

CARGO CONTROL PRODUCTS



VANGUARD STEEL LTD.



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at your service

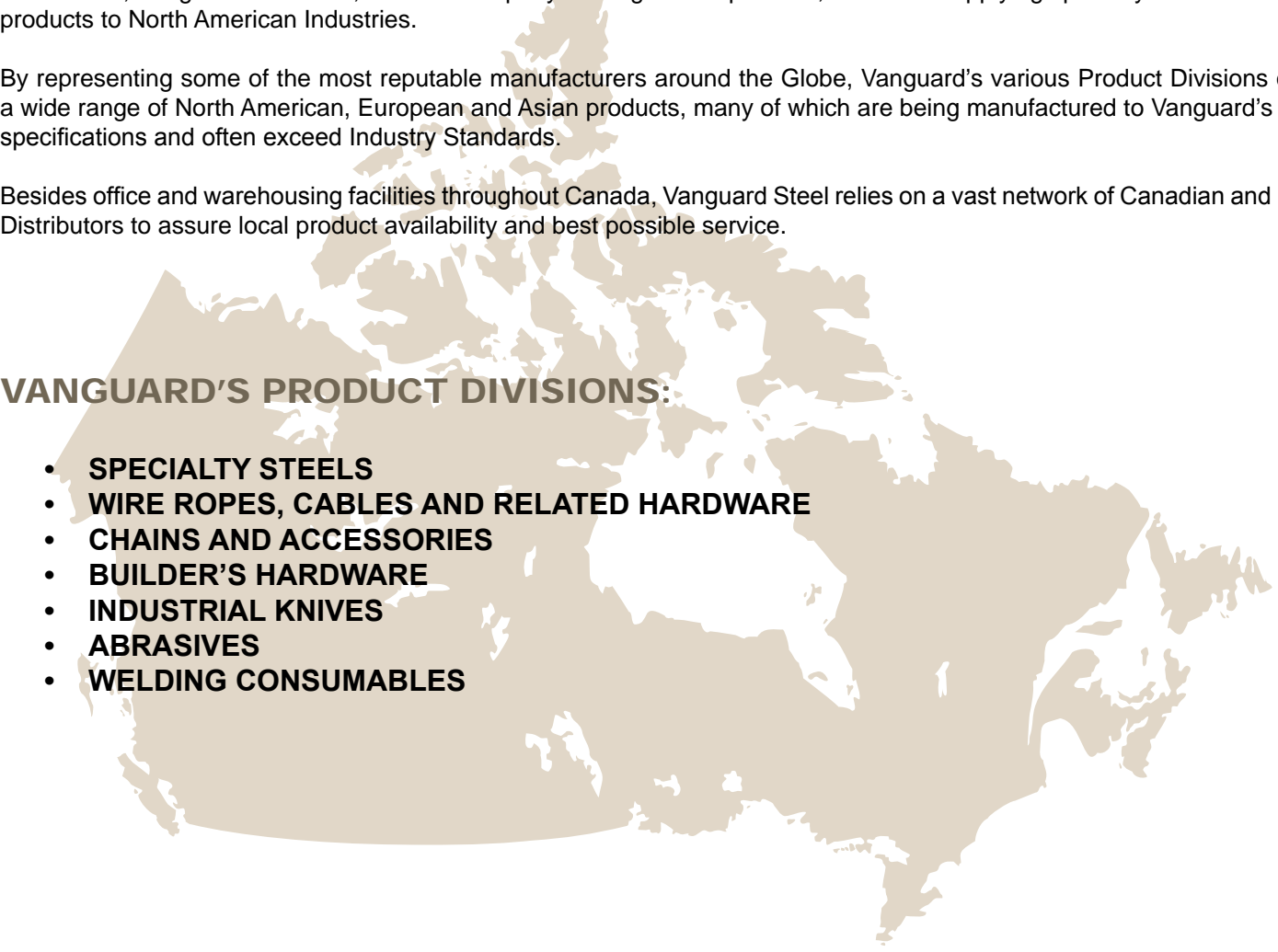


Since 1960, Vanguard Steel Ltd., a sister Company of Ringball Corporation, has been supplying specialty steels and steel products to North American Industries.

By representing some of the most reputable manufacturers around the Globe, Vanguard's various Product Divisions offer a wide range of North American, European and Asian products, many of which are being manufactured to Vanguard's own specifications and often exceed Industry Standards.

Besides office and warehousing facilities throughout Canada, Vanguard Steel relies on a vast network of Canadian and U.S. Distributors to assure local product availability and best possible service.

VANGUARD'S PRODUCT DIVISIONS:

- **SPECIALTY STEELS**
 - **WIRE ROPES, CABLES AND RELATED HARDWARE**
 - **CHAINS AND ACCESSORIES**
 - **BUILDER'S HARDWARE**
 - **INDUSTRIAL KNIVES**
 - **ABRASIVES**
 - **WELDING CONSUMABLES**
- 

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CARGO CONTROL PRODUCTS

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CONVERSION CHART

LOAD BINDERS WARNINGS AND INFORMATION

It is very important to read and understand all information shown before using a load binder



Lever



Ratchet



Recoilless

Warning:

FAILURE TO OBSERVE THESE WARNINGS MAY RESULT IN SERIOUS INJURY OR DEATH!

Load binders should only be used by properly trained/competent people that are familiar with all provincial/state and federal regulations regarding the size of and number of chain systems that are required to secure loads on trucks.

- **ALWAYS** inspect load binders for wear, bending, cracks, nicks and/or gouges BEFORE use. Load binders that are not functioning properly or show signs of bending or cracks must be removed from service immediately.
- **ALWAYS** move handle using extreme caution, as it may whip.
- **ALWAYS** keep your body clear of the path of the moving handle and loose chain that may be laying on the handle.
- **ALWAYS** make sure that your footing is stable/secure before using a load binder.
- **ALWAYS** be aware of your surroundings when using load binders, making sure to take the safety of nearby workers and yourself into consideration before use.
- **ALWAYS** secure the position of the load binder by wrapping the loose end of the chain around the handle.
- **NEVER** exceed the working load limit of the load binder, chain or components.
- **NEVER** operate a load binder when you or anyone else is standing on the load.
- **NEVER** close your hand around the handle.
- **NEVER** allow the load binder to bear against an object when under load, as this will cause side load.
- **NEVER** use a cheater bar/pipe/handle extender.
- **NEVER** attempt to open or close a load binder with more than one person.

MAINTENANCE:

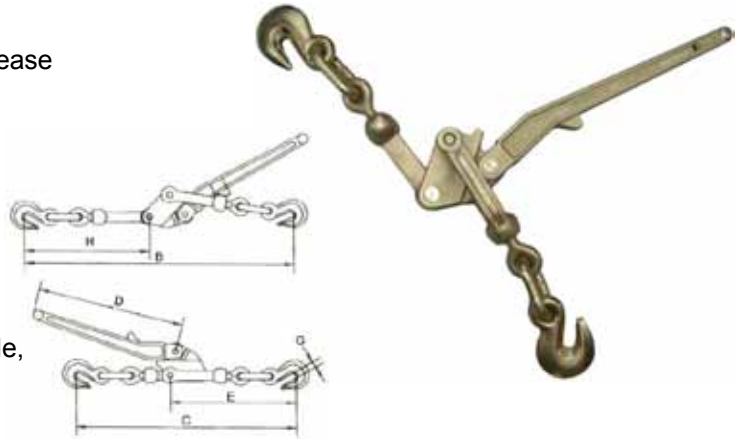
Routinely lubricate ball and socket joints to extend service life. For ratchet load binders the pawl parts and screw threads should also be lubricated to reduce friction wear.

CARGO CONTROL PRODUCTS

RECOILLESS LOAD BINDERS

Recoilless/in-direct load binders provide greater safety and ease of use than standard lever type load binders.

- Forged Steel - quenched and tempered
- Hooks can rotate 360° for easier use
- Continuous take up
- Design prevents whipping/kick back of handle
- Handle moves freely without storing load tension
- Binder toggles away from load
- Yellow chromate finish, embossed with VGD, Trace Code, WLL, MBS and chain dimensions
- Design Factor 3.5:1

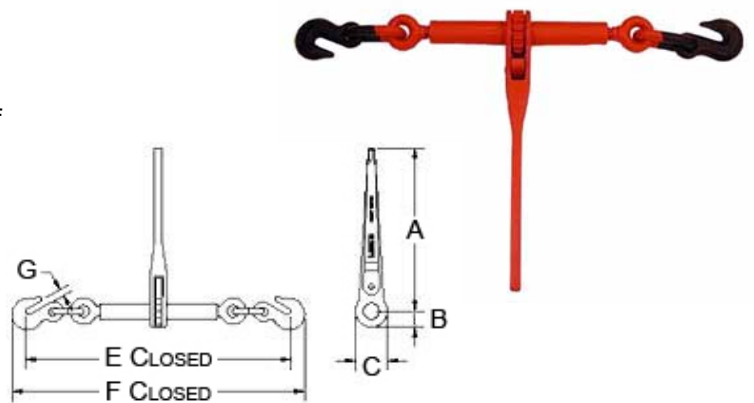


Chain Size	Dimensions (inches)								WLL (lbs)	Breaking Strength (lbs)	Weight (lbs)	Vanguard Code
	A	B	C	D	E	F	G	Take up				
5/16 - 3/8	24.10	23.70	19.70	13.20	11.00	11.00	0.51	4.50	5,400	19,000	9.20	3906 0024
3/8 - 1/2	27.00	25.50	22.00	18.50	12.50	12.50	0.60	4.50	9,200	33,000	15.00	3906 0032

RATCHET TYPE LOAD BINDERS

Ratchet load binders offer a quick, easy and safe means of tightening load securing chain assemblies.

- Forged Steel - quenched and tempered
- Continuous take-up
- Binder toggles away from load
- Painted red with black hooks, embossed with VGD, Trace Code, WLL and chain dimensions
- Design Factor 3.5:1



Chain Size	Dimensions							WLL (lbs)	Breaking Strength (lbs)	Weight (lbs)	Vanguard Code
	A	B	C	D	E	F	Take up				
1/4	6.80	0.88	1.57	16.00	17.80	0.32	5.00	2,600	7,800	4.00	3905 0016
5/16 - 3/8	14.00	1.38	2.75	23.00	25.30	0.50	8.00	5,400	19,000	10.50	3905 0024
5/16 - 3/8	14.00	1.38	2.75	23.00	25.30	0.50	8.00	6,600	26,000	11.03	3905 1024
3/8 - 1/2	14.00	1.38	2.75	25.20	28.50	0.60	8.00	9,200	33,000	13.00	3905 0032
1/2 - 5/8	14.30	1.40	2.50	26.00	29.00	0.70	9.00	13,000	46,000	15.00	3905 0040

Warning:

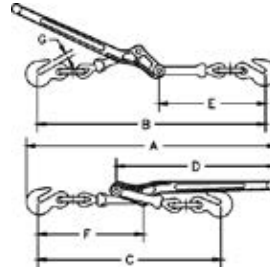
**NEVER EXCEED WORKING LOAD LIMITS!
FAILURE TO FOLLOW INSTRUCTIONS CAN RESULT IN SERIOUS INJURY!**

- For more detailed information please refer to load binder warnings and information section of this catalogue

LEVER TYPE LOAD BINDERS

Load binders are used for easy and efficient tightening of chain used for lashing purposes.

- Forged Steel - quenched and tempered
- Ball and socket swivel joints at hook assemblies permit a straight line pull
- Painted red with black hooks, embossed with VGD, Trace Code, WLL and chain dimensions
- Design Factor 3.5:1



Chain Size	Dimensions (inches)								WLL (lbs)	NBS (lbs)	Weight (lbs)	Vanguard Code
	A	B	C	D	E	F	G	Take up				
1/4	20.00	17.90	13.70	11.60	8.00	8.00	0.36	3.62	2,600	7,800	2.4	3904 0016
5/16 - 3/8	24.10	22.10	17.90	16.00	10.40	10.40	0.50	4.25	5,400	19,000	7.0	3904 0024
5/16 - 3/8	24.10	22.10	17.90	16.00	10.40	10.40	0.50	4.25	6,600	19,800	7.4	3904 1024
3/8 - 1/2	27.00	25.50	22.00	18.50	12.50	12.50	0.60	4.25	9,200	33,000	10.5	3904 0032

LOAD BINDER LOCKS

Load binder locks are designed to fit over load binder handles, locking into place with the aid of the steel spring clip. The U-shaped bracket fits over either the transport chain or the load binder handle.

The steel spring clip allows for the operator to either clip through the transport chain, around the load binder handle or through the hole found on most load binder handle and then around the transport chain



Vanguard Code: 3904 0001

LOAD TIGHTENERS

- For 3/16" chain - light duty applications only
- WLL 250 lbs

Vanguard Code: 3904 0012



Warning:

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- For more detailed information please refer to load binder warnings and information section of this catalogue

CARGO CONTROL PRODUCTS

GRADE 70 TRANSPORT CHAIN

- Heat treated, high tensile carbon steel
- Commonly used as a binder tie down chain, meeting the stringent Department of Transportation requirements
- Design factor 4:1 (in accordance with NACM specifications)
- Proof loaded at 2x the WLL
- Permanently embossed with L7 or V7 every 6 links
- Gold Chromated finish



Chain Size	WLL (lbs)	Material Diameter	Inside Length	Inside Width	Weight (lbs/100')	Full drums		Vanguard Code*
						feet	lbs	
DOMESTIC - NORTH AMERICAN CHAIN								
1/4	3,150	0.275	1.240	0.460	74	800	592	3807 0016
5/16	4,700	0.330	1.150	0.490	100	550	550	3807 0020
3/8	6,600	0.397	1.300	0.600	145	400	580	3807 0024
7/16	8,750	0.458	1.370	0.670	209	300	627	3807 0028
1/2	11,300	0.520	1.560	0.810	264	200	528	3807 0032
IMPORTED CHAIN								
1/4	3,150	0.275	1.240	0.460	74	800	592	3807 1016
5/16	4,700	0.330	1.150	0.490	100	550	550	3807 1020
3/8	6,600	0.397	1.300	0.600	145	400	580	3807 1024
7/16	8,750	0.458	1.370	0.670	209	300	627	3807 1028
1/2	11,300	0.520	1.560	0.810	264	200	528	3807 1032

*For 1/2 drums, add '1' at the end of part number (i.e. 3807 00161)

** For NACM Specification see chart in the chain section of this catalogue

TAGS FOR GRADE 70 CHAIN AND ASSEMBLIES

- Steel tags with slit that can be opened and closed around chain link
- Stamped with chain diameter and Working Load Limit (WLL), provides easy visual confirmation of NSC Standard 10 requirements
- Yellow chromate finish



Diameter (inches)	Vanguard Code
1/4	3963 0016
5/16	3963 0020
3/8	3963 0024
1/2	3963 0032

Warning:

NEVER EXCEED WORKING LOAD LIMITS!

- **NEVER** use grade 70 chains for lifting applications



18" CHAIN TAILS - GRADE 70

- Design factor 3:1

Chain Size	WLL (lbs)	Model / Web Width	Weight (lbs)	Vanguard Code
5/16	3,335	S-925 / 2"	2.62	3705 4010
3/8	6,000	S-926 / 3"	3.50	3705 4011
3/8	6,600	S-927 / 4"	3.66	3705 4012
5/16	5,500	S-928 / 3"	2.80	3705 5000



GRADE 70 TIE DOWN ASSEMBLIES

- Designed for use in cargo securement, towing and logging.
- Grade 70 chain with alloy clevis grab hooks on each end.
- Manufactured in accordance with the Department of Transportation regulations
- Each assembly has a rating tags attached to meet NSC Standard 10 requirements
- Yellow chromate finish
- Design factor 4:1

Chain Diameter (inches)	WLL (lbs)	Weight (lbs/pc)	Vanguard Code
5/16 x 16'	4,700	16.00	3807 2016
5/16 x 20'	4,700	20.00	3807 2020
5/16 x 25'	4,700	25.00	3807 2025
3/8 x 16'	6,600	25.00	3807 2416
3/8 x 20'	6,600	31.00	3807 2420
3/8 x 25'	6,600	38.00	3807 2425



'AG'-TYPE GRADE 70 CLEVIS GRAB HOOKS

- Yellow chromate finish
- Latch included
- Also available in carbon steel

Size	Dimensions (inches)					WLL (lbs)	Weight (lbs)	Vanguard Code
	B	E	R	P	T			
1/4	9.0	10.0	50.0	9.6	10.0	3,600	0.62	3931 00161
5/16	10.0	11.0	57.4	11.0	12.5	5,400	0.95	3931 00201
3/8	12.0	12.7	66.8	12.0	10.5	7,500	1.28	3931 00241
1/2	19.1	16.8	81.0	16.0	17.8	12,750	2.60	3931 00321



Warning:

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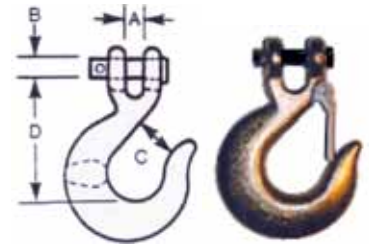
- **NEVER** use grade 70 chains for lifting applications

CARGO CONTROL PRODUCTS

'BLACK PIN'® CLEVIS SLIP HOOKS - ALLOY STEEL

- For use with Grade 70 or lower grade chains only
- Gold Chromated body with 'black pin'
- Available with or without latches

Size	WLL (lbs)	Dimensions (inches)				Weight (lbs)	Vanguard Code*
		A	B	C	D		
1/4	2,750	0.43	0.38	0.98	2.52	0.65	3903 1016
5/16	4,300	0.51	0.43	1.10	2.82	0.92	3903 1020
3/8	5,250	0.58	0.47	1.33	3.22	1.32	3903 1024
7/16	7,000	0.67	0.54	1.61	3.69	2.07	3903 1028
1/2	9,000	0.76	0.62	1.74	3.99	2.90	3903 1032

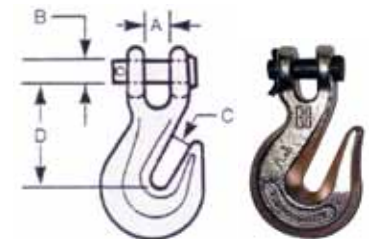


*For clevis slip hooks with latches, add '1' at the end of part number (i.e. 3903 10161)

'BLACK PIN'® CLEVIS GRAB HOOKS - ALLOY STEEL

- For use with Grade 70 or lower grade chains only
- Gold Chromated body with 'black pin'

Size	WLL (lbs)	Dimensions (inches)				Weight (lbs)	Vanguard Code
		A	B	C	D		
1/4	3,150	0.36	0.38	0.39	1.97	0.46	3931 0016
5/16	4,700	0.38	0.44	0.43	2.28	0.75	3931 0020
3/8	6,600	0.47	0.47	0.50	2.61	1.10	3931 0024
7/16	8,800	0.67	0.55	0.58	2.79	1.53	3931 0028
1/2	11,300	0.76	0.62	0.67	3.13	2.34	3931 0032



Note:

- Forged Carbon or Alloy Steel, heat treated
- Design Factor 4:1
- Refer to specific applications and warnings!

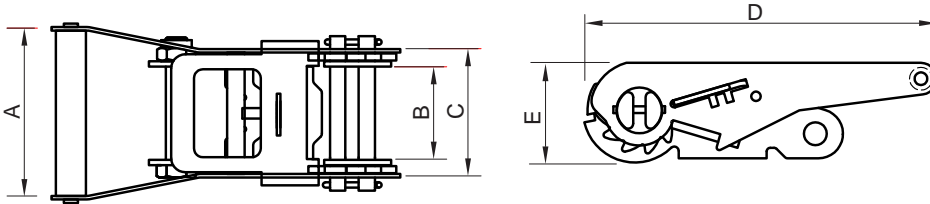
Warning:

NEVER EXCEED WORKING LOAD LIMITS!

- **NEVER** use grade 40 or 70 chains for overhead lifting applications
- **ALWAYS** discard hooks which show signs of deformation or excessive wear!

RATCHET BUCKLES

- Sturdy construction
- Double gear and pawl design offers increased reliability and safety
- We offer a wide range of handle widths and lengths
- Gold chromated finish
- Design factor 3:1



Web Width (inches)	WLL (lbs)	Dimensions (inches)					Vanguard Code
		A	B	C	D	E	
1	1,000	2.50	1.38	2.13	5.13	1.56	3701 1002
1	1,000	2.36	1.10	2.17	5.16	1.57	3701 1003
2	1,460	2.53	1.18	2.20	5.23	1.56	3701 1006
2	1,460	3.27	2.05	3.15	5.28	1.56	3701 2008
2	3,660	3.04	2.08	3.36	6.74	2.16	3701 2004
2	3,660	3.98	2.05	3.54	7.76	2.24	3701 2006
2	3,660	3.98	2.05	3.54	9.06	2.24	3701 2011
3	7,300	4.33	3.07	5.56	12.80	2.95	3701 3001
4	8,000	5.56	4.06	6.50	12.98	4.06	3701 4024

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

Note:

- Working load limits (WLL) are for straight in-line pulls ONLY
- To increase the service life of strap assemblies the use of edge and corner protectors is strongly recommended

Warning:

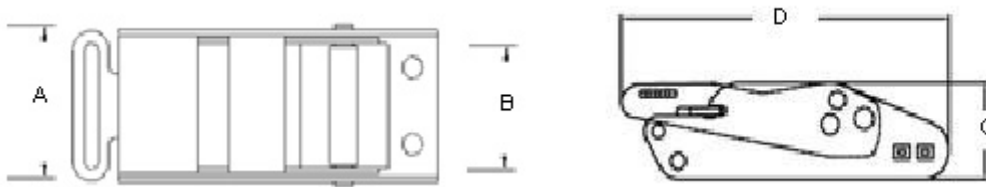
NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

- **NEVER** use handle extension or extension bars
- **NEVER** use strap assemblies where the straps are cut, frayed or otherwise damaged
- **ALWAYS** remember that strap assemblies/systems are only as strong as their weakest components
- **ALWAYS** make sure the webbing is wrapped 2-3 time around the reel **BEFORE** tightening
- **ALWAYS** make sure the total mass/weight of the load shall not exceed the aggregate working load limit of all tie-downs in use
- **ALWAYS** keep ratchet buckles clean and properly lubricated

OVERCENTRE BUCKLES

- Sturdy construction for additional tension on straps
- Gold dye-chromated finish or chrome-nickel stainless steel
- Low wear to strap
- Positive locking features
- Design factor 3:1



Finish	Web Width (inches)	WLL (lbs)	Dimensions (inches)				Vanguard Code
			A	B	C	D	
GOLD DYE-CHROMATE	2.00	1,860	2.44	2.00	1.00	5.51	3701 4020
STAINLESS STEEL	2.00	1,100	2.36	2.00	0.88	6.14	3701 4050
GOLD DYE-CHROMATE	1.75	1,860	2.52	1.81	1.63	6.69	3701 40201

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Warning:

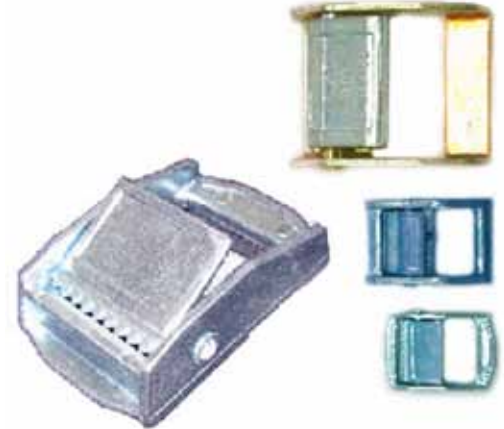
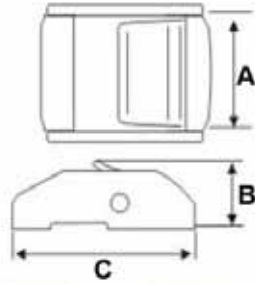
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- **ALWAYS** make sure the webbing is wrapped 2-3 time around the reel **BEFORE** tightening
- **ALWAYS** make sure the total mass/weight of the load shall not exceed the aggregate working load limit of all tie-downs in use
- **ALWAYS** keep overcentre buckles clean and properly lubricated

CAM BUCKLES

- Cam buckles for easy and quick tying down of loads
- Die-cast, solid construction
- Large model with steel base
- For 1" and 2" wide straps
- Design factor 3:1



WLL (lbs)	Web Width (inches)	Dimensions (inches)			Vanguard Code
		A	B	C	
200	1.00	1.18	0.47	1.73	3701 5002
230	1.00	1.28	0.60	1.95	3701 5000
660	2.00	2.40	0.94	3.07	3701 5001

Note:

- Working load limits (WLL) are for straight in-line pulls ONLY
- To increase the service life of strap assemblies the use of edge and corner protectors is strongly recommended

Warning:

NEVER EXCEED WORKING LOAD LIMIT!

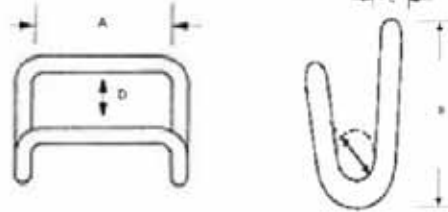
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- **NEVER** use strap assemblies where the straps are cut, frayed or otherwise damaged
- **ALWAYS** remember that strap assemblies/systems are only as strong as their weakest components
- **ALWAYS** make sure the total mass/weight of the load shall not exceed the aggregate working load limit of all tie-downs in use
- **ALWAYS** keep cam buckles clean and properly lubricated

CARGO CONTROL PRODUCTS

CLOSED HOOKS

- Closed wire hooks are available in a variety of sizes and styles
- Yellow chromated finish
- Design factor 3:1

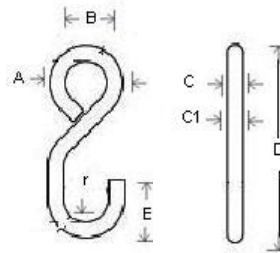


Web Width (inches)	WLL (lbs)	Dimensions (inches)				Vanguard Code
		A	B	C	D	
2	1,000	2.250	1.000	0.375	0.940	3703 0203

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

VINYL COVERED HOOKS

- Strong S-hook coated with black vinyl
- For use where hooks are touching delicate surfaces
- Design factor 3:1



Web Width (inches)	WLL (lbs)	Dimensions (inches)							Vanguard Code
		A	B	C	C1	D	E	r	
1	600	1.687	0.937	0.312	0.375	4.125	1.500	0.375	3703 0018
2	830	2.000	0.937	0.437	0.500	5.000	2.000	0.500	3703 0019

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

Note:

- Working load limits (WLL) are for straight in-line pulls ONLY

Warning:

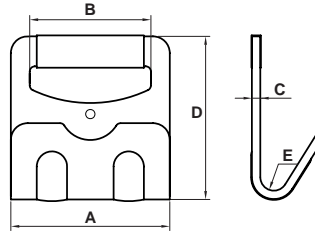
NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

- **NEVER** use strap assemblies where the straps are cut, frayed or otherwise damaged
- **ALWAYS** remember that strap assemblies/systems are only as strong as their weakest components
- **ALWAYS** make sure the total mass/weight of the load shall not exceed the aggregate working load limit of all tie-downs in use
- **ALWAYS** keep buckles clean and lubricated

FLAT HOOKS

- Flat hooks are available in a variety of sizes and styles
- Yellow chromate finish
- Design factor 3:1

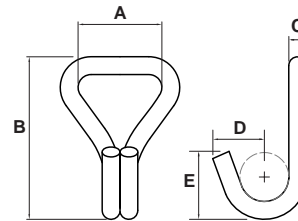


Web Width (inches)	WLL (lbs)	Dimensions (inches)					Vanguard Code
		A	B	C	D	E	
2	3,335	2.656	1.929	0.192	3.778	0.638	3703 0015
3 - 4	5,000	3.768	2.788	0.196	3.814	0.722	3703 0005

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

NARROW WIRE HOOKS

- Narrow wire hooks are available in a variety of sizes and styles
- Yellow chromate finish
- Design factor 3:1



Web Width (inches)	WLL (lbs)	Dimensions (inches)					Vanguard Code
		A	B	C	D	E	
1	800	1.062	2.375	0.250	1.00	1.250	3703 0006
2	1,660	2.000	3.250	0.312	1.062	1.312	3703 0009
2	3,660	2.000	3.250	0.500	1.187	1.321	3703 0008

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

Note:

- Working load limits (WLL) are for straight in-line pulls ONLY

Warning:

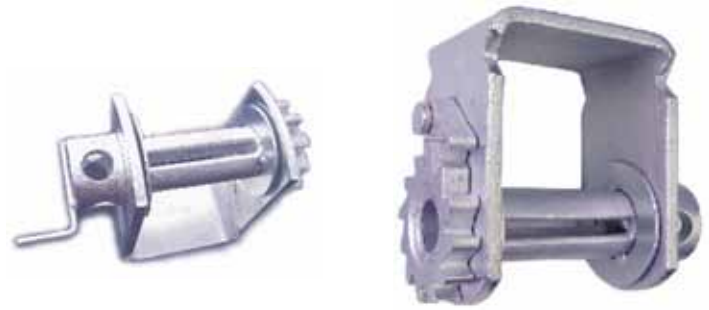
NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

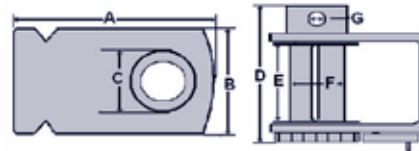
- **NEVER** use strap assemblies where the straps are cut, frayed or otherwise damaged
- **ALWAYS** remember that strap assemblies/systems are only as strong as their weakest components
- **ALWAYS** make sure the total mass/weight of the load shall not exceed the aggregate working load limit of all tie-downs in use
- **ALWAYS** keep buckles clean and lubricated

CARGO CONTROL PRODUCTS

STANDARD SLIDING WINCHES



- Sturdy construction
- Extra strong ratchet pawl
- Design factor 3:1
- The WLL is permanently marked on each winch
- Sliding winches allow for easy positioning in the track, however once tension is applied they will lock into place
- Bolt on type winches, can be welded for fixed applications, this must only be performed by a competent/qualified welder. For best results use Bonarc® 7018 mild steel electrodes or Bonarc® ER70S-6 wire
- For use with 4" straps
- Unless otherwise stated all Vanguard winches shown are right hand models, left hand models are only available as a special order



Type	WLL (lbs)	Dimensions (inches)							Vanguard Code
		A	B	C	D	E	F	G	
With flange (painted black)	6,000	6.75	3.92	2.25	7.75	4.30	1.90	0.93	3705 1020
Without flange	6,000	6.75	4.00	2.50	8.25	4.50	1.75	1.00	3705 1021
With flange & handle	6,000	6.75	4.00	2.50	8.25	4.50	1.75	1.00	3705 1063
With handle, NO flange	6,000	6.75	4.00	2.50	8.25	4.50	1.75	1.00	3705 1065

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

Note:

- **Always** perform a thorough inspection of each winch before use to ensure that the units are not damaged and they are in good working order
- Damaged/malfunctioning winches should be removed from use until repaired by a competent properly trained person. If the units cannot be repaired they should be disposed of and replaced with new units
- Winches should be periodically cleaned to remove any dirt, mud, stones, road salt or ice that may have accumulated
- Winches should be lubricated periodically to ensure a long and reliable service life
- Both the winch cleaning and lubricating frequency will vary based upon the working conditions of the units, it is the responsibility of the user to determine the proper frequency

Warning:

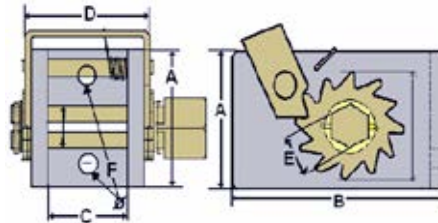
NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

- **NEVER** use handle extension or extension bars
- **NEVER** use straps that are cut, frayed or otherwise damaged
- **NEVER** release the winch bar without first ensuring that the ratchet pawls are properly engaged
- **ALWAYS** make sure that the webbing is inserted a minimum of 12" into the slot on the mandrel and that it is wrapped 2-3 times around the mandrel before tightening
- **ALWAYS** ensure that you have a firm grip on the winch bar when in use to avoid the risk of injury

2" LASHING WINCH

- Sturdy construction
- Base painted black, moving parts yellow chromated
- Working load limit 3,660 lbs
- Extra strong ratchet pawl
- Bolt-on type



Type	WLL (lbs)	Dimensions (inches)						Vanguard Code
		A	B	C	D	E	F	
Hex Key, Two Hole	3,660	3.00	4.00	2.19	3.25	1.06	0.50	3705 1000
Hex Key, One Hole	3,660	3.00	4.50	2.05	3.18	1.10	0.75	3705 10009
One Hole (Yellow)	3,660	2.95	4.80	2.10	2.57	1.10	0.70	3705 1032

* Additional sizes, capacities and finishes available upon request, minimum order quantities may apply

Note:

- **Always** perform a thorough inspection of each winch before use to ensure that the units are not damaged and they are in good working order
- Damaged/malfunctioning winches should be removed from use until repaired by a competent properly trained person. If the units cannot be repaired they should be disposed of and replaced with new units
- Winches should be periodically cleaned to remove any dirt, mud, stones, road salt or ice that may have accumulated
- Winches should be lubricated periodically to ensure a long and reliable service life
- Both the winch cleaning and lubricating frequency will vary based upon the working conditions of the units, it is the responsibility of the user to determine the proper frequency

Warning:

NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

- **NEVER** use handle extension or extension bars
- **NEVER** use straps that are cut, frayed or otherwise damaged
- **NEVER** release the winch bar without first ensuring that the ratchet pawls are properly engaged
- **ALWAYS** make sure that the webbing is inserted a minimum of 12" into the slot on the mandrel and that it is wrapped 2-3 times around the mandrel before tightening
- **ALWAYS** ensure that you have a firm grip on the winch bar when in use to avoid the risk of injury

RATCHET GEAR HAND WINCH

- Solid gear construction
- Internally lubricated drum and pinion gear bushings
- Molded and smoothly rotating handle
- Formed reinforcements in frame for added strength
- Zinc plated finish
- Holds load when handle is released
- Operating instructions included with each unit
- Handle and nut must be tightened against drive shaft before operating winch
- Winch cable sold separately



Description	Model Number	Gear Ratio	Capacity (lbs)	Vanguard Code
Ratchet 1 way	US-01	3.2:1	600	3851 0600
Ratchet 1 way	US-02	3.2:1	800	3851 0800
Ratchet 1 way and Free Spool	US-03	4.1:1	1,000	3851 1000
Ratchet 1 way and Free Spool	US-04	4.1:1	1,200	3851 1200
Ratchet 1 way and Free Spool	US-05	4.1:1	1,400	3851 1400
Ratchet 2 way and Free Spool	US-08	4.1:1	1,600	3851 1600
Ratchet 2 way and Free Spool (dual gear)	US-06	4.1:1 & 9.8:1	2,000	3851 2000
Ratchet 2 way and Free Spool (dual gear)	US-07	5:1 & 12:1	2,500	3851 2500

* Not a standard stock item at all distribution centres.

** Additional styles and capacity units available upon request, minimum order quantities may apply

WORM GEAR HAND WINCH

- Solid gear construction
- Internally lubricated drum and pinion gear bushings
- Loop drive without handle
- Formed reinforcements in frame for added strength
- Black finish
- Reel automatically stops turning whenever cranking is stopped, locking load in place
- Operating instructions included with each unit
- Loop drive must be tightened against drive shaft before operating winch
- Winch cable sold separately



Description	Model Number	Gear Ratio	Capacity (lbs)	Vanguard Code
Ratchet 2 way	620AB	4.1:1	2,000	3851 2001

* Not a standard stock item at all distribution centres.

** Additional styles and capacity units available upon request, minimum order quantities may apply

Warning:

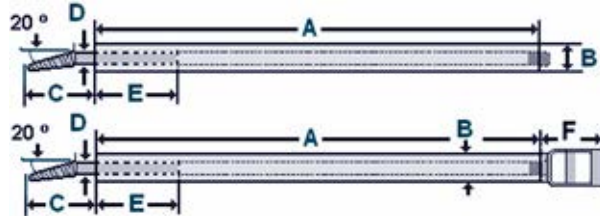
NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

- **NEVER** use a hand winches to lift, support, transport people or loads over areas where people could be present
- **ALWAYS** inspect winches before use to make sure that they are in proper working order. Do not use if damaged, send immediate for repair by a properly trained qualified/competent person before returning to service.

WINCH BARS

- Standard winch bars in either black painted or attractive chrome plated finish
- No-slip handle and nose surface for better grip



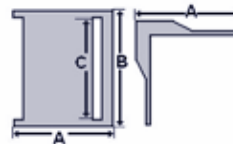
Type	Dimensions (inches)						Vanguard Code
	A	B	C	D	E	F	
Standard Black	32.68	1.26	3.35	0.93	9.84	-	3703 0060
Standard Chrome	32.68	1.26	3.35	0.93	9.84	-	3703 0063
Combination Bar Chrome	31.50	1.26	3.19	0.99	10.24	5.31	3703 0061
Combination Bar Black	31.50	1.26	3.19	0.99	10.24	5.31	3703 0062

Warning:

- **ALWAYS** hold winch bars firmly when tightening or loosening straps
- **BEFORE** removing winch bars ensure that ratchet pawl is fully engaged
- **NEVER** use extension bars with winch bars
- **WHEN** tightening or loosening straps make sure that nose of winch bar is fully inserted into holes of winch drums
- **KEEP** bystanders in safe distance when tightening or loosening straps

CORNER PROTECTORS FOR CHAIN & WEBBING

- Available in galvanized steel or white plastic (for webbing)
- Prolongs service life of webbing
- Protects cargo from chains or webbing



Type	Dimensions (inches)			Vanguard Code
	A	B	C	
Plastic Corner Protector for 2 - 4" Webbing	4.3	5.3	4.1	3703 0048
2" Steel Corner Protector for Chains	4.7	5.9	-	3703 0040
Steel Corner Protector for 3" Webbing	4.3	6.5	-	3703 0043
Steel Corner Protector for 4" Webbing	4.3	7.5	-	3703 0045

Warning:

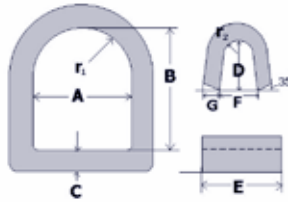
- **NEVER** use plastic corner protectors for chains
- **ALWAYS** make sure that webbing or chains slide properly over corner protectors

CARGO CONTROL PRODUCTS

D-RINGS WITH WELD-ON HINGES



- Made from drop forged carbon steel, quenched & tempered
- Self coloured, ready to be welded on truck body
- Hinges are bevelled 35° for proper weld penetration
- This must be performed by a qualified welder. For best welding results use BONARC E 7018 coated welding electrodes or BONARC ER 70S-6 welding wire
- Before welding, make sure that all contaminants like rust, oil, paint, and galvanization are removed from welding area
- Design factor 3:1



Size	WLL (lbs)	Dimensions (inches)									Vanguard Code
		A	B	C	D	E	F	G	r ¹	r ²	
3 x 3 x 5/8"	6,000	3.00	3.00	0.63	0.88	2.50	1.00	0.38	1.50	0.38	3705 0015
3 x 4 x 1"	12,000	3.00	4.00	1.00	1.33	2.56	1.31	0.50	1.50	0.56	3705 0014

* Additional sizes available upon request, minimum order quantities may apply

Note:

- Working load limits (WLL) are for straight in-line pulls ONLY
- Bolt on D-Rings are the perfect choice when a permanent (weld-on) lashing point is undesirable, or in the case where the surface is not suitable for welding the hinge on in a safe and secure manner

Warning:

NEVER EXCEED WORKING LOAD LIMIT!

Failure to follow instructions can result in serious property damage, injury or death!

- **ALWAYS** make sure to use bolts of adequate size and strength
- **ALWAYS** use washers and lock washers when securing the bolt-on hinges, making sure to torque tighten the bolts
- **ALWAYS** inspect the condition of the hinges before securing a load, damaged hinges should be removed and replaced with new hinges by a competent/properly trained person
- **PERIODIC** adjustments may be required and it is the responsibility of the end-user to make sure that his maintenance is performed at regular intervals

TARP TIE-DOWN STRAPS

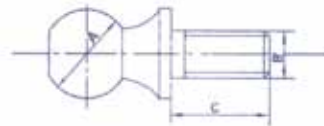
- VANGUARD branded straps available either in 100% natural rubber (black) or synthetic EPDM (artic-blue)
- With UV and Ozone inhibitor for better resistance against cracking
- For conditions with extreme atmospheric Ozone levels (high pollution in temperatures between -2° and +3° C we recommend EPDM straps with increased resistance against corrosion)
- Elastic stretch to 150% of nominal length
- Rubber only: VGD & 50lb WLL marking



Type	Dimensions (inches)		Vanguard Code
	Length	Max. Stretch	
100% Natural Rubber (Black)	4	6	3708 0004
100% Natural Rubber (Black)	9	14	3708 0009
100% Natural Rubber (Black)	15	23	3708 0015
100% Natural Rubber (Black)	21	32	3708 0021
100% Natural Rubber (Black)	31	47	3708 0031
100% Natural Rubber (Black)	41	62	3708 0041
Artic Blue EPDM	9	14	3708 1009
Artic Blue EPDM	15	23	3708 1015
Artic Blue EPDM	21	32	3708 1021
Artic Blue EPDM	31	47	3708 1031

CHROME PLATED HITCH BALLS

- Drop forged low carbon steel
- Complete with hex nut and washer
- UNC threads
- 'V 5', WLL and size markings



Ball Diameter (A)	WLL (lbs)	Dimensions (inches)			MBS (lbs)	Weight (lbs)	Vanguard Code
		Shank (B)	Shank Length (C)	Thread Size			
1-7/8	3,500	0.75	2.00	16	10,500	1.70	3990 1048
2	3,500	0.75	2.00	16	10,500	2.00	3990 2048
2	5,000	1.00	2.00	14	15,000	2.50	3990 2100
2-15/16	5,000	1.00	2.00	14	15,000	3.20	3990 3100
2-15/16	7,500	1.25	2.00	12	22,500	3.80	3990 3116

Warning:

- **TYING** tarp straps over sharp edges shortens the service life
- **NEVER** tie knots in tarp straps
- **NEVER** extend over safe stretch (150%)
- **ALWAYS** inspect straps frequently, replace cracked straps



CONVERSIONS

To Convert	Multiply By	To Obtain	To Convert	Multiply By	To Obtain
Miles (statute)	1.609	Kilometers		0.621	Miles (statute)
Yards	0.914	Meters		1.094	Yards
Feet	0.305	Meters		3.281	Feet
Inches	25.400	Millimeters		0.039	Inches
Short Tons	0.907	Metric Tons		1.102	Short Tons
Long Tons	1.016	Metric Tons		0.984	Long Tons
Pounds	0.454	Kilograms		2.205	Pounds
Pounds	0.00444	Kilo newtons		224.8	Pounds
Pounds per Foot	1.488	Kilos per Meter		0.672	Pounds per Foot
Pounds per sq. ft.	4.882	Kilos per sq. m		0.205	Pounds per sq. ft.
Pounds per sq. in.	0.070	Kilos per sq. cm		14.223	Pounds per sq. in.
Square Inches	645.200	Sq. Millimeters		0.002	Square Inches
Cubic Inches	16.387	Cubic Centimeters		0.061	Cubic Inches
Cubic Feet	0.028	Cubic Meters		35.310	Cubic Feet
Cubic Yards	0.765	Cubic Meters		1.308	Cubic Yards
U.S. Gallons	3.785	Liters		0.264	U.S. Gallons
Imperial Gallons	4.546	Liters		0.220	Imperial Gallons
Cubic Feet	28.320	Liters		0.035	Cubic Feet
Diameter	3.142	Circumference		0.318	Diameter
Deg. Fahrenheit	$.5556 \times (F^{\circ} - 32)$	Degrees Celsius		$(1.8 \times C^{\circ}) + 32$	Deg. Fahrenheit
1 Statute Mile -	1760 Yards -	5280 Feet -		1.60934 Km	
1 Nautical Mile -	6080 Feet -	1.85318 Km			
1 Fathom -	6 Feet -	1.82880 Meters			
1 Rod -	5.5 Yards -	16.5 Feet -		5.02919 Meters	