



07 - LOAD RESTRAINT & RECOVERY

Load Binders

Gunnebo GrabiQ Lashing System

RUD VIP Chain Tensioners

Transport Chain & End Fittings

Ratchet Assemblies

Recovery

Bullivants distribute a large range of tie-down lashings used to restrain a load using friction. This range includes, ropes, straps or chains that can be used over the top of a load, to pass through the load or attached to the load and then attached to the vehicle on either side.

Because the restraints use friction to hold a load, it is vital that the lashings are correctly tensioned. To maintain the friction force during transportation the load must always remain in contact with the vehicle. The tension applied to the load is impacted by the angle at which the lashing is applied. The greater the angle, the less the clamping force. The clamping force is very small when the lashing is near horizontal and more lashing may be required. For example, a single strap at 90 degrees is equivalent to four straps at 15 degrees. The type of surface the load sits on also impacts the tension - a slippery surface provides less friction.

Bullivants distribute a large range of quality load restraint products that comply with the Australian Standards.

The range comprises of the following:

1. Webbing Assemblies, including webbing, end fittings and tensioners. These products include load binders, ratchet assemblies and winches.
2. Chains, which are usually fitted with hooks on each end and tensioned with levers, commonly called "dogs and chains". Not to be used for loads that can settle or crush during transportation.
3. Wire Rope, can be used to tie down loads with rope tensioned with a winch or turnbuckle.
4. Transport Fibre Rope is made from synthetic fibre. Rope should only be used for restraining relatively lightweight loads, and some natural ropes are not suitable at all for restraining loads.

Australian Standards state that lashings must be replaced if they are weakened by 10% or more of their original strength. All restraint equipment must be inspected regularly and if the components are cracked, broken or worn must not be used for restraining loads.

Maximum Weight Restrained By One Lashing (with load shift)

Front load blocked?	No		Yes	
Degree of Friction H + L = 0.85 or more lashing angle 60° or more horizontal	Medium (smooth steel on timber) $\mu = 0.4$	High (rubber load mat) $\mu = 0.6$	Medium (smooth steel on timber) $\mu = 0.4$	High (rubber load mat) $\mu = 0.4$
Rope - Single Hitch (50kg average tension)	85kg	255kg	340kg	425kg
Rope - Double Hitch (100kg average tension)	170kg	510kg	2040kg	850kg
Webbing Strap (300kg average tension)	510kg	1530kg	5100kg	2550kg
Chain (750kg average tension)	1275kg	3825kg	5100kg	6375kg

Selection

When purchasing your lashing equipment consider the following:

1. Consider the required lashing capacity taking into account the mode of use and the load to be secured.
2. Choose lashing equipment that is strong enough to suit your load.
3. Never overload the lashing and always ensure the lashing is evenly loaded.

Use

1. Always inspect your lashing prior to use, checking for nicks, cuts and stretched links.
2. Never overload the lashing and always ensure the lashing is evenly loaded.
3. Ensure lashing is not twisted or knotted when in use.
4. Always check your lashing equipment prior to use for wear and damage.
5. Never mix webbing lashing and chain lashing when securing a load.
6. Protect the lashing from sharp edges and use protective sleeving (for webbing) and corner protection where required.

Typical Lashing Capacity

Lashing	Lashing Capacity	
12mm synthetic (silver rope)	300kg	
25mm webbing	250kg	
35mm webbing	1 tonne	
50mm webbing	2 tonnes	
Chain	With claw hooks or winged grab hooks (tonnes)	With grab hooks or edge contact (tonnes)
6mm transport chain	2.3	1.7
8mm transport chain	4	3.0
10mm transport chain	6	4.5
13mm transport chain	9	6.7
13mm Grade 80 chain	10	7.5
16mm Grade 80 chain	16	12

Load Binders

Load Binders - Lever Type: Unit of Measure - Each



ORDER CODE	To suit chain size (mm)	End Fittings
421193	6	Winged Grab Hooks
421246	8	Winged Grab Hooks
422218	10	Winged Grab Hooks
421199	13	Winged Grab Hooks
122050	6	Claw Hooks
421194	8-10	Claw Hooks
421195	10	Claw Hooks

Uni-Hook Load Binders - Lever Type: Unit of Measure - Each



The UNI-Hook Load Binder is unique in its ability to maintain full lashing capacity of the chain without damaging it. The hook design is to cradle the crown of the chain so that no distortion occurs. The ability to stay on the chain if the load becomes loose reduces the chance of loss and cost of replacement.

ORDER CODE	To suit chain size (mm)	End Fittings
422215	8	Uni-Hook
422216	10	Uni-Hook

Load Binders - Ratchet Type: Unit of Measure - Each



ORDER CODE	To suit chain size (mm)	End Fittings
122051	6	Winged Grab Hooks
421247	8	Winged Grab Hooks
422222	10	Winged Grab Hooks
422223	13	Winged Grab Hooks

Loadmax AUSBINDER: Unit of Measure - Each



This new innovative and revolutionary Load Binder is ergonomically designed for OH&S in the work place. Safe and easy to use, it will not only reduce lashing times but will also reduce safety issues as well. The new AUSBINDER is a combination of the old style DOG & ratchet tie down in one.

ORDER CODE	To suit chain size (mm)	End Fittings
422213	8	Grab Hooks

Gunnebo GrabiQ Lashing System

- A range of high grade products designed to meet the needs of the most demanding of lashing applications
- ID Tag with indication of lashing capacity (LC), standard tension force (STF), manufacturer, traceability code, applicable standard and information "Not for lifting"
- In accordance with AS/NZS 4344

Gunnebo GrabiQ Ratchet Chain Tensioner: Unit of Measure - Each

Features:

Short Handle

- Fully protected ratched mechanism with 8 steps per 90 degree pull, enables use in very narrow spaces.
- Easy to change direction.
- The rubber handle decreases the risk of slipping and is convenient in cold climates.

Open design

- For easier and faster cleaning and lubrication.
- Allows dirt to fall through instead of building up.
- No residue water inside the house thanks to two drain holes at the bottom.

Trapezoidal Thread

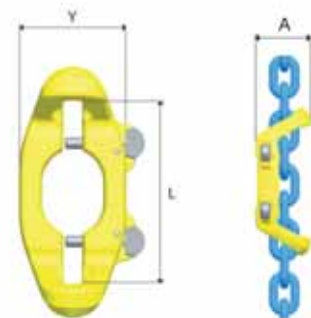
- Makes the thread less sensitive to dirt and particles.
- Low-friction treated for trouble free operation.
- Makes the lashing faster.
- Safety pins stops unintended unwinding.

ORDER CODE	To suit chain size (mm)	Lashing capacity (kN)	Breaking force (kN)	Min. length (mm)	Max. length (mm)	Weight (kgs)	Gunnebo Part No.
422226	8	50	102	400	600	3.3	GT-8-10
422227	10	80	158	400	600	3.3	GT-10-10

Gunnebo GrabiQ Midgrab Shortener MIG: Unit of Measure - Each

Marked with positive indication of the manufacturer, product designation, size, batch number and grade.

ORDER CODE	WLL (tonnes)	For Chain Size (mm)	L (mm)	A (mm)	B (mm)	Weight (kg)	Gunnebo Part No.
422229	2.5	8	95	50	60	0.7	MIG-8-10
122244	4.0	10	125	70	77	1.1	MIG-10-10
422230	6.7	13	150	90	80	2.6	MIG-13-10



Gunnebo GrabiQ Grade 100 Alloy Chain: Unit of Measure - metre

• Grade 80+ or grade 10.

ORDER CODE	WLL (tonnes)	Dia. (mm)	P (mm)	W1 (mm)	Weight (kg)	Gunnebo Part No.
122148	1.5	6	18	8	1.0	KLA 6-10
122149	2.5	8	24	11	1.7	KLA 8-10
122150	4.0	10	30	14	2.6	KLA 10-10
122151	6.7	13	39	18	4.5	KLA 13-10
122152	10	16	48	22	6.6	KLA 16-10
122318	16	20	60	29	9.1	KLA 20-10
122692	19	22	66	31	11.8	KLA 22-10

Please note for Grade 10 the maximum in - service temperature is 200°C.



Clevis Sling Hook with Latch EGKN: Unit of Measure - Each

Sling Hooks with a heavy duty latch against working loose, marked with positive indication of the manufacturer, product designation, size, batch number and grade.

ORDER CODE	To suit chain size (mm)	WLL (tonnes)	L (mm)	B (mm)	G (mm)	H (mm)	Approx. Weight (kg)	Gunnebo Part No.
121485	8	2.5	95	28	17	23	0.54	EGKN-8-10
122216	10	4.0	121	35	23	31	1.08	EGKN-10-10
122217	13	6.7	145	42	28	38	2.23	EGKN-13-10



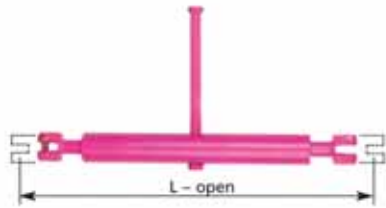
Grip Latch Clevis Safety Hook GBK: Unit of Measure - Each

ORDER CODE	WLL (tonnes)	For Chain Size (mm)	L (mm)	B (mm)	G (mm)	H (mm)	Weight (kg)	Gunnebo Part No.
121830	1.5	6	87	26	14	17	0.4	GBK 6-10
122286	2.5	8	119	37	20	22	0.8	GBK 8-10
122287	4.0	10	150	47	22	29	1.3	GBK 10-10
122288	6.7	13	172	54	27	35	2.4	GBK 13-10
122167	10	16	207	68	29	43	4.3	GBK 16-10



Rud VIP Chain Tensioners

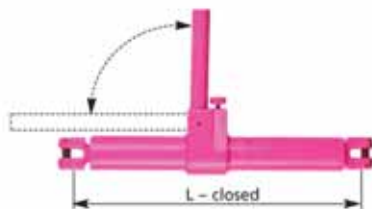
VIP Chain Tensioners - VKSPS: Unit of Measure - Each



- Full and even adjustment on both ends
- Tension lever held captive

ORDER CODE	Chain Size (mm)	L Open (mm)	L Closed (mm)	Adjustment (mm)	RUD Part No.
422241	6	323	204	120	VKSPS 6
422242	8	518	308	210	VKSPS 8
422243	10	533	324	210	VKSPS 10
422244	13	787	487	300	VKSPS 13
422245	16	807	507	300	VKSPS 16

VIP Chain Tensioners Ratchet - VKSPS-R: Unit of Measure - Each



- Ratchet tensioner with clevis fittings
- Arm folds flat avoiding accidental damage
- Lever on tensioner arm for easy operation
- Full and even tension on both ends

ORDER CODE	Chain Size (mm)	L Open (mm)	L Closed (mm)	Adjustment (mm)	RUD Part No.
422246	6	323	204	120	VKSPS-R 6
422247	8	518	308	210	VKSPS-R 8
422248	10	533	324	210	VKSPS-R 10
422249	13	787	487	300	VKSPS-R 13
422250	16	807	507	300	VKSPS-R 16

Transport Chain & End fittings

Transport Grade 70 Chain: Unit of Measure - Each



Supplied in bucket complete with Winged Grab Hooks.

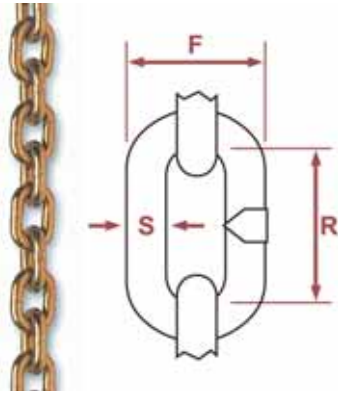
ORDER CODE	Chain Size (mm)	Length (metres)
121726	6	6
121720	8	9
121728	10	6

Replacement Load Restraint Hooks: Unit of Measure - Each



ORDER CODE	To Chain Size (mm)	Length (metres)
421214	6-8	Clevis Claw Hook
421215	8	Clevis Claw Hook
421216	10	Clevis Claw Hook
421212	6	Clevis Winged Grab Hook
421250	8	Clevis Winged Grab Hook
421217	13	Clevis Winged Grab Hook

Transport Chain Grade 70: Unit of Measure - metre



Transport Chain is a high performance chain that is easy to handle.

ORDER CODE	Chain Size (mm)	Lashing Capacity (tonnes)	S (mm)	R (mm)	F (mm)	Weight m/100kg	Quantity in Drum (meter)
121722	6	2.3	6.3	18.8	21.6	116	625
121719	8	4	8	23.8	27	68.9	350
121721	10	6	10	29.8	33.8	45.5	220
121723	13	9	12.7	38	42.5	28.6	130

Not for lifting applications. Other sizes available.

Ratchet Assemblies

Tie Down Restraint Ratchet Assemblies:
Unit of Measure - Each



ORDER CODE	Lashing Capacity (tonnes)	Width of Webbing (mm)	Length of Webbing (m)	End Fittings
421123	0.25	25	4	S Hooks
421137	0.25	25	4	J Hooks
421127	0.5	25	1.8	Endless
421128	0.5	25	4	Endless
421124	0.6	36	6	S Hooks
421125	1	36	6	Hook & Keeper
421126	2.5	50	9	Hook & Keeper
421149	5	75	9	Hook & Keeper

Tie Down Restraint Ratchet Winch System:
Unit of Measure - Each



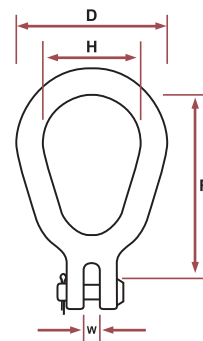
ORDER CODE	Type	Lashing Capacity (tonnes)	Width of Webbing (mm)	Length of Strap (m)	End Fittings
422239	Clip On	2.5	-	-	-
422233	Clip On	2.5	50	9	Hook & Keeper
422237	Slide On	2.5	-	-	-
422240	Slide On	2.5	50	9	Hook & Keeper

Replacement Load Restraint Webbing Straps:
Unit of Measure - Each



ORDER CODE	Lashing Capacity (tonnes)	Width of Webbing (mm)	Length of Strap (m)	End Fittings
421231	2.5	50	9	Hook & Keeper

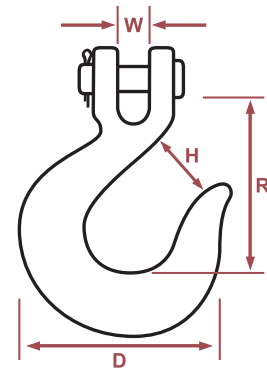
Clevis Lug Link: Unit of Measure - Each



ORDER CODE	Chain Size (mm)	MWL (tonnes)	D (mm)	H (mm)	R (mm)	W (mm)	Mass (kg)
121759	8	2.5	83	54	108	10	0.5
121760	10	4	87	54	107	12	0.6
121785	13	6	110	60	158	15	1.5

Slip Hooks: Unit of Measure - Each

ORDER CODE	Chain Size (mm)	MWL (tonnes)	D (mm)	H (mm)	R (mm)	W (mm)	Mass (kg)
121715	6	1	66	24	59	8	0.3
121711	8	2.5	78	27	75	9.5	0.4
121712	10	4	89	32	76	11.1	0.6
121716	13	6	124	44	100	15.1	1.3



Recovery

RecoverSAFE: Unit of Measure - Each

RecoverSAFE allows for faster, safer handling and response time in the event of a bogged or broken down vehicle with less risk of injury & reduced productivity loss.

- HMPE fibre - same strength as steel wire rope
- 1/7 the weight of wire rope
- Available as a single sling or grommet configuration
- Low stretch
- High flex fatigue
- Torque free (Safe energy release)
- High abrasion resistance
- Easy to inspect with sliding or fixed covers
- Traceability available via BEAM
- Test certificates available upon request

ORDER CODE	Product Description (all Slings come complete with sleeves each end)	WLL in tonnes based on 2:1 Safety Factor
113099	44mm x 8m RecoverSAFE Sling	68
113100	44mm x 10m RecoverSAFE Sling	68
113101	44mm x 15m RecoverSAFE Sling	68
113102	56mm x 8m RecoverSAFE Sling	109
113103	56mm x 10m RecoverSAFE Sling	109
113104	56mm x 15m RecoverSAFE Sling	109
113105	88mm x 9m RecoverSAFE Sling	298
113106	88mm x 10m RecoverSAFE Sling	298
113107	88mm x 15m RecoverSAFE Sling	298
113108	44mm x 8m RecoverSAFE Grommet	102
113109	44mm x 15m RecoverSAFE Grommet	102
113110	56mm x 8m RecoverSAFE Grommet	164
113111	56mm x 15m RecoverSAFE Grommet	164
113112	88mm x 8m RecoverSAFE Grommet	447
113113	88mm x 15m RecoverSAFE Grommet	447
113114	44mm x 8m RecoverSAFE Double Grommet	153
113115	44mm x 15m RecoverSAFE Double Grommet	153
113116	56mm x 8m RecoverSAFE Double Grommet	246
113117	56mm x 15m RecoverSAFE Double Grommet	246
113118	88mm x 8m RecoverSAFE Double Grommet	670
113119	88mm x 15m RecoverSAFE Double Grommet	670



RecoverFast Recovery Strap: Unit of Measure - Each

RecoverFast is a high performance, rubber covered strap for recreational 4WD, light commercial, heavy industrial vehicles and mining.

- Abrasion and cut resistant.
- Proof tested to 50% of ultimate breaking strength.
- Available in high strength nylon core or for extra strength and flexibility a Kevlar Core.
- Extremely high strength to weight ratio.
- Individual traceability.
- Smooth stretch for assisted recovery.
- No cleaning after use.
- Easy to use - oval shaped eyelets.
- Oil, water, mud and dust proof.

ORDER CODE	Breaking Strength (tonnes)	Length (metres)	Core	Weight of Recovery Strap (kg)	Recovery Strap Dimensions (mm)	Bogged Vehicles			Towing on Inclined Roadways		
						(G.V.W.) Recovery/Towed (tonnes)			(G.V.W.) Recovery/Towed (tonnes)		
						C	Light Bogged or Slippery	Medium Bogged	Severely Bogged	Slop 10-1 Grade 10% Inclined 6°	Slope 6-1 Grade 16% Inclined 9.5°
131058	8	6	Nylon	4	50	16	8	5	30	20	12
131059	8	10	Nylon	6	50	16	8	5	30	20	12
131223	12	6	Nylon	5	50	24	12	8	50	30	20
131061	20	6	Nylon	8	60	40	20	15	80	50	35
131063	20	10	Nylon	12	60	40	20	15	80	50	35
422209	50	0.5	Kevlar	3.5	56	100	50	35	200	130	80
422208	50	0.8	Kevlar	4	56	100	50	35	200	130	80
131068	50	1	Kevlar	4	56	100	50	35	200	130	80
131070	50	6	Kevlar	11	56	100	50	35	200	130	80
131071	50	10	Kevlar	18	56	60	30	20	120	80	50
131078	100	10	Kevlar	25	80	200	100	70	400	250	170
131083	150	6	Kevlar	20	80	300	150	100	600	380	250
131085	150	10	Kevlar	32	80	300	150	100	600	380	250
131088	200	6	Kevlar	25	80	400	200	140	800	500	340
131091	200	10	Kevlar	40	80	400	200	140	800	500	340
131101	300	6	Kevlar	33	90	600	300	200	1200	750	500
131000	300	10	Kevlar	52	90	600	300	200	1200	750	500
422211	300	15	Kevlar	77	90	600	300	200	1200	750	500
131103	300	20	Kevlar	102	90	600	300	200	1200	750	500

Other sizes available. Not to be used for lifting purposes.



Snatch Straps: Unit of Measure - Each



Snatch Straps are made of the finest quality polyester webbing. The webbing is designed to stretch, allowing a “shock absorbing” action that reduced shock loads that could damage vehicles or equipment. The Snatch Straps are simple to use, lightweight, less expensive than chain, and will not rust.

ORDER CODE	Description	Towing Capacity (tonnes)	Width (mm)
421218	9 metre Snatch Strap	16	60
422231	9 metre Snatch Strap	32	100

Tree Trunk Protector: Unit of Measure - Each



Designed to allow use of a tree as an anchorage point whilst using your electric or mechanical winch for recovery of your vehicle. The wide bearing surface of the polyester webbing protects the tree’s delicate surface from bruising or ringbarking.

ORDER CODE	Length (metres)	Width (mm)	MSB (kg)	Stretch Max %
421221	3	75	8000	10

Accessories

Corner Protection: Unit of Measure - Each



ORDER CODE	Description	Length (mm)
421233	Corner Protector for Webbing - Plastic	100
421234	Corner Protector for Webbing - Plastic	1050
421245	50mm Wide Webbing Protective Sleeve	300
421235	Corner Protector for Chain - Urethane	130