Fall protection

Horizontal Lifeline System Components







RELIANCE

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Horizontal Lifeline System Components - Types of Systems

Reliance manufactures a variety of horizontal lifeline components and systems that are designed specifically for segments of industry where fall hazards that require unique, functional solutions exist. The components outlined in this manual are common elements in the types of systems shown below; the manual does include specialty components designed for use in other highly custom areas. Many of the components in Road & Bridge, Structural Steel, and Concrete systems are common to all three types.



Road & Bridge Systems

Road & Bridge systems use components that were developed to meet the standard requirements of road and bridge work environments, and have been thoroughly field tested on actual jobsites. Reliance Horizontal Lifeline Systems for Road and Bridge work share a common horizontal lifeline system, but use different anchor, stanchion, and other elements specific to the environment in which they are installed.

Structural Steel Systems

Structural steel systems are designed for installation on existing structures. Most structures can be accommodated with off the shelf components. System height is 5' - 7' (1.5 - 2.1m) above the walking surface or can be configured to hang from above. System stabilization is maintained with tie-back cables or strong back struts when stanchions are utilized. On structures where clamping on the top flange of I-beams is not feasible, underslung clamps may be used.

Concrete Systems



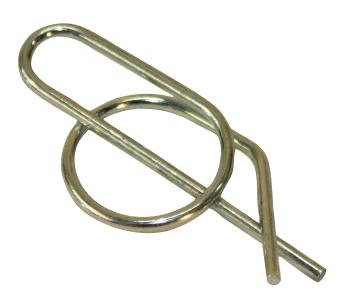
Construction projects utilizing concrete foundations are among the most common in building sites worldwide. Reliance offers several off the shelf systems which effectively address most concrete construction applications. Since each project has unique challenges, custom fabrication of brackets and structural interfaces are available upon request.

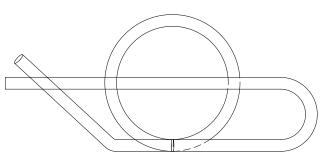
Specialty Systems



With our large selection of off the shelf components, most any structure may be fitted with a permanent or temporary Reliance horizontal lifeline. With the ability to 'tune' our lifeline systems, Reliance can accommodate clearance and span geometries that our competitors have difficulty with.



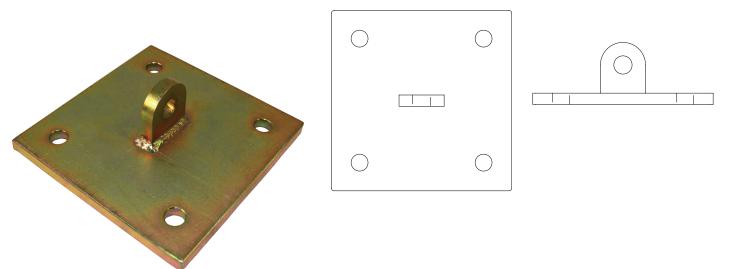




No Replaceable Parts

Retaining Pin Product Number: 2134

Retaining Pin. No tools required for installation.



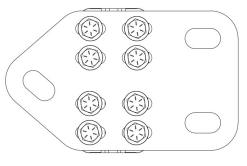
No Replaceable Parts

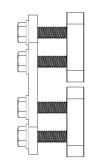
Rebar Anchor Stanchion System for Concrete Construction Product Number: 3083-12

8"X 8" single lug bolt-down anchor plate for tie back in concrete (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)





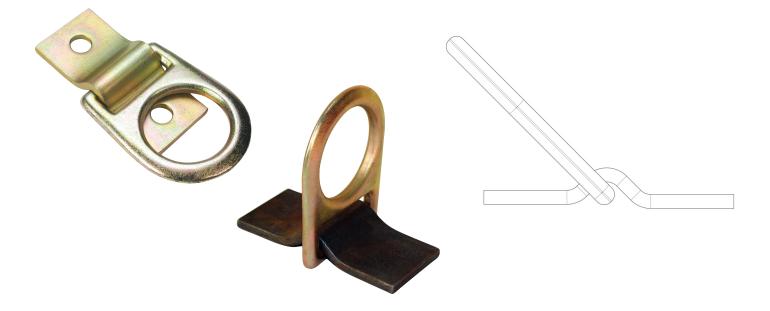




Replaceable Parts	
Part#	Description
2102-50-250-4	1/2"X 2-1/2" Grade B Tap Bolt
2122-50-6	1/2" SAE Washer

Horizontal Lifeline Rebar Anchor Assembly Product Number: 6203

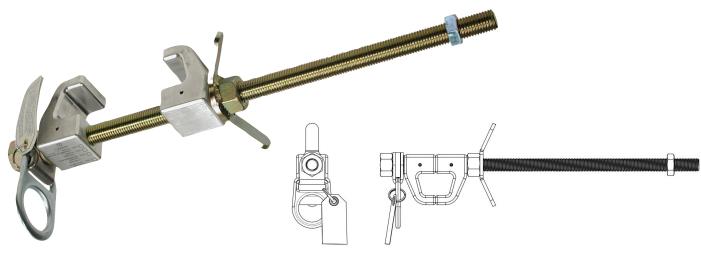
HLL Rebar Anchor Assembly for rebar sizes #6 to #11



Bolt-On/Weld-On D-Ring Anchors Product Number: 3066 (Bolt-On), 3068 (Weld-On)

Retaining Pin. No tools required for installation.

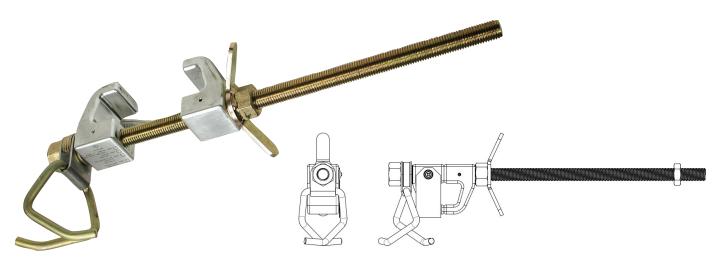




No Replaceable Parts

Horizontal Lifeline Structural Steel Anchor Clamp with D-Ring Product Number: 3093

Temporary (Movable) Anchorage desined to be used for steel erection. Provides D-ring anchor point for attachment of a Personal Fall Arrest System. 14,500 lbs. maximum breaking strength. Attaches to I-Beams with 4" to 16-5/8" flanges and 1/2" to 1-3/4" flange thickness.



No Replaceable Parts

Horizontal Lifeline Bypass Beam Clamp Product Number: 3091

Temporary (Movable) Anchorage provides additional bypass without a stanchion. Bypass Clamp has 14,500 lb. rating. Horizontal Lifeline anchor clamp for steel erection. Attaches to I-beams 4" to 16-5/8" wide with a 1/2" to 1-3/4" flange thickness.





No Replaceable Parts

Adjustable Width Beam Anchor Product Number: 3098

Dual anchor ring for personal fall arrest equipment or engineered Horizontal Lifeline. Attaches to I-Beams with 4" to 16-5/8" flanges and 1/2" to 1-3/4" flange thickness (4 - 41.5cm width, .6 - 4.4cm thick)

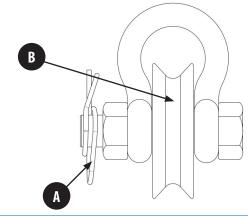


Pulley with Stainless Steel Side Plates Product Number: 5100

Pulley with Stainless Steel Side Plates.



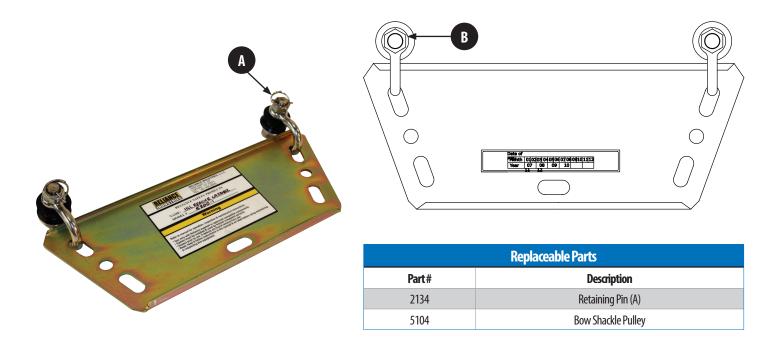




Replaceable Parts	
Part#	Description
2134	Retaining Pin (A)
5104-28	Pulley Wheel (B)
5104-32	Pulley Wheel Spacer (2 ea)

Bow Shackle Pulley Product Number: 5104

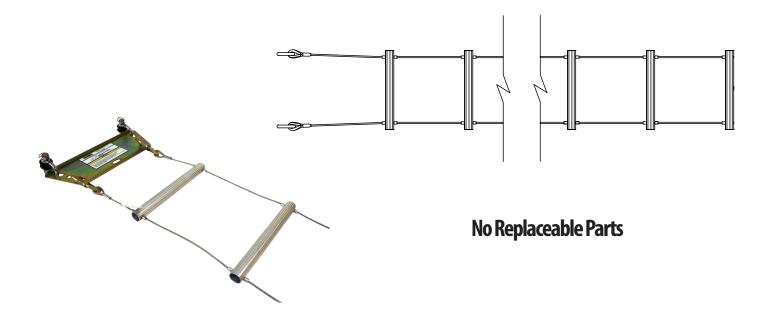
Bow Shackle Pulley - 3/8" (10mm) Cable



Horizontal Lifeline Rescue Ladder Mounting Bracket Product Number: 5200

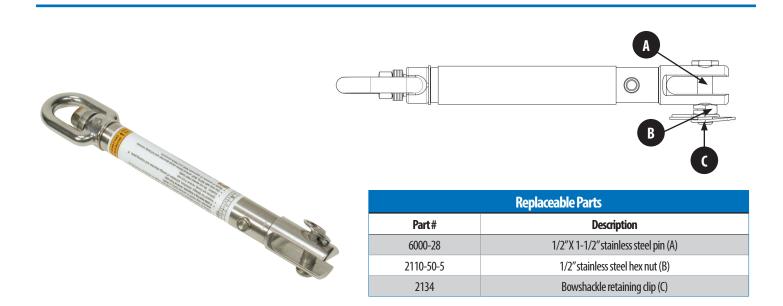
Horizontal Lifeline Rescue Ladder Mounting Bracket. Used with 52XX Wire Rope Rescue Ladder.





Wire Rope Ladder for Horizontal Lifeline Rescue Product Numbers: 5210, 5220, 5230, 5240, 5250, 5260 (last two digits denote length in feet)

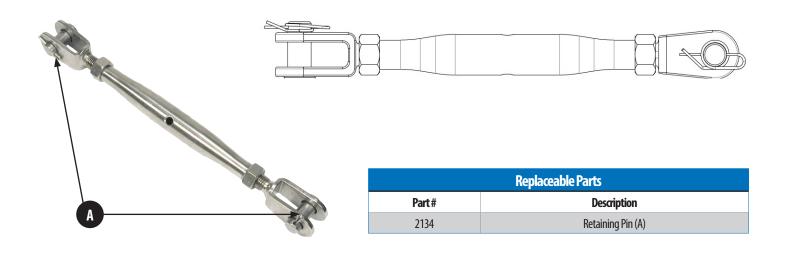
30' (9.1m) Wire Rope Ladder for Horizontal Lifeline rescue (#5200 bracket not included)



Skyline™ HLL Energy Absorber Product Number: 6000

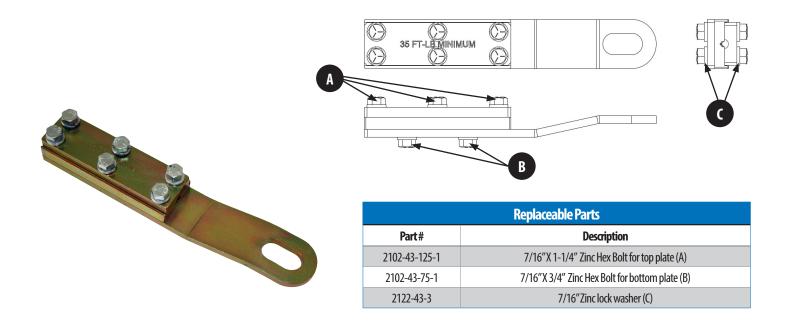
Shock absorber assembly made from stainless steel. 5.25" travel at 2000 lbs. of force *Sold only as parts of complete engineered systems or to registered customer as replacement parts.)





Stainless Steel Rigging Screws Product Number: 6021-1

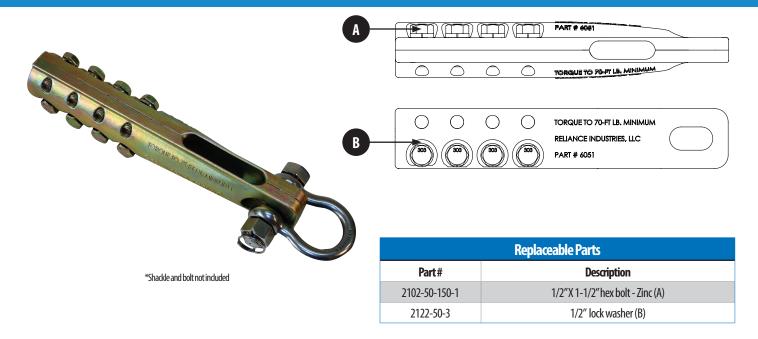
For use as a component of a tieback assembly (6077) or permanent lifelines kit # (6300). 8" travel adjustment. (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)



Zinc Plated Inline Cable Clamp Product Number: 6050

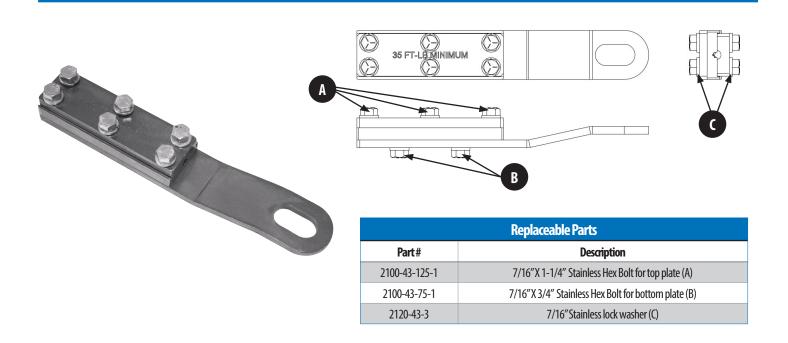
Can clamp anywhere along 3/8" (10mm) wire rope without crimping or damaging the cable. Zinc plated. (*Sold only as parts of complete engineered systems or to registered customer as replacement parts.)





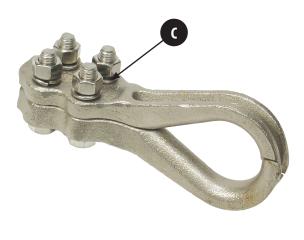
Cast Inline Clamp Product Number: 6051

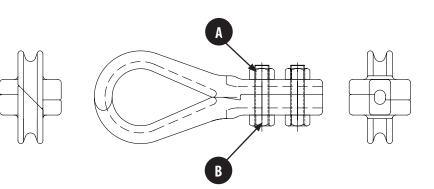
1/2" Cast Inline Clamp (bow shackle not included) for horizontal lifeline systems.



Stainless Steel Inline Cable Clamp Product Number: 6052

Can clamp anywhere along 3/8" twire rope without crimping or damaging the cable. Stainless steel. (*Sold only as parts of complete engineered systems or to registered customer as replacement parts.)



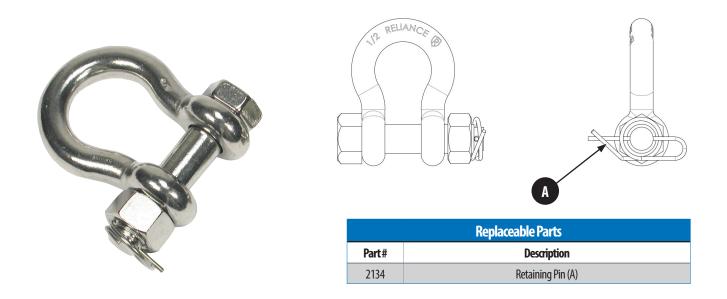


Replaceable Parts	
Part#	Description
2110-50-1	1/2" Stainless Steel Nut (A)
2100-50-250-1	1/2"X 2-1/2" bolt in clamp (B)
2120-50-3	1/2: Stainless Steel Lock Washer (C)

3/8" Large Loop Combo Clamp Wire Rope End Termination Product Number: 6055

All stainless steel, 4-bolt clamp assures maximum strength.

(*Sold only as parts of complete engineered systems or to registered customer as replacement parts.)

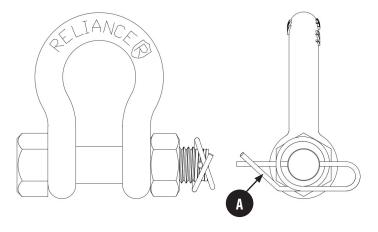


Stainless Forged Bow Shackle 1/2" Product Number: 6062

1/2'' Stainless steel forged bow shackle. 6066 = 5/8'' size (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)



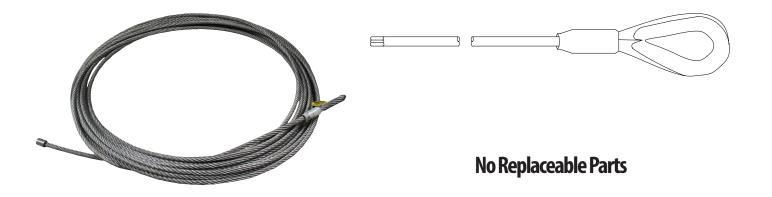




Replaceable Parts	
Part#	Description
2134	Retaining Pin (A)

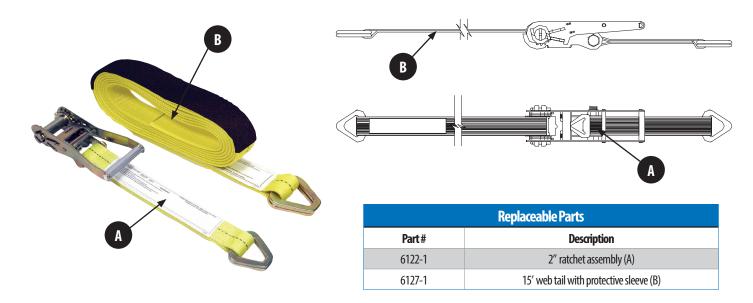
Galvanized Forged Bow Shackle Product Number: 6063 (#6067 : 5/8" version)

1/2" Galvanized Forged Bow Shackle



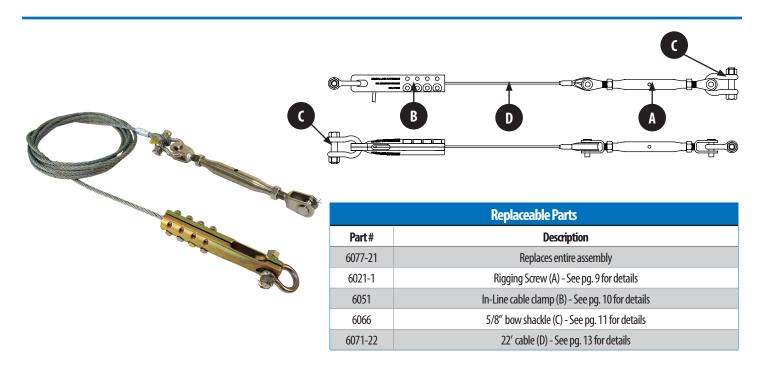
Skyline™ Lifeline Cable & Tieback Cable Product Number: 6070-XX - Galvanized Aircraft Cable, 6071-XX , Galvanized IWRC Cable for Cable Tieback

6070-XX: 3/8" 7x19 galvanized aircraft cable. 6071-XX: 1/2" 6x25 galvanized IWRC cable. 'XX' designates cable length in feet; 200' (61m) max. length. Fitted with swaged flemish splice on one end and seized on free end. (*Sold only as parts of complete engineered systems or to registered customer as replacement parts.)



2" Ratchet Strap Tieback Assembly Product Number: 6076

Used for securing end stanchion termination. Standard 2" ratchet with 15' tail. (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)

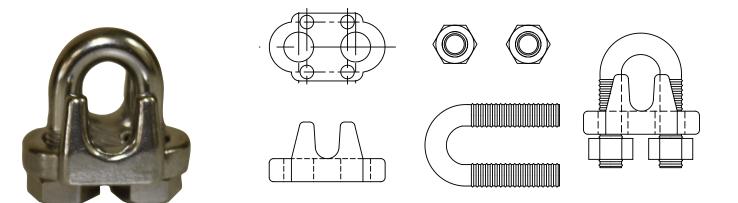


Cable Tieback Assembly 1/2", Adjustable 21' Length Product Number: 6077-21

Galvanized Cable.

(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)





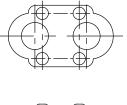
No Replaceable Parts

Wire Rope Clip Product Number: 6082

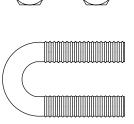
Stainless steel 3/8" wire rope clips.

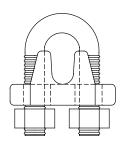
(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)











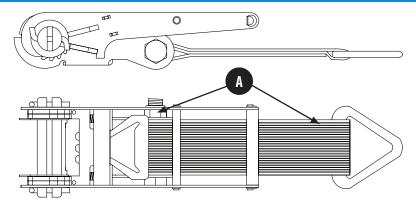
No Replaceable Parts

Wire Rope Clip Product Number: 6088

Stainless steel 1/2" wire rope clips. (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)





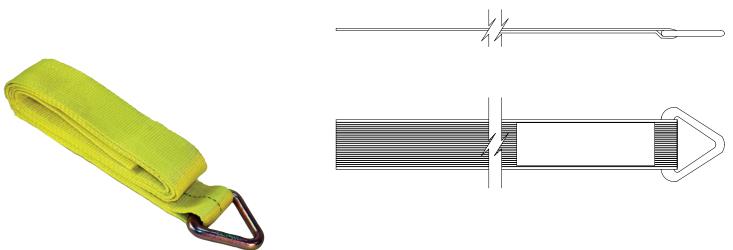


Replaceable Parts		
Part#	Part# Description	
6090-1	Replaces entire Ratchet Assembly	
6090-2	Web strap with triangle ring and Nyloc nut at web attachment (A)	

3" Ratchet Assembly Product Number: 6090

3"Ratchet Assembly. For portable systems.

(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)

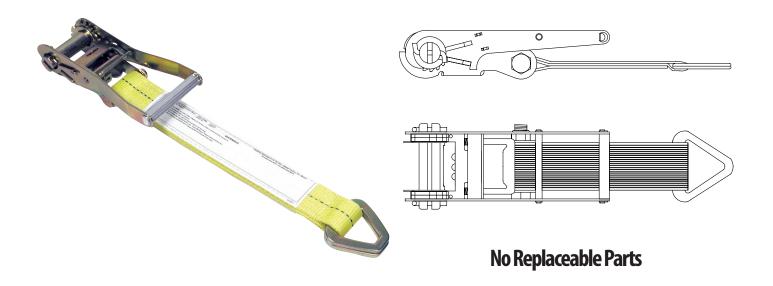


No Replaceable Parts

10'X 3" Webbing Strap Assembly for Portable System Product Number: 6092

Triangle end. For use with 6090 ratchet assembly (sold separately). Component of 6310. (*Sold only as parts of complete engineered systems or to registered customer as replacement parts.)

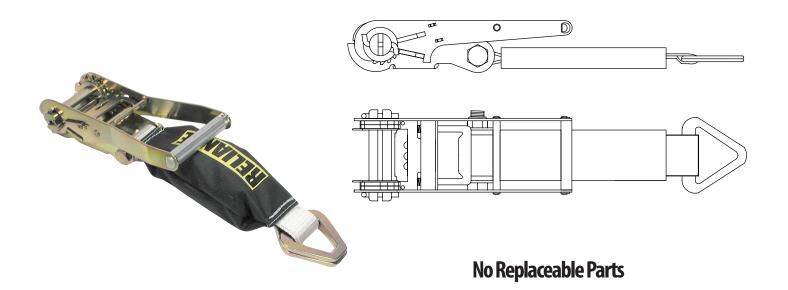




Tieback Ratchet Product Number: 6122

2" webbing. Used with 6127 web assembly (sold separately).

(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)

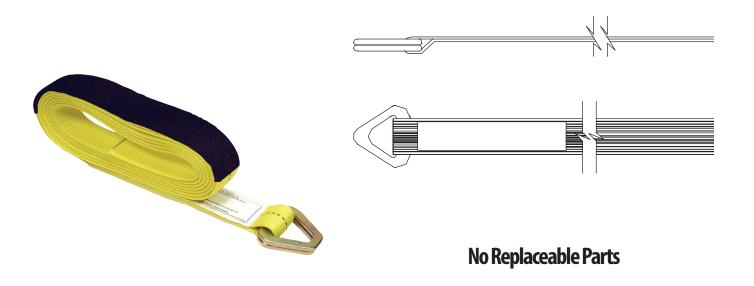


2" Ratchet with Webbing Shock Absorber Product Number: 6123

Component of 6320-30 and 6320-60 temporary systems. (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)



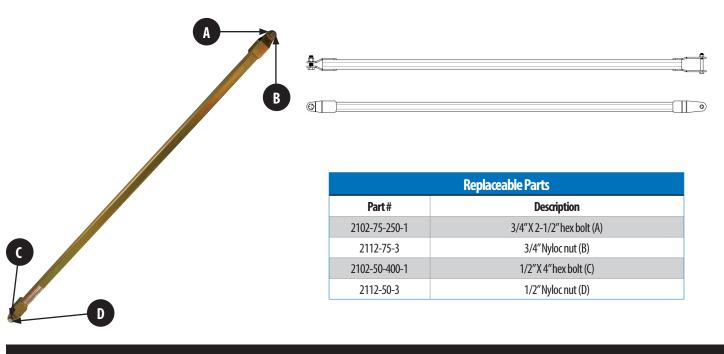
17



15'x 2" Tieback Ratchet Strap with Wear Sleeve Product Number: 6127

Use with 6122 ratchet assembly (sold separately).

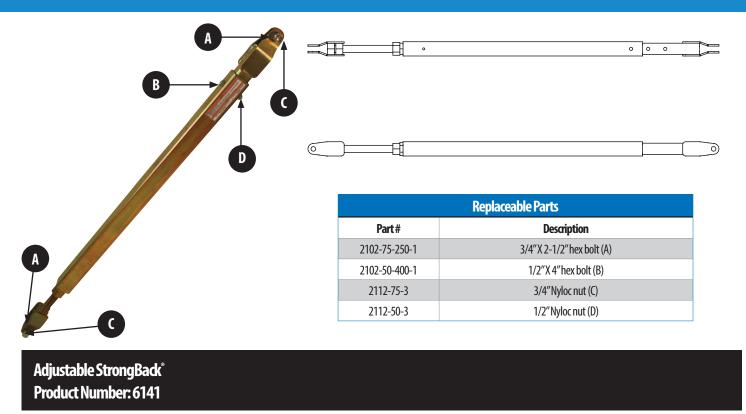
(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)



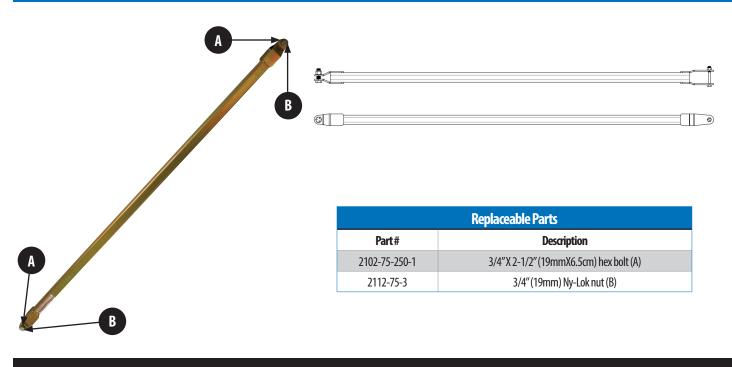
Standard StrongBack[®] Product Number: 6140 - 83.5" Length, Product Number 6142 - 82" Length

83.5" & 82" Length Standard Strong Back. End point anchor component for horizontal lifeline systems.





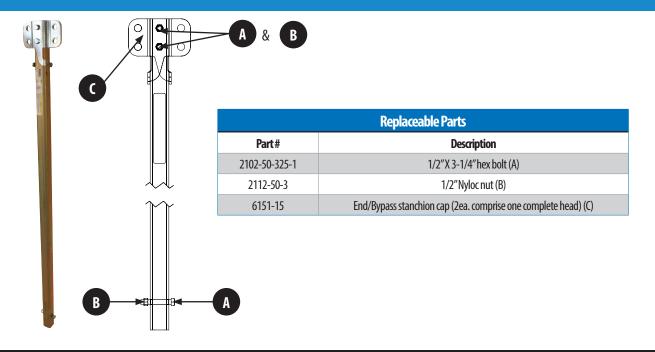
82" (2m) Adjustable Strong Back for horizontal lifeline end point anchorages.



Narrow StrongBack[®] Product Number: 6131 - 99.5″ Length, Product Number 6132 - 99.5″ (products differ in anchor & stanchion compatibility)

99.5" Narrow Strong Back. End point anchor component for horizontal lifeline systems.

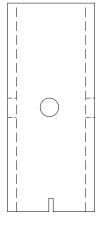
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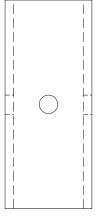


End / By-Pass Stanchion Product Number: 6151, 6178, 6163

Combination End/By-Pass Stanchion for horizontal lifeline systems. Standard sizes : 6151 - 60", 6178 - 72", 6163 - 84"







No Replaceable Parts

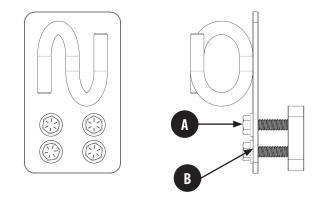
Weld-on Receiver for End and Bypass Stanchions Product Number: 6154

This is an economical alternative to beam clamps.

(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)





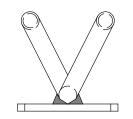


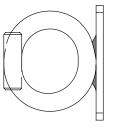
Replaceable Parts	
Part#	Description
2102-50-250-4	1/2"X 2-1/2" Grade 8 Tap Bolt (A)
2122-50-6	1/2"SAE Washer

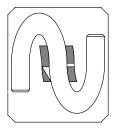
Rebar Bypass Bracket Product Number: 6204 Additional Options : 6158 - Weld On Lug, 6160 <u>- Weld On SST Lug, 6161 - Weld On Double Lug, 6162 - Weld On SST Double Lug</u>

Side mount cable bypass for rebar. (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)









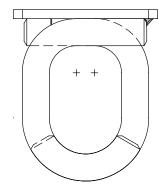
No Replaceable Parts

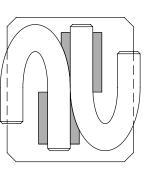
Weld-on Bypass Bracket Product Number: 6167

Weld-on Bypass Bracket, Side mount. (*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)

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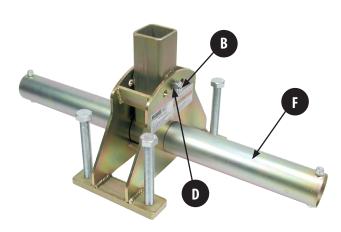


No Replaceable Parts

Weld-on Bypass Bracket Product Number: 6168

Top mount.

(*Sold only as parts of complete engineered systems or to registered customers as replacement parts.)



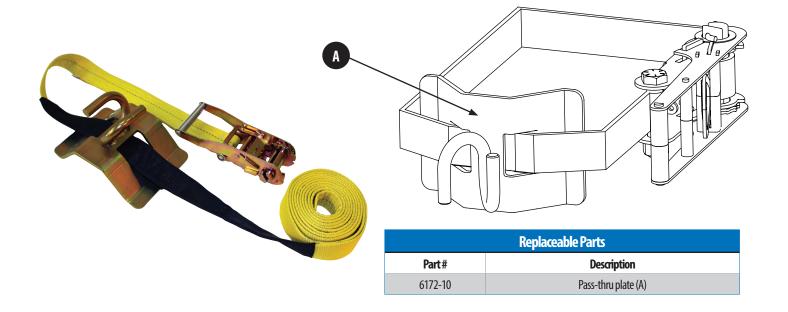
|--|--|--|

Replaceable Parts	
Part#	Description
2102-75-600-2	3/4"X 6" hex tap bolt (A)
2102-50-400-1	1/2"X 4" hex bolt (B)
2102-37-300-1	3/8"X 3" hex bolt (C)
2112-50-3	1/2" Nyloc nut (D)
2112-37-3	3/8" Nyloc nut (E)
6170-25	28"Load Tube (F)

Receiver Bracket for Looped Rebar HLL Systems Product Number: 6170

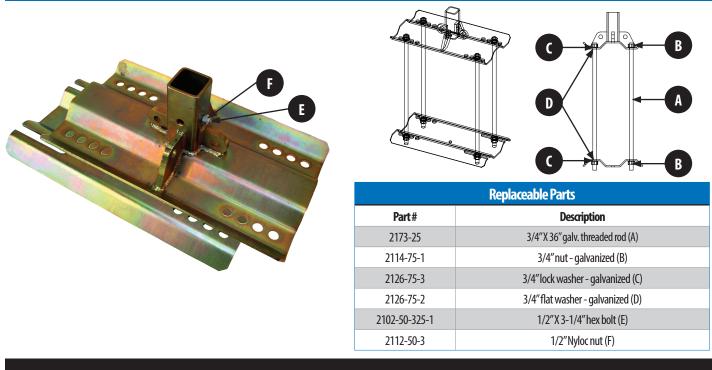
For use with standard 2" end/bypass stanchions (*Sold only as parts of complete engineered systems or to registered customer as replacement parts.)





Ratchet Strap Bypass Assembly Product Number: 6172

Provides a temporary bypass point for horizontal lifeline systems utilizing a ratchet strap as opposed to a permanently installed bypass.



Concrete Beam Receiver Base (Upper And Lower Plate) Product Number: 6173

Two-piece system bolts to concrete beams and provides a receiver for horizontal lifeline system end and midpoint stanchion assemblies.

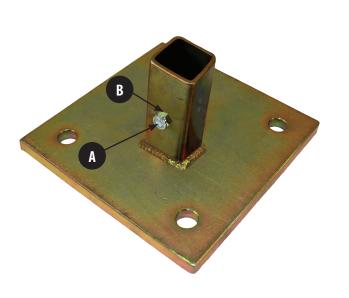
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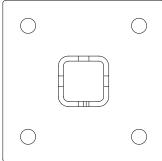


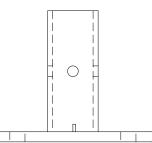
No Replaceable Parts

PVC Drop-In Sleeve for Stanchion Product Number: 6181

The PVC Drop-In Sleeve for Stanchion is cast in place in concrete and provides a receiver for horizontal lifeline end and midpoint stanchion assemblies.







Replaceable Parts	
Part#	Description
2102-50-325-1	1/2"X 3-1/4" hex bolt (A)
2112-50-3	1/2" Nyloc nut (B)
2102-62-800-5	5/8"X 8" threaded rod (not pictured)
3084-20	Concrete epoxy (not pictured)

Bolt Down Stanchion Receiver for Concrete Product Number: 6185-10

Bolt Down Stanchion Receiver for Concrete (sold as part of a complete horizontal lifeline system).





Rebar & Nelson Stud Tieback Bracket Product Number: 6202

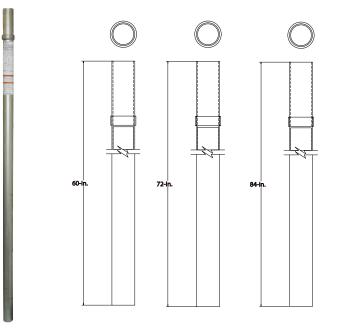
Tieback bracket for Nelson Studs between 3/4" and 1-1/4" and rebar between #6 and #11



60", 72", 84" Commercial Rebar Stanchion Head Tieback Assemblies Product Number: 6200-21, 6210-21, 6220-21

Stanchion head assembly with tieback cable assemblies for use with Concrete Rebar Stanchions. 6200-21:60", Gold color, used with 6200-23 stanchion. 6210-21:72", Silver color, used with 6210-23 stanchion. 6220-21:84", Black color, used with 6220-23 stanchion.

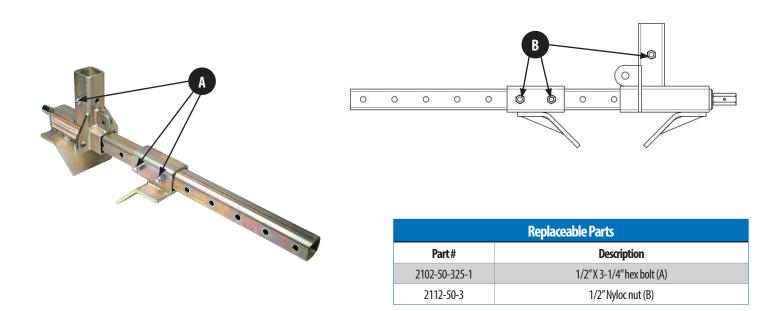
RELIANCE



No Replaceable Parts

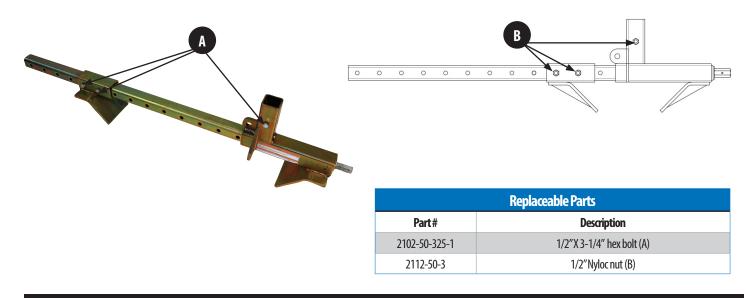
60", 72", 84" Concrete Rebar Stanchions Product Number: 6200-23, 6210-23, 6220-23

Commercial Rebar Stanchion Tube, 60", 72", 84". 6200-23 : Gold color, 6210-23 : Silver Color, 6220-23 : Black Color



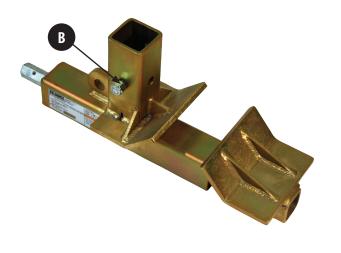
HLL Stanchion Beam Clamp (Wide) Product Number: 6230

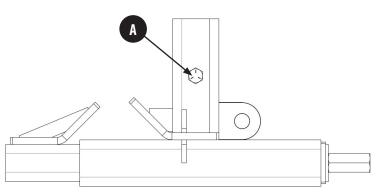
HLL Stanchion Base. For use on I-beams. 6"- 28" clamp range, 1/2" - 2" flange thickness.



Horizontal Lifeline Stanchion Beam Clamp Product Number: 6231

Horizontal Lifeline Stanchion Beam Clamp. Clamps to I-beams to provide receiver for end and midpoint HLL stanchions. Fits 11"-38" width, 1/2" - 3" thick



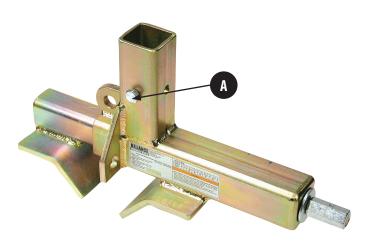


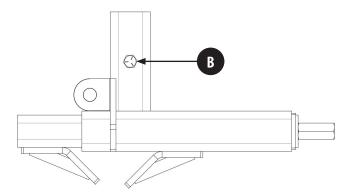
Replaceable Parts	
Part#	Description
2102-50-325-1	1/2"X 3-1/4" hex bolt (A)
2112-50-3	1/2" Nyloc nut (B)

HLL Stanchion Beam Clamp (Inverted) Product Number: 6235

HLL Stanchion Base for use on I-beams. Underslung clamp. 4-1/2" - 14" clamp range, 1/2" - 1-1/2" flange thickness.





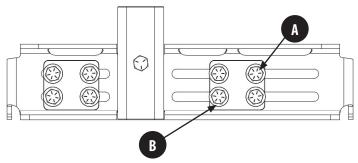


Replaceable Parts	
Part#	Description
2102-50-325-1	1/2"X 3-1/4" hex bolt (A)
2112-50-3	1/2" Nyloc nut (B)

HLL Stanchion Beam Clamp (Universal) Product Number: 6240

HLL Stanchion Base. For use on I-beams. 4-1/2" - 14" clamp range, 1/2" - 1-1/2" flange thickness.



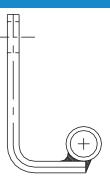


Replaceable Parts		
Part#	Description	
2102-50-250-4	1/2"X 2-1/2" Grade 8 tap bolt (A)	
2122-50-6	1/2"SAE washer (B)	

Modular Stanchion Receiver Base Product Number: 6262

Attaches to Nelson Studs with a diameter of 3/4" to 1-1/4" and rebar sizes #6 to #11. Will fit spacing between 3" and 12" with minimum clamping distance of 6".



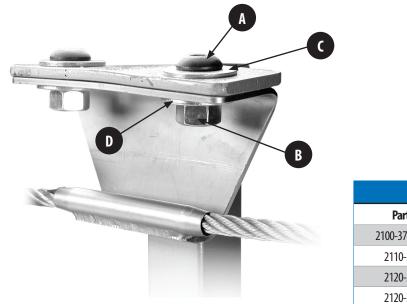


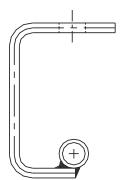
Replaceable Parts		
Part#	Description	
2100-37-200-3	3/8"X 2" stainless bolt 82°	
2110-37-1	3/8" stainless nut	
2120-37-1	3/8" stainless flat washer	
2120-37-3	3/8" stainless lock washer	

*All parts are attachment hardware - not shown here

Stainless Steel Horizontal Lifeline Hands-Free Bypass Support Product Number: 6452

Stainless Steel hands-free bypass suport. Side mount.





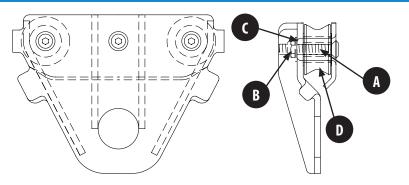
Replaceable Parts		
Part#	Description	
2100-37-200-3	3/8"X 2" stainless bolt 82° (A)	
2110-37-1	3/8" stainless nut (B)	
2120-37-1	3/8" stainless flat washer (C)	
2120-37-3	3/8" stainless lock washer (D)	

Stainless Steel Horizontal Lifeline Hands Free Bypass Support Product Number: 6454

Stainless steel hands-free bypass support top mount.



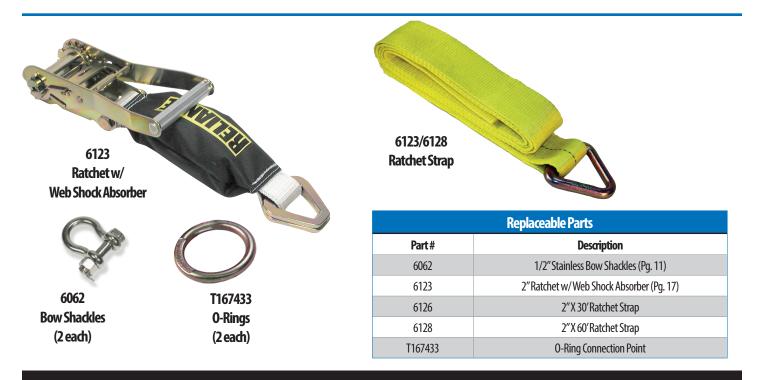




Replaceable Parts		
Part#	Description	
2100-31-175-3	5/16" X 1-3/4" stainless bolt 82° (A)	
2110-31-4	5/16" stainless lock nut (B)	
2120-31-1	5/16" stainless flat washer (C)	
6460-18	Wheel traveler (D)	

Horizontal Lifeline Hands Free Dual Wheel Traveler Product Number: 6461

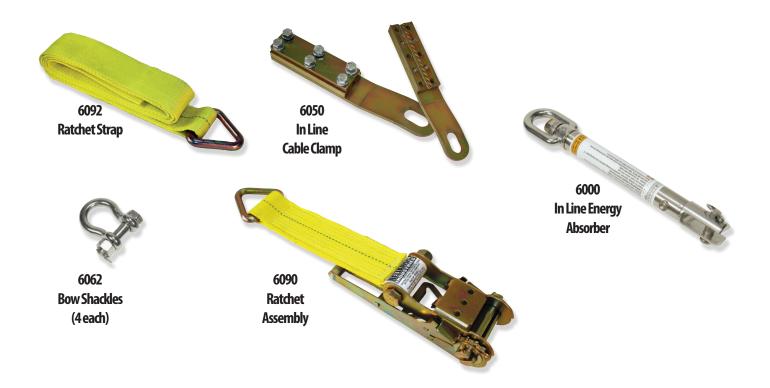
Stainless steel dual wheel traveler. Used to support retractables on the HLL. Stainless. Use with 6454 top-mount or 6452 side mount (sold separately)



30'/60' Temporary Horizontal Lifeline System Product Number: 6320-30 (30'), 6320-60 (60')

30' Temporary Horizontal Lifeline. 2" webbing X 30' long 60' Temporary Horizontal Lifeline. 2" webbing X 60' long

30



Please Note : The 6310 is an integral part of most Reliance horizontal lifeline systems. Cable lengths vary according to the requirements for each individual system; cable is therefore not induded with these components. For details on the cable component, please see pg. 13.

Replaceable Parts		
Part#	Description	
6310	Replaces entire system	
6092	Ratchet Strap - See pg. 16 for details	
6050	Inline Cable Clamp - See pg. 9 for details	
6000	In-Line Energy Absorber - See pg. 8 for details	
6062	Bow Shackles - See pg. 11 for details	
6090	Ratchet Assembly - See pg. 16 for details	

Portable Horizontal Lifeline System w/o anchorages or cable Product Number: 6310

Because these are Tuned Cable™ technology systems, they're easy to install and will fit safely in more applications than any other systems on the market. After reviewing the design program (web-based with training or through Reliance specialist) for your application, choose appropriate cable length and anchorage terminations based on those needs for up to 4 men and 200 ft.

Components: 6000-Skyline Shock absorber-tensioner 6050-InlineCable Clamp 6090 3" Ratchet 6092-10'X 3" Tensioning Strap & mating hardware 6062-1/2" shackles





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