RELANCE fall protection

Horizontal Lifeline System Components



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HIGHER STANDARDS IN PERSONAL FALL PROTECTION

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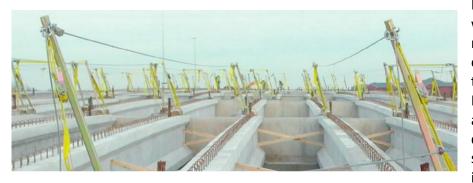
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Horizontal Lifeline Systems



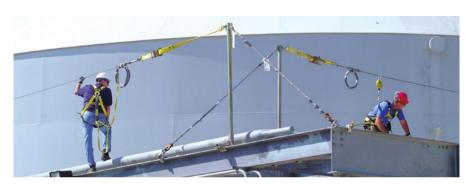
Reliance manufactures a variety of horizontal lifeline components and systems that are designed specifically for segments of industry where fall hazards require unique, functional solutions. This guide is divided up between common horizontal lifeline components and use specific components. These specific components have been designed to allow HLL installation in most environments. Components in this guide are all sold part of engineered systems or as replacements parts to registered users.

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.

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.

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Skyline[™] Galvanized Lifeline Cable Product Number: 6070-XX

3/8" (10mm) 7x19 galvanized aircraft cable. 'XX' designates cable length; 200' (61m) max. length. Fitted with swaged flemish splice on one end and seized on free end.



Skyline[™] Stainless Steel Lifeline Cable Product Number: 6072-XX

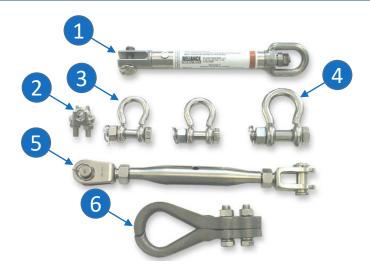
3/8" (10mm) 7x19 stainless steel aircraft cable. 'XX' designates cable length; 200' (61m) max. length. Fitted with swaged flemish splice on one end and seized on free end.



Cable Tieback Product Number: 6071-XX

1/2" (13mm) 6x25 galvanized IWRC cable. Fitted with swaged flemish splice on one end and seized on free end .





Permanent Horizontal Lifeline Systems Product Number: 6300

Permanent lifeline systems use all stainless steel components, including rigging screws to adjust line tension. They are intended for use in structures where the lifelines are designed and installed for permanent use, such as rooftops and pipe racks

Replacement Parts:

- 1 6000 HLL Energy Absorber
- 2 6082 Wire Rope Clip, 3/8", Stainless Steel
- 3 6062 Bow Shackle, ½", Forged Stainless Steel
- 4 6066 Bow Shackle 5/8", Forged Stainless Steel
- 5 6021 Rigging Screw
- 6 6055 Combo Clamp, 3/8", Stainless Steel

Portable Horizontal Lifeline System 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 for your application, choose appropriate cable length and anchorage terminations based on those needs for up to 4 men and 200 ft.

Replacement Parts:

- 1 6000 HLL Energy Absorber
- 2 6050 Inline Cable Clamp
- 3 6062 Bow Shackle, ½", Forged Stainless Steel
- 4 6092 10' Tensioning Strap
- 5 6090 3" Ratchet

Skyline[™] HLL Energy Absorber Product Number: 6000

Shock absorber assembly made from stainless steel. 5.25" travel at 2000 lbs. of force.

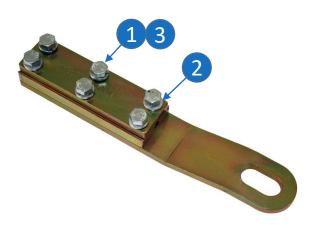
- 1 2134 Pin, Locking Rue
- 2 6000-15 Machined Pin, Stainless Steel
- 3 2110-50-5 1/2" Spring Lock Nut, Stainless Steel







Common Components



Inline Cable Clamp Product Number: 6050-1

Can clamp anywhere along 3/8" wire rope without crimping or damaging the cable. Zinc plated.

Replacement Parts:

- 1 2102-43-125-1 7/16" x 1-1/4" Hex Bolt
- 2 2122-43-3 7/16" Lock Washer
- 3 2102-43-75-1 7/16" x ¾" Hex Bolt (not shown)



Stainless Steel Inline Cable Clamp Product Number: 6052

Can clamp anywhere along 3/8" wire rope without crimping or damaging the cable. Stainless steel.

Replacement Parts:

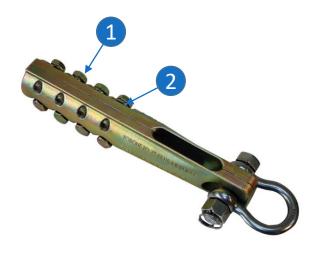
 $1 - 2100-43-125-1 - 7/16'' \times 1-1/4''$ Stainless Hex Bolt 2 - 2120-43-3 - 7/16'' Stainless Lock Washer 3 - 2100-43-75-1 - 7/16'' $\times \frac{3}{4}''$ Stainless Hex Bolt (not shown)

Stainless Steel Rigging Screw Product Number: 6021

For up to 3/4" cable, 8" travel adjustment.

Replacement Parts: 1 – 2134 – Pin, Locking Rue





Cast Inline Tieback Clamp Product Number: 6051

Permanent lifeline systems use all stainless steel components, including rigging screws to adjust line tension. They are intended for use in structures where the lifelines are designed and installed for permanent use, such as rooftops and pipe racks (bow shackle not included)

Replacement Parts:

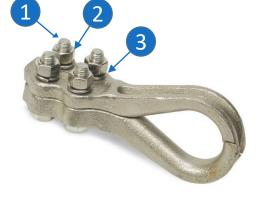
- 1 2102-50-150-1 ½" x 1-1/2" Hex Bolt
- $2-2122\text{-}50\text{-}3-\frac{1}{2}^{\prime\prime}$ Lock Washer

3/8" Large Loop Combo Clamp Product Number: 6055

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

Replacement Parts:

- 1 2100-50-250-1 1/2" x 2-1/2" Stainless Hex Bolt
- 2 2110-50-1 ½" Stainless Hex Nut
- 3 2120-50-3 ½" Lock Washer



Stainless Forged Bow Shackle ½" Product Number: 6062

Replacement Parts: 1 – 2134 – Pin, Locking Rue





Common Components

Stainless Forged Bow Shackle 5/8" Product Number: 6066

5/8" Stainless steel forged bow shackle.

Replacement Parts: 1 – 2134 – Pin, Locking Rue



Galvanized Forged Bow Shackle 1/2" Product Number: 6063

½" galvanized forged bow shackle.

Replacement Parts: 1 – 2134 – Pin, Locking Rue



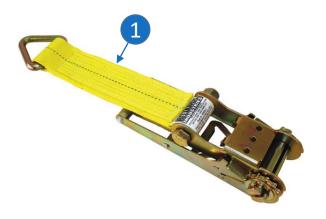


Galvanized Forged Bow Shackle 5/8" Product Number: 6067

5/8" galvanized forged bow shackle.

Replacement Parts: 1 – 2134 – Pin, Locking Rue





3" Ratchet Assembly Product Number: 6090

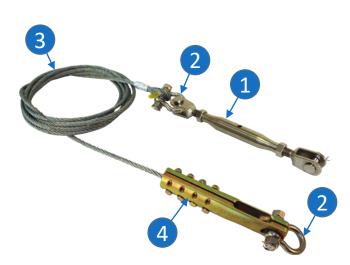
3" Ratchet Assembly. For portable systems.

Replacement Parts: 1 – 6090-2 – Web Strap Replacement

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

Triangle end. For use with 6090 ratchet assembly (sold separately). Component of 6310.





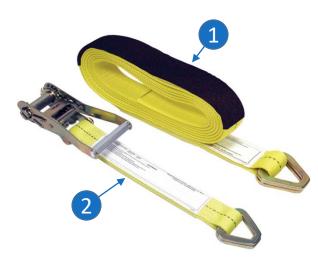
Cable Tieback Assembly ½" Product Number: 6077-XX

Galvanized cable adjustable tieback assembly. XX denotes length

- 1 6021 Rigging Screw
- 2 6066 Bow Shackle, 5/8"
- 3 6071-XX Tieback Cable (XX denotes length)
- 4 6051 Inline Cable Clamp



Common Components



2" Ratchet Strap Tieback Assembly Product Number: 6076

Standard 2" ratchet with 15' strap.

Replacement Parts:

- 1 6127 2" x 15' Webbing Assembly
- 2 6122 2" Ratchet Assembly



Temporary HLL Jumper System Product Number: 6320-XX

Temporary Horizontal Lifeline 2" Strap "Jumper" System used to connect multiple Cable Horizontal Lifeline Spans. Used to ensure continuous protection on long, multiple span bridges and structures. Available in either 30' (6320-30) or 60' (6320-60).

Replacement Parts:

- 1-6126 2" x 30' Web Assembly
- 2 T167433 2" Forged O-Ring
- $3 6062 \frac{1}{2}$ " Forged Bow Shackle
- 4 6123 2" Shock Absorbing Ratchet Assy

End / By-Pass Stanchion Product Number: Various

Combination End/By-Pass Stanchion for horizontal lifeline systems.

Standard sizes :

6151 - 60" (1.5m) 6178 - 72" (1.8m) 6163 - 84" (2.1m)

Replacement Parts:

1 – 6151-15 – End/Bypass Stanchion Cap (2 ea. required for complete head unit)

- 2 2102-50-325-1 ½" x 3-1/4" Hex Bolt
- 3 2112-50-3 1/2" Nylon Insert Lock Nut





Adjustable Strongback for 5' & 6' Stanchions –Reduced Weight Product Number: 6141-1WR

Adjustable from 56" to 92". The reduced weight adjustable Strongback uses a Vernier type adjustment.

Replacement Parts:

- 1 2102-75-250-1 ¾" x 2-1/2" Hex Bolt
- 2 2112-75-3 ¾" Nylon Insert Lock Nut
- 3 2112-50-3 1/2" Nylon Insert Lock Nut
- 4 2102-50-325-1 1/2" x 3-1/4" Hex Bolt (not shown)



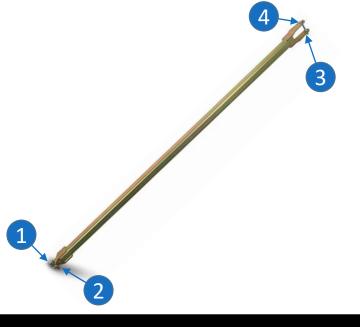
Adjustable Strongback for 5' & 6' Stanchions

Product Number: 6141

Adjustable from 56" to 92". Adjustable Strongback for horizontal lifeline end point anchorages with 5' or 6' stanchions.

Replacement Parts:

- 1 2102-75-250-1 ¾" x 2-1/2" Hex Bolt (not shown)
- 2 2112-75-3 ¾" Nylon Insert Lock Nut
- 3 2112-50-3 ½" Nylon Insert Lock Nut
- 4 2102-50-325-1 ½" x 3-1/4" Hex Bolt



Wide Jaw Strongback for 5' & 6' Stanchions

Product Number: 6140

83.5" (2.1m) Wide Jaw Strongback for 5-ft and 6-ft Stanchions. End point anchor component for horizontal lifeline systems.

- 1 2102-75-250-1 ¾" x 2-1/2" Hex Bolt
- 2 2112-75-3 ¾" Nylon Insert Lock Nut
- 3 2112-50-3 1/2" Nylon Insert Lock Nut
- 4 2102-50-325-1 ½" x 4" Hex Bolt



Common Components

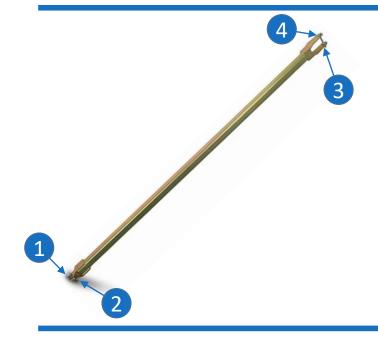
Narrow Jaw Strong Back for 5' and 6' 2 Stanchions

Product Number: 6142

82" (2m) Narrow Jaw Strong Back for 5' and 6' Stanchions. End point anchor component for horizontal lifeline systems.

Replacement Parts:

1 – 2102-75-250-1 – ¾" x 2-1/2" Hex Bolt 2 – 2112-75-3 – ¾" Nylon Insert Lock Nut (not shown)

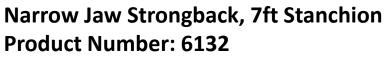


Wide Jaw Strongback, 7-ft Stanchion Product Number: 6131

99.5" (2.5m) Wide Jaw Strongback for 7-ft Stanchions. End point anchor component for horizontal lifeline systems.

Replacement Parts:

- 1 2102-75-250-1 ¾" x 2-1/2" Hex Bolt
- 2 2112-75-3 ¾" Nylon Insert Lock Nut
- 3 2112-50-3 1/2" Nylon Insert Lock Nut
- 4 2102-50-325-1 ½" x 4" Hex Bolt

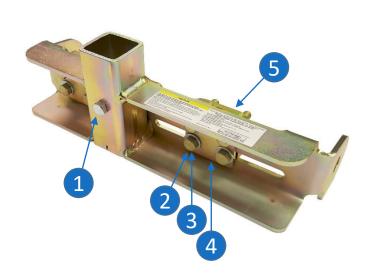


99.5" (2.5m) Narrow Jaw Strongback for 7-ft Stanchions. End point anchor component for horizontal lifeline systems.

Replacement Parts:

1 – 2102-75-250-1 – ¾" x 2-1/2" Hex Bolt 2 – 2112-75-3 – ¾" Nylon Insert Lock Nut (not shown)

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Modular Rebar/Shear Stud HLL Bracket Product Number: 6262

The Modular Rebar/Shear Stud HLL Bracket is used to connect HLL stanchions to appropriately sized rebar or Nelson shear studs.

Replacement Parts:

- 1 2102-50-275-1 ½" x 2-3/4" Hex Bolt
- 2 2102-50-250-4 ½" x 2-1/2" Gr. 8 Hex Bolt
- 3 2122-50-6 1/2" SAE Washer
- 4 6262-30 Bolt Plate
- 5 6202-22 Tension Bracket

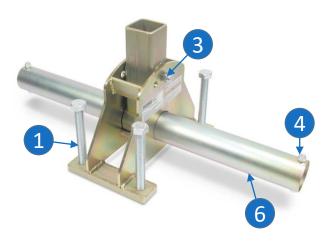
Modular Rebar/Shear Stud HLL Bracket Product Number: 6263

The Modular Rebar/Shear Stud HLL Bracket is used to connect HLL stanchions to appropriately sized rebar or Nelson shear studs. The 6263 has a smaller footprint than the 6262, allowing it to be used in tight spaces.

Replacement Parts:

Replacement Parts:

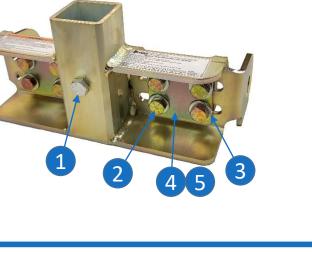
- 1 2102-50-275-1 ½" x 2-3/4" Hex Bolt
- 2 2102-50-250-4 ½" x 2-1/2" Gr. 8 Hex Bolt
- 3 2122-50-6 ½" SAE Washer
- 4 6262-30 Bolt Plate
- 5 6202-22 Tension Bracket (not shown)

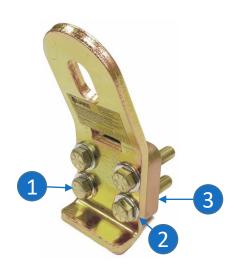


Receiver Bracket for Looped Rebar Product Number: 6170

The looped rebar receiver bracket allows HLL systems to be installed on most beams that have exposed looped rebar.

- $1-2102\text{-}75\text{-}600\text{-}2-3\hspace{-0.5ex}\rlap{/}^{\prime\prime}$ x 6" Fully Threaded Hex Bolt
- 2 2102-50-400-1 ½" x 4" Hex Bolt
- 3 2112-50-3 1/2" Nylon Insert Lock Nut
- 4 2102-37-300-1 3/8" x 3" Hex Bolt
- 5 2112-37-3 3/8" Nylon Insert Lock Nut
- 6 6170-25 28" Load Tube



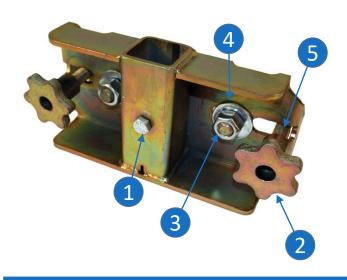


Rebar/Shear Stud Tie-back Bracket Product Number: 6202

The Rebar/Shear Stud Tie-back Bracket is used to connect horizontal lifeline tie-back cables or straps to appropriately sized rebar or Nelson shear studs.

Replacement Parts:

- 1 2102-50-250-4 ½" x 2-1/2" Gr. 8 Hex Bolt
- 2 2122-50-6 ½" SAE Washer
- 3 6202-22 Tension Bracket



Nelson Stud Bracket Base Product Number: 6260

Nelson Stud Bracket Base. Attaches to Nelson Studs to provide receiver for horizontal lifeline end and midpoint stanchion assemblies.

- 1 2102-50-275-1 ½" x 2-3/4" Hex Bolt
- 2 6200-30 Hand Knob
- 3 2111-75-2 ¾" Galvanized Nut
- 4 2122-75-2 ¾" Washer
- 5 6200-29 J-Bolt

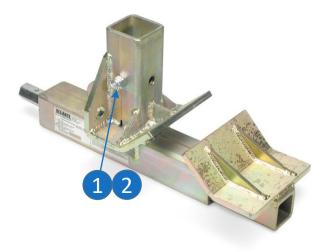


HLL Stanchion Beam Clamp Product Number: 6240

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

Replacement Parts:

- 1 2102-50-325-1 ½" x 3-1/4" Hex Bolt
- 2 2112-50-3 1/2" Nylon Insert Lock Nut (not shown)



HLL Stanchion Beam Clamp (Inverted) Product Number: 6235

HLL Stanchion Base. For use on I-beams. Underslung clamp. 4.5" - 14" clamp range, 1/2" - 1-1/2" flange thickness.

Replacement Parts:

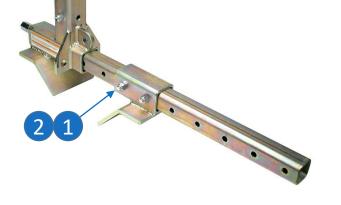
1 – 2112-50-3 – ½" Nylon Insert Lock Nut 2 – 2102-50-325-1 – ½" x 3-1/4" Hex Bolt (not shown)

HLL Stanchion Beam Clamp (Wide) Product Number: 6230

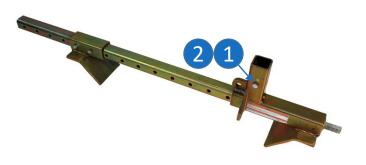
HLL Stanchion Base. For use on I-beams. 6" - 28" clamp range, 1/2" - 2" flange thickness.

Replacement Parts:

1 – 2112-50-3 – ½" Nylon Insert Lock Nut 2 – 2102-50-325-1 – ½" x 3-1/4" Hex Bolt (not shown)





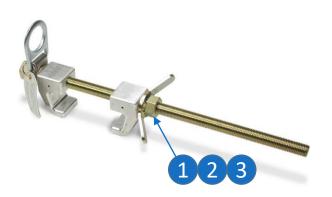


HLL Stanchion Beam Clamp (Extra Wide) Product Number: 6231

Horizontal Lifeline Stanchion Beam Clamp. Clamps to Ibeams to provide receiver for end and midpoint HLL stanchions. Fits 11"-48" width, 1/2" - 2.5" thick

Replacement Parts:

1 – 2102-50-325-1 – ½" x 3-1/4" Hex Bolt 2 – 2112-50-3 – ½" Nylon Insert Lock Nut (not shown)

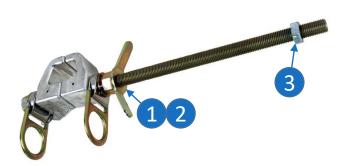


HLL Anchor Clamp Product Number: 3093

Temporary (Movable) Anchorage. Clamp is used for steel erection. 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.

Replacement Parts:

- 1 3093-23 T-Handle
- 2-3093-40- Stainless Steel Washer (not shown)
- 3 2113-100-2 1" Jam Nut (not shown)

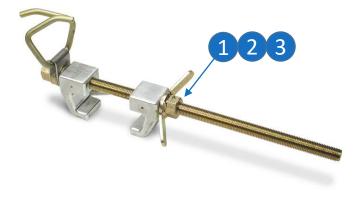


HLL Dual Anchor Clamp Product Number: 3098

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

- 1 3093-23 T-Handle
- 2-3093-40-Stainless Steel Washer (not shown)
- 3 2113-100-2 1" Jam Nut





HLL Bypass Clamp Product Number: 3091

Temporary (Movable) Anchorage. Bypass Clamp has a 1,800 lb. rating. Bypass is used as one component of a Horizontal Lifeline System. Attaches to I-beams 4" to 16-5/8" wide with a 1/2" to 1-3/4" flange thickness

Replacement Parts:

- 1 3093-23 T-Handle
- 2-3093-40 Stainless Steel Washer (not shown)
- 3 2113-100-2 1" Jam Nut (not shown)



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

This is a low-cost alternative to beam clamps. Note: The weld-on receiver is not reusable.



Weld-on Bypass Bracket Product Number: 6167 Weld-on Bypass Bracket.



Structural Steel Components



Single Hole Weld-on Anchorage Product Number: Multiple

Permanent (Fixed) Anchorage. Weld-on 1/2" x 2" Anchorage with a single 3/4" hole. High strength weldon lug for HLL or tie-back anchorages. 14,500 lb. proof load.

6158 – Carbon Steel 6160 – Stainless Steel

Double Hole Weld-on Anchorage Product Number: Multiple

Permanent (Fixed) Anchorage. Weld-on 1/2" x 2" Anchorage with two 3/4" hole. High strength weld-on lug for HLL or tie-back anchorages. 14,500 lb. proof load.

6161 – Carbon Steel 6162 – Stainless Steel



I-Beam Anchor Strap w/ Wear Sleeves Product Number: 6095

Temporary (Movable) Anchorage. A 3", 28,000 lb. Polyester web with four movable wear sleeves for corner protection. 6' length.

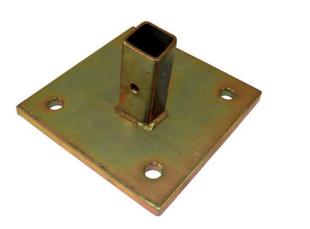




PVC Drop-In Sleeve for Stanchion Product Number: 6181

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.





Bolt Down Stanchion Receiver for Concrete

Product Number: 6185-10

Bolt Down Stanchion Receiver for Concrete

Replacement Parts:

2102-50-325-1 – ½" x 3-1/4" Hex Bolt 2112-50-3 – Nylon Insert Lock Nut 2102-62-800-5 – 5/8" x 8" Threaded Rod 3084-20 – Concrete Epoxy

Concrete Beam Anchor Strap with Wear Sleeves

Product Number: 6096

Temporary (Movable) Anchorage. A 3", 28,000 lb. Polyester web with four movable wear sleeves for corner protection. 15' length.







Rebar Cage HLL Anchor Bracket Product Number: 6203

The Rebar Cage HLL Anchor Bracket allows horizontal lifelines be anchored to appropriately sized and tied rebar cages.

Replacement Parts:

- 1 2102-50-250-4 ½" x 2-1/2" Gr. 8 Hex Bolt
- 2 2122-50-6 1/2" SAE Washer
- 3 6202-22 Tension Bracket

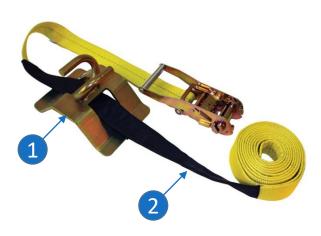


Rebar HLL Bypass Bracket Product Number: 6204

The Rebar HLL Bypass Bracket is connected to rebar cages and acts as a bypass support for approved horizontal lifeline systems.

Replacement Parts:

- 1 2102-50-250-4 ½" x 2-1/2" Gr. 8 Hex Bolt
- 2 2122-50-6 1/2" SAE Washer
- 3 6202-22 Tension Bracket (not shown)



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.

- 1 6172-10 Plate Assembly
- 2 6172-2 Ratchet Strap Assembly









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