

Load Hugger BASICS

Lift-All Load Hugger cargo control and load securement products are of the highest quality. They offer the van and flatbed operator a wide variety of options to meet Department of Transportation and CVSA requirements.*

Features, Advantages and Benefits

Promotes Safety

- Flexible, conforms to and controls the load
- Ratchet assembly allows easy adjustment
- All hooks and chain assemblies equal or exceed strength of webbing
- Meet all DOT (Department of Transportation) and CVSA (Commercial Vehicle Safety Alliance) regulations.

Saves Money

- Soft and wide - does not damage costly cargo
- Large selection - choose the capacity that's right for the load carried

Saves Time

- Light weight, easy to handle
- Large selection of end fastenings, winches and ratchets make choosing and using the correct assembly easy

Inspection Criteria

Remove from service if any of the following are visible:

- Cuts, holes, surface abrasion or crushed areas
- Burns or chemical damage
- Separation of load carrying stitch pattern
- Hardware, fittings or tensioning devices which are broken, bent, twisted, cracked, or have nicks and gouges
- Knotted webbing
- Splices or other makeshift repairs
- Damaged loop ends

See illustrations of damaged webbing on page 50 & 51; damaged chain and hooks on page 112 and 113.

Definitions

Working Load Limit: The maximum load that may routinely be applied to an assembly or component in straight tension.

Ultimate Strength: The load at which an assembly or component will fail in testing.

Department of Transportation Regulations 393, 102(b) use Ultimate Breaking Strength to calculate the number of tiedown assemblies required to secure a load.

Lift-All publishes Ultimate Strength for this purpose only. For safety, we recommend that only Working Load Limits be used for your calculations.

Environmental Considerations

- Nylon and polyester are seriously degraded at temperatures above 200° F.
- Prolonged exposure to Ultraviolet light adversely affects nylon and polyester. Tie down straps become bleached and stiff when exposed to sunlight or arc welding.
- Many acids, alkalis and chemicals have an adverse effect on nylon and polyester. See chart on page 34.

Safe Operating Practices

- Inspect tie down straps and all hardware when load is first being secured.
- Re-tighten tie downs periodically during run.
- Never use *Load Huggers* for anything other than securing cargo. Do not use for lifting loads or towing vehicles.
- Load should be securely blocked and stabilized before tensioning the straps.
- Never exceed rated capacities.
- Use caution when tossing straps and chain anchor assemblies over a load.
- Check installation of portable winches - ratchet pawl must be at top of toothed wheel and bolts tight against the rub rail.
- Weld-on winches should not be cracked.
- Corner protectors and wear pads must be used to protect *Load Huggers* from edges and abrasion.
- All hardware must be in line with direction of pull to achieve full strength.

* CVSA - Commercial Vehicle Safety Alliance
Phone: 202-775-1623 Fax: 202-775-1624
www.cvsa.org

WEB SELECTION

Two **styles** of webbing are available for our 2"-4" ratchet assemblies and winch straps:
Standard yellow and **Hi-Vis Tuff-Edge**.

Two **strength classes** are available for 2" assemblies: **Single Stripe** and **Double Stripe**.

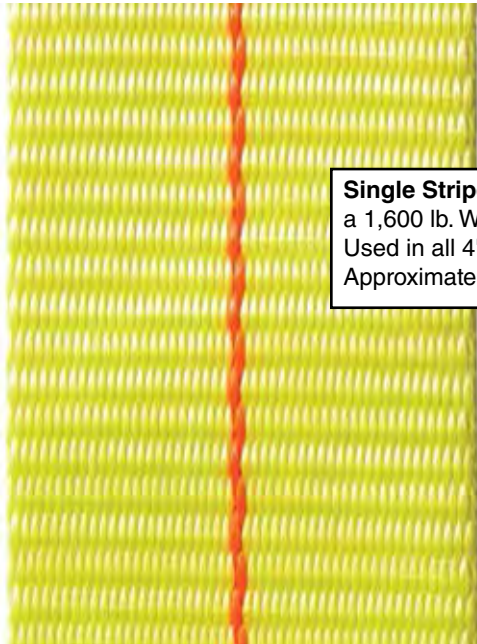
Standard Polyester Tiedown Webbing

This webbing offers exceptional value for everyday use.

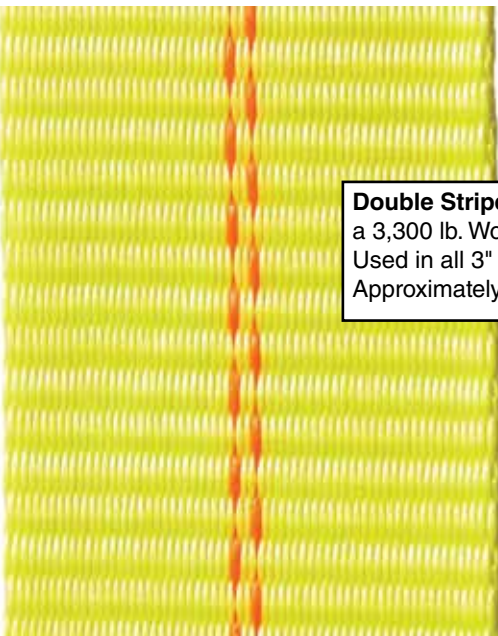
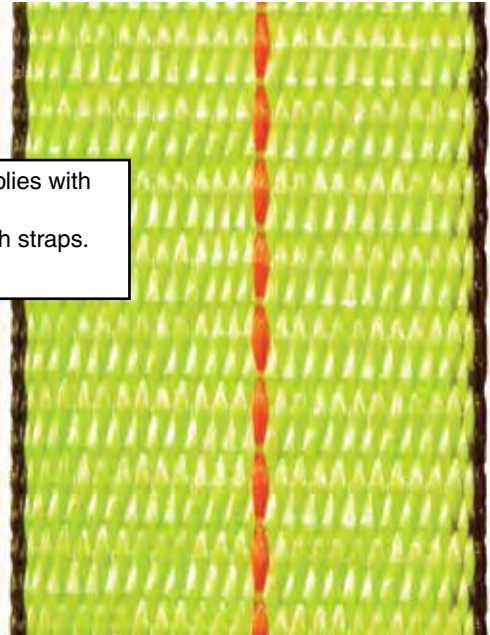
Hi-Vis Tuff-Edge Polyester Tiedown Webbing

The brightness of our new **Hi-Vis Tuff-Edge** tiedowns makes them more visible, easier to locate and harder to lose.

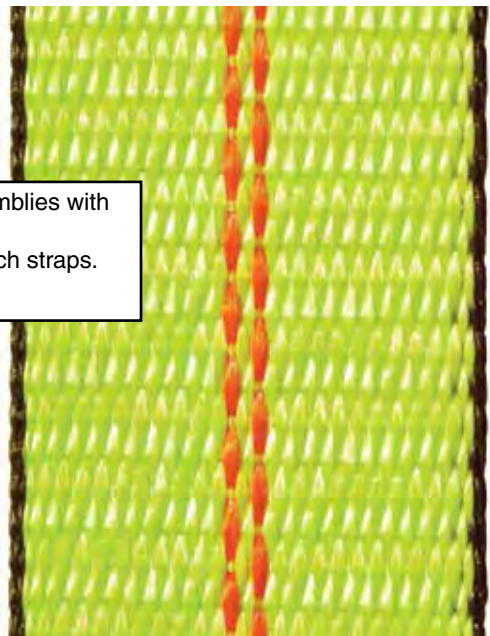
Special black polymer edge yarns provide 32% better edge cut resistance for longer assembly life.



Single Stripe - Used for 2" assemblies with a 1,600 lb. Working Load Limit. Used in all 4" assemblies and winch straps. Approximately 1/32" thick.



Double Stripe - Used for 2" assemblies with a 3,300 lb. Working Load Limit. Used in all 3" assemblies and winch straps. Approximately 3/64" thick.



RATCHET ASSEMBLIES

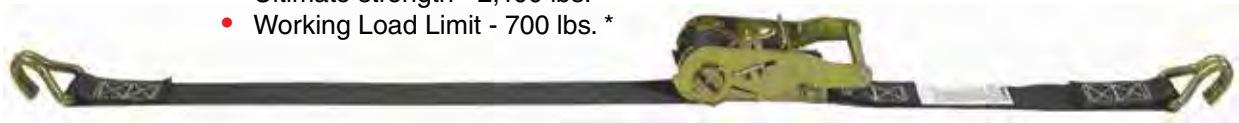
Type A Assemblies One piece (endless) assembly for use without end fittings.
Length measured from ratchet mandrel to end of webbing.



Type B Assemblies Two piece assemblies with one fixed length of webbing and one adjustable length of webbing. Numerous end fittings are available to handle any requirements.
(See following pages)

Series 1,000

- 1" wide polyester webbing
- Ultimate strength - 2,100 lbs. *
- Working Load Limit - 700 lbs. *



Series 5,000

- 2" wide polyester webbing
- Ultimate strength - 5,000 lbs.
- Working Load Limit - 1,600 lbs.



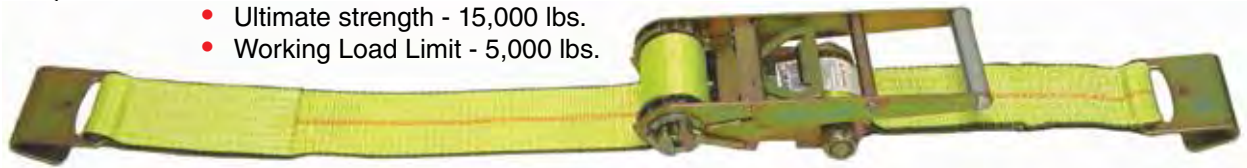
Series 10,000

- 2" wide polyester webbing
- Ultimate strength - 10,000 lbs.
- Working Load Limit - 3,300 lbs.



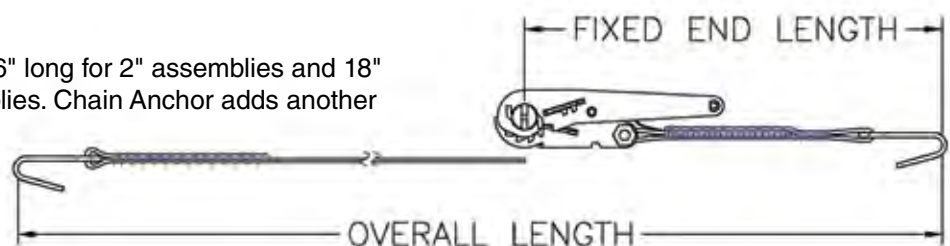
Series 15,000

- 3" or 4" wide polyester webbing
- Ultimate strength - 15,000 lbs.
- Working Load Limit - 5,000 lbs.



Type B Measurement

Fixed end is approximately 16" long for 2" assemblies and 18" long for 1", 3" and 4" assemblies. Chain Anchor adds another 14" to fixed end length.



* When using flat hooks in Series 1,000, ultimate strength is 1,000 lbs., working load limit is 330 lbs.

1" TIEDOWN ASSEMBLIES

Webbing Ultimate Strength * (lbs.) Working Load Limit (lbs.)	Series 1,000			
	1" Wide Polyester 2,100 with Ratchet** / 1,000 with Cam 700 with Ratchet** / 330 with Cam			
	Buckle	Part No. 10 Ft. Lgth.	Part No. 15 Ft. Lgth.	Weight (lbs.)
Flat Hook ** 	Ratchet	60102	6A102	1.1
	Cam	60110	6A110	.7
Stamped Snap Hook 	Ratchet	60104	6A104	1.5
	Cam	60113	6A113	1.0
U-Hook 	Ratchet	60101	6A101	1.1
	Cam	60109	6A109	.7
Hook & Keeper 	Ratchet	60105	6A105	1.5
	Cam	60114	6A114	1.1
Open Hook (PE Coated or Zinc Plated)  (PE Coated Hook shown)	Ratchet PE Hook	60103	6A103	1.7
	Ratchet ZP Hook	60106	6A106	1.6
	Cam PE Hook	60111	6A111	1.3
	Cam ZP Hook	60112	6A112	1.2
Type A (Endless)  (Series 1,000 Cam Buckle shown)	Ratchet	60107	6A107	.9
	Cam	60108	6A108	.5

Note: Because end terminations vary proportionally with size, check with Lift-All if critical dimensions are required. Non-standard lengths available upon request.

* Ultimate strength of assembly when new.

** Exception: When used with Flat Hooks, 1" Ratchet Assembly rating is 1,000 lbs. ULTIMATE STRENGTH and 330 lbs. WORKING LOAD LIMIT.










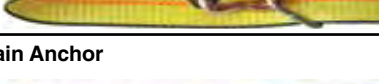

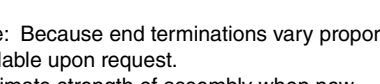
1" Ratchet Buckle



1" Cam Buckle

Our popular 1" Ratchet Tiedown with PE coated Open Hooks is available in 15 foot lengths in a 16 piece display box (Part No. 6A103B)

RATCHET ASSEMBLIES







Webbing Ultimate Strength * Working Load Limit	Length	Series 5,000			Series 10,000		
		2" Wide Polyester 5,000 lbs. 1,600 lbs.			2" Wide Polyester 10,000 lbs. 3,300 lbs.		
		Standard Part No.	Tuff-Edge Part No.	Weight (lbs.)	Standard Part No.	Tuff-Edge Part No.	Weight (lbs.)
Flat Hook  (Series 10,000 shown)	27'	60501	TE60501	4.6	61001	TE61001	5.8
	30'	60502	TE60502	4.8	61002	TE61002	6.0
Stamped Triangle  (Series 5,000 shown)	27'	60503	TE60503	4.2	61003	TE61003	5.2
	30'	60504	TE60504	4.4	61004	TE61004	5.4
Stamped Snap Hook  (Series 10,000 shown)	27'	60505	TE60505	4.6	61005	TE61005	6.2
	30'	60506	TE60506	4.8	61006	TE61006	6.4
Twisted Snap Hook  (Series 10,000 shown)	27'	60507	TE60507	5.2	61007	TE61007	5.6
	30'	60508	TE60508	5.4	61008	TE61008	5.8
Forged Snap Hook  (Series 10,000 shown)	27'	60509	TE60509	5.8	61009	TE61009	6.4
	30'	60510	TE60510	6.0	61010	TE61010	6.6
D-Ring  (Series 10,000 shown)	27'	60511	TE60511	4.2			
	30'	60512	TE60512	4.4			
U-Hook  (Series 10,000 shown)	27'	60513	TE60513	4.6	26422	TE26422	5.8
	30'	60514	TE60514	4.8	26423	TE26423	6.0
Hook & Keeper  (Series 10,000 shown)	27'	60515	TE60515	4.8			
	30'	60516	TE60516	5.0			
Chain Anchor  (Series 10,000 shown)	27'				61013	TE61013	13.0
	30'				61014	TE61014	13.2
Type A (Endless)  (Series 5,000 Ratchet Buckle shown)	27'	60517	TE60517	3.8	61011	TE61011	4.4
	30'	60518	TE60518	4.0	61012	TE61012	4.6

Note: Because end terminations vary proportionally with size, check with Lift-All if critical dimensions are required. Non-standard lengths available upon request.

* Ultimate strength of assembly when new.

⚠ WARNING Always protect tiedowns from being cut by corners and edges.

RATCHET ASSEMBLIES

Webbing Ultimate Strength * Working Load Limit	Length	Series 15,000					
		3" Wide Polyester 15,000 lbs. 5,000 lbs.			4" Wide Polyester 15,000 lbs. 5,000 lbs.		
		Standard Part No.	Tuff-Edge Part No.	Wt. (lbs.)	Standard Part No.	Tuff-Edge Part No.	Wt. (lbs.)
Flat Hook 	27'	20482	TE20482	12.8	26424	TE26424	13.6
	30'	20483	TE20483	13.2	26425	TE26425	14.0
Forged Triangle 	27'	20484	TE20484	14.0	26430	TE26430	14.8
	30'	20485	TE20485	14.4	26431	TE26431	15.2
Chain Grab Hook 	27'	20486	TE20486	13.4	26426	TE26426	14.2
	30'	20487	TE20487	13.8	26427	TE26427	14.6
Chain Anchor Assembly 	27'	20488	TE20488	16.8	26432	TE26432	17.6
	30'	20489	TE20489	17.2	26433	TE26433	18.0
U-Hook 	27'	20494	TE20494	13.0	26436	TE26436	13.8
	30'	20495	TE20495	13.2	26437	TE26437	14.2
7 in. Sewn Eye 	27'	20490	TE20490	11.0	26428	TE26428	11.8
	30'	20491	TE20491	11.4	26429	TE26429	12.2
Type A (Endless) 	27'	20492	TE20492	10.6	26434	TE26434	11.4
	30'	20493	TE20493	11.0	26435	TE26435	11.8

WEAR PADS AND CORNER PROTECTORS

Sliding Sleeve

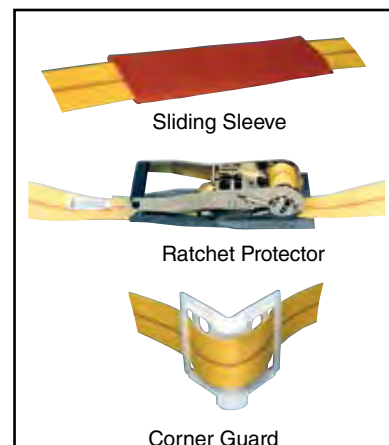
- Double walled tubular product
- Specify length when ordering
- Protects Load Hugger webbing from abrasion and helps resist cutting

Ratchet Protector

A sewn fabric pad used to protect surface finish of cargo and ratchet mechanism. Specify with order.

Corner Guard - Part #CG

A movable, rust-proof copolymer corner guard. Protects Load Hugger from sharp edges. Tough enough to be used with either chain or webbing. For other wear pad options, see pages 16-19 in the Wear Pad section.



WINCH STRAP ASSEMBLIES AND WINCHES

Series 12,000, Load Huggers 3 & 4 inch Wide Polyester Winch Assemblies

- *Load Hugger Winch Straps* are made for securely mounted winches on flat bed trucks and trailers.
- Ultimate strength 15,000 lbs.
- Working load limit 5,000 lbs.
- Standard assemblies in 3" or 4" widths and 27' or 30' lengths
- Wear pads and corner protectors extend life of *Load Huggers* (see page 126)
- To order non-standards - specify width, length, and end fitting

Winches must be properly installed with ratchet pawl on top of toothed wheel to help prevent accidental disengagement.



Standard Winch #61222
For 3" & 4" *Load Hugger*
Winch Straps - 7.8 lbs.



Portable Winch #61221
For 3" & 4" *Load Hugger*
Winch Straps - 8.8 lbs.



**36" Winch Bar
#61223**
For use with 61221 and
61222 - 4.8 lbs.

End Fitting	Web Width (in.)	Assembly Length (ft.)	Standard Part No	Tuff-Edge Part No.	Assembly Weight (lbs.)
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Flat Hook

4	27	61201	TE61201	4.0
4	30	61202	TE61202	4.6
3	27	61203	TE61203	4.4
3	30	61204	TE61204	4.8

Forged Triangle

4	27	61205	TE61205	4.4
4	30	61206	TE61206	5.0
3	27	61207	TE61207	4.8
3	30	61208	TE61208	5.2

GrabHook

4	27	61209	TE61209	4.2
4	30	61210	TE61210	4.8
3	27	61211	TE61211	4.6
3	30	61212	TE61212	5.0

Chain Anchor

4	27	61213	TE61213	6.0
4	30	61214	TE61214	6.6
3	27	61215	TE61215	6.4
3	30	61216	TE61216	6.8

7" Sewn Eye

4	27	61217	TE61217	3.0
4	30	61218	TE61218	3.6
3	27	61219	TE61219	3.4
3	30	61220	TE61220	3.8

U-Hook

4	27	61225	TE61225	4.2
4	30	61226	TE61226	4.8
3	27	61227	TE61227	4.6
3	30	61228	TE61228	5.0

E - TRACK AND VAN INTERIOR ASSEMBLIES

To order non-standard interior van restraint assemblies specify:

- Overall length
- Fixed Length
- Cam buckle or ratchet buckle
- Spring loaded E-Track, 3 piece E-Track or any of the end fittings listed in Series 5,000 *Load Huggers* (page 125) may be attached
- Ultimate Assembly Strength: 2,500 lbs. with Cam Buckle
3,000 lbs. with Ratchet
- Working load limit: 800 lbs. with Cam Buckle
1,000 lbs. with Ratchet Buckle
- E-Track only works with E-Track fittings

Standard E-Track Straps	Standard Part No.	Tuff-Edge* Part No.	Wt. (lbs.)
2" x 12' Cam Buckle/Spring E Track Fittings - Yellow	60805	TE60805	1.6
2" x 16' Cam Buckle/Spring E Track Fittings - Gray	60806	TE60806	1.7
2" x 20' Cam Buckle/Spring E Track Fittings - Blue	60807	TE60807	1.8
2" x 12' Ratchet/Spring E Track Fittings - Yellow	60808	TE60808	2.0
2" x 16' Ratchet/Spring E Track Fittings - Gray	60809	TE60809	2.1
2" x 20' Ratchet/Spring E Track Fittings - Blue	60810	TE60810	2.2

*Tuff-Edge web is yellow for all lengths.

Van interior restraint assemblies are only as strong as the anchor or track to which they are attached.



TIE DOWN CHAIN AND BINDERS



Tiedown Chain - Boomers (Grab hook each end)

Tiedown Chain - Boomers (Grab hook each end)	Standard Part No.	Wt. (lbs.)
5/16 x 20' G-70 Yellow Dichromate-Welded Hooks	16001	21.0
3/8 x 20' G-43 Self-colored-Welded Hooks	16002	32.0
5/16 x 20' G-70 Yellow Dichromate-Clevis Hooks	16005	21.0
3/8 x 20' G-43 Self-colored-Clevis Hooks	16006	32.0
Load Binders		
5/16 - 3/8 Lever Style	16004I	8.0
5/16 - 3/8 Ratchet Style	16003I	12.0



Load Binders