting or positioning.
- Suits the PWB Anchor range of HiLITE<sup>™</sup> Chain.
- Fitted with winged Grab Hooks with additional spring loaded lock-in pins.

Chain Size (mm)	Lashing Capacity (kg)	Mass (kg)	Take-up	Part No.
7-8mm	3800kg	4.6kg	15cm	42077
10mm	6000kg	5.4kg	15cm	42078

Do not use any handle extension (cheater bar or pipe) to tension or release unit. Hand tighten only.



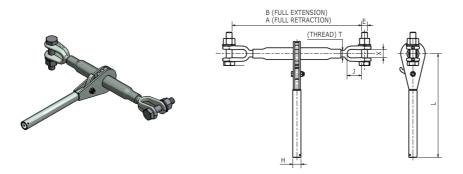
### www.pwbanchor.com.au

### 12.6 Nobles Ratchet Loadbinder



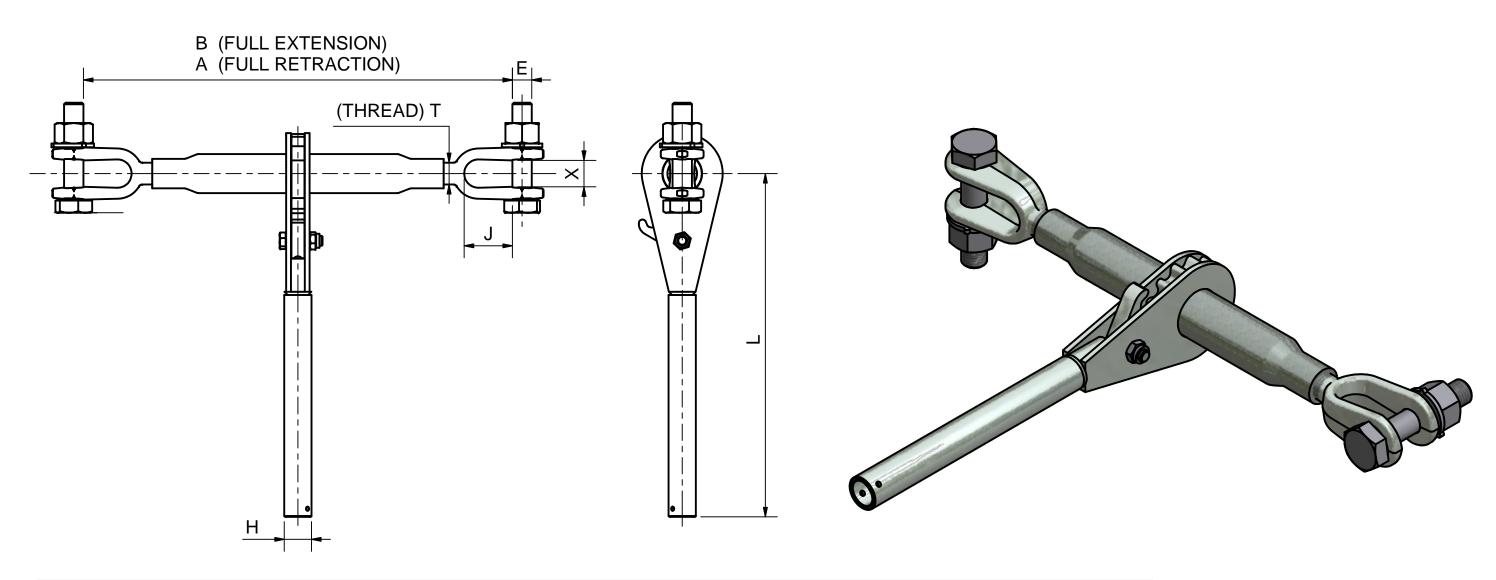
### **Nobles Ratchet Loadbinder**

The Nobles Ratchet Load binder is made by Nobles in Australia, and is based around our Rigging Screw. Ratchet load binders are well suited for heavy duty tensioning applications as very high tensioning forces can be achieved and more precise adjustment is available. Ratchet load binders also have no kick back when released.



### **Product Specifications**

Name	ITEM #	Grade	WLL (tonnes)	A (mm)	B (mm)	E (mm)	H (mm)	J (mm)	T (mm)	X (mm)	Weight (kg)
LRR M33 Ratchet Loadbinder	29206	Ρ	8	574	800	28	33.7	68	M33	38	13.7



	RATCHET LOADBINDERS											
STOCK CODE	DESCRIPTION	GRADE	WLL	TARE	A	В	Е	Н	J	L	Т	Х
			(TONNES)	(KG)	(mm)							
NLR27PJJ	M27 Jaw & Jaw Ratchet Loadbinder	Р	5	10	530	754	24	33.7	59.5	424	M27	31
NLR33	M27 Jaw & Jaw Ratchet Loadbinder	P	8	13.7	574	800	28	33.7	68	424	M33	38
NLR39PJJ	M39 Jaw & Jaw Ratchet Loadbinder	P	10	14.2	644	904	32	33.7	75	423	M39	44
NLR42SJJ	M42 Jaw & Jaw Ratchet Loadbinder	S	16	29	837	1059	36	20	91	540	M42	54

Ratchet Loadbinders are supplied with "Jaw" type end fittings as standard (i.e. Bolted Clevis) but may be fitted with "Eye" type end fittings upon request.

### 12.7 Load Choker

# NOFLES

### **Load Choker**

#### Simple to use

Easy to add to existing systems

Allows easy way to choke loads, especially for webbing straps without reducing lashing capacity through knotting/twisting

Quality manufacture and testing

Fully compliant with AS 4380 (strap choker) and AS 4344 (chain choker)





### **Product Specifications**

Name	ITEM #	Lashing Capacity (kg)	Weight (kg)
Webbing Strap Load Choker 2500kg Suit 50mm Strap	21461	2500	0.43
Chain Load Choker 4000kg Suit 8mm Chain	21215	4000	0.67

# Don't risk unsafe loads!

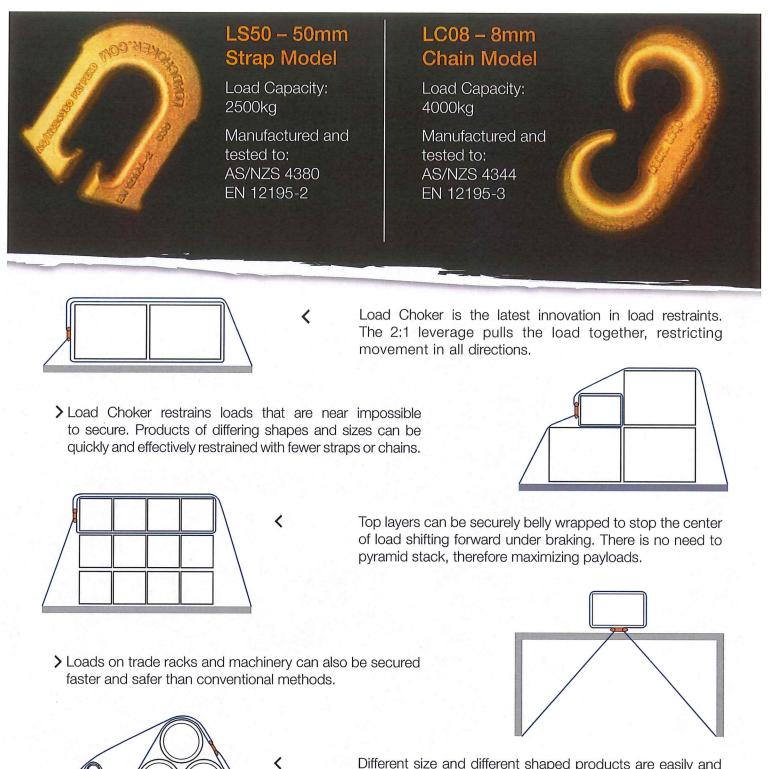


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Restrain difficult loads | Increase productivity | Reduce OH&S risks View our demonstrations on www.loadchoker.com



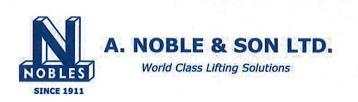
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Different size and different shaped products are easily and safely secured with fewer straps or chains saving time and eliminating safety concerns.

Order now or find out more at **loadchoker.com** 

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### 12.8 Ice Blue Rope



### **Ice Blue Rope**

Ice Blue is a high tenacity polyethylene rope with high strength and excellent abrasion resistance (15% higher breaking strength than PE Silver Staple). Like silver staple the rope is hairy which enables good grip and has high ultra-violet light resistance making it useful in numerous applications for lashing and general purpose.

Fibre rope has been common in the transport industry for many years and is still widely used. Ice Blue rope is only recommended on relatively light loads and is not suitable for heavy loads. Rope is usually attached to the tie off rails and tensioned using knots. To be effective the knot must be correctly tied. Be aware that rope is susceptible to relaxing during transport as the load shifts or settles.



### **Product Specifications**

Name	ITEM #	Size (mm)	Standard Coil Length (m)	Breaking Load (kg)	Weight per m
Rope Ice Blue 6mm Staple Polyethylene Film	18232	6	250	435	0.018
Rope Ice Blue 8mm Staple Polyethylene Film	12225	8	250	716	0.031
Rope Ice Blue 10mm Staple Polyethylene Film	18688	10	250	1080	0.049
Rope Ice Blue 12mm Staple Polyethylene Film	15660	12	250	1460	0.07
Rope Ice Blue 14mm Staple Polyethylene Film	11003	14	250	1650	0.096
Rope Ice Blue 16mm Staple Polyethylene Film	15278	16	250	2400	0.125



**General Information** 

ICE BLUE ROPE TO AS 4345

Ice Blue is a high tenacity polyethylene rope with high strength and excellent abrasion resistance (15% higher breaking strength than PE Silver Staple). Like silver staple the rope is hairy which enables good grip and has high ultra-violet light resistance making it useful in numerous applications for lashing and general purpose. Fibre rope has been common in the transport industry for many years and is still widely used. Ice Blue rope is only recommended on relatively light loads and is not suitable for heavy loads. Rope is usually attached to the tie off rails and tensioned using knots. To be effective the knot must be correctly tied. Be aware that rope is susceptible to relaxing during transport as the load shifts or settles.

	Item#	Size (mm)	Description	Breaking Load (kg)	Coil Length (metres)
	18232	6	Ice Blue Rope	435	250
	12225	8	Ice Blue Rope	716	250
	18688	10	Ice Blue Rope	1,080	250
	15660	12	Ice Blue Rope	1,460	250
and the second sec	11003	14	Ice Blue Rope	1,650	250
Rec.	15278	16	Ice Blue Rope	2,400	250

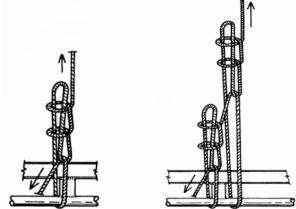
#### **Inspection Before Use**

Rope should always be inspected prior to use to ensure there is no excessive wear, abrasion or cuts that could cause the rope to break prematurely.

#### Care In Use

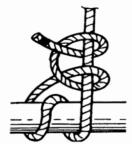


- Rope should always be used in line with good lashing and tie down practice.
- Failure to use and tie off ropes correctly could result in property damage, serious injury or death.
- 1. The most important aspect of using ropes for tie down purposes is the tie off (knot). There are many types of knot and the user should ensure they are competent at tying a suitable knot for any given tie off application.
- 2. Do not use ropes that have excessive wear, abrasion or are frayed or cut.
- Care should be taken if lashing down cargo with rough or sharp corners or edges as this could prematurely wear or cut the rope. Use padding or load corner protectors on sharp edges or corners as required to protect the rope.

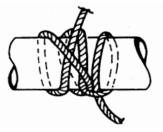


The single or double "truckies hitch" (sheepshank). The double hitch provides about twice the tension of the single hitch.

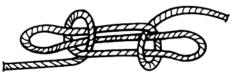
Knots commonly used are shown below.



Round turn & two half hitches



Clove hitch & half hitch



Sheepshank



Single sheet bend