

## PRODUCT DETAILS

## LINK-IT MAX ANATOMY:



## GENERAL GUIDANCE

**Rope WILL FAIL if worn-out, overloaded, misused, damaged or improperly maintained or abused.  
Rope failure may cause death, serious injury, or property damage.**

## PRODUCT SELECTION

- > Select *Link-It Max* with the correct WLL for the job. Samson uses a safety factor of 5:1 in accordance with ASME B30.9 and B30.26 to calculate its working load limits.
- Do not use Link-It Max to lift loads greater than the WLL.*
- > Ensure that the body of the shackle, excluding button knot, can pass through the connection points.
- > Ensure the elements being connected are free from sharp edges and offer a bend diameter that meets or exceeds the published minimum bend diameter.
- > Pad Eyes interfacing directly with *Link-It Max* should have rounded contours at the bore hole, or a shackle should be installed to which the *Link-It Max* may connect.
- > For extreme conditions (temperature above 150° F / 65.5° C, chemically active environments, dynamic or vibrational loading, or prolonged duration), consult a Samson Rope engineer.



## USING LINK-IT MAX SHACKLES & TAURUS LIFTING SLINGS:

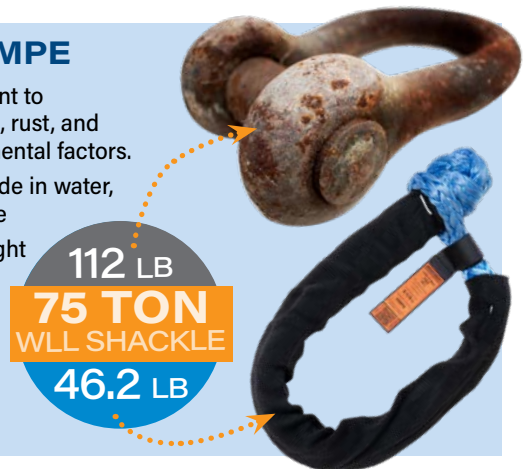
Working together, Samson's Taurus™ Lifting Slings and Link-It Max create a complete synthetic lifting solution.

TAURUS SLING RATING VERTICAL WLL POUNDS	PRODUCT CODE	LINK-IT MAX VERTICAL WLL TONS	PRODUCT CODE
30,000 lb	807038	15 tons	407056
		20 tons	407064
50,000 lb	807052	25 tons	407072
		30 tons	407080
70,000 lb	807063	35 tons	407088
		40 tons	407096
		45 tons	407100
100,000 lb	807074	50 tons	407108
		55 tons	407112
130,000 lb	807080	70 tons	407128
		75 tons	407136
160,000 lb	807094	85 tons	407144
		105 tons	407160
200,000 lb	807104	110 tons	407168
230,000 lb	807112	120 tons	407176
		140 tons	407192



### STEEL VS. HMPE

- > HMPE is very resistant to chemicals, corrosion, rust, and most other environmental factors.
- > HMPE will not degrade in water, seawater, or moisture
- > A fraction of the weight of steel shackles
- > Safer to use
- > Highly flexible
- > Easy to change out
- > Won't corrode



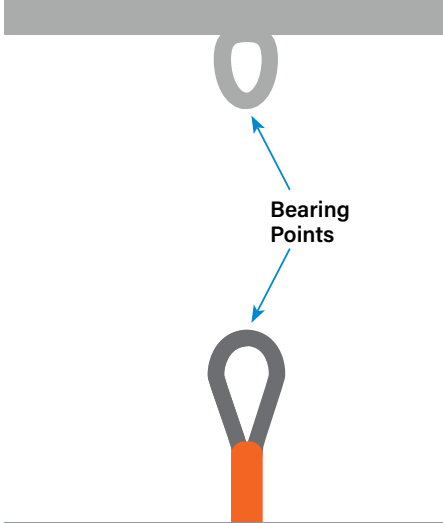
*Taurus* lifting slings conform to ASME B30.9 and are tagged with WLL for Vertical, Basket, and Choker configurations at a safety factor of 5. *Taurus* utilizes a strength-optimized HMPE core fabricated into a multi-loop sling, protected by non-weight bearing braided HMPE chafe eyes and a high-vis braided polyester chafe body. *Taurus* general purpose lifting slings are available with vertical WLL ranging from 30,000 lb to 400,000 lb. Available in lengths from 15 ft. to 50 ft. (size dependent).

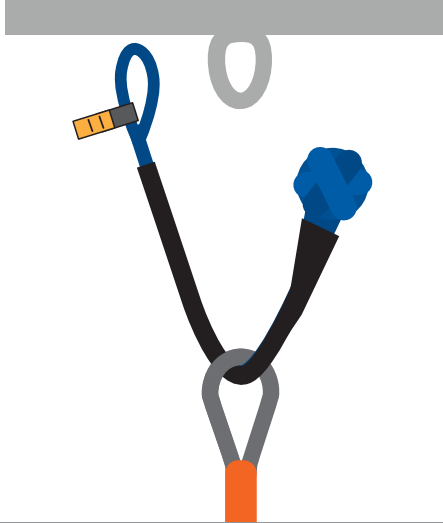
Excellent for general purpose lifting, *Taurus Lifting Sling* is loaded with value, combining tremendous weight savings over wire or chain with the simplicity of an eye-and-eye sling form factor.


When paired together, *Taurus + Link-It Max* makes your complete Samson Lifting System.

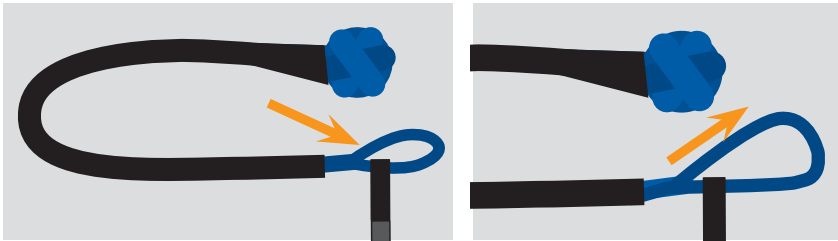
## HOW TO CONNECT LINK-IT MAX

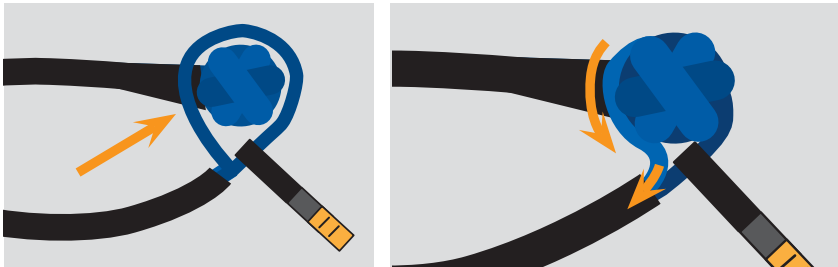
- 1** Set the bearing points close together, about one foot less than the desired shackle overall length.



- 2** Place the button knot between the two bearing points. Avoid placing the base of the tail on the bearing point if possible.

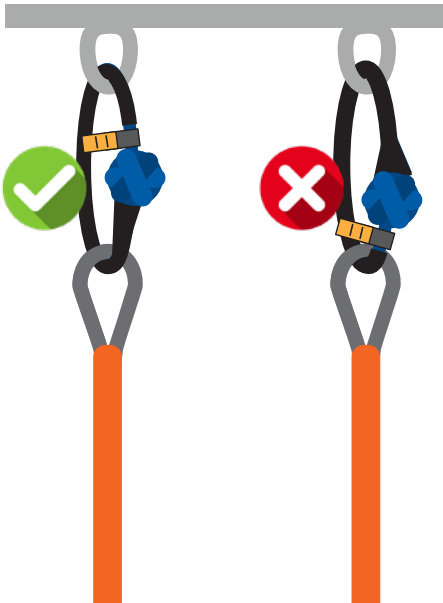

- 3** Thread the shackle eye end around the other bearing point.


- 4** Widen the shackle eye by pulling on the penetrating leg at the crossover point. Pull until the eye can fit over the button knot. *Note: Do not pull the lock-stitched leg of the Link-It Max.*


- 5** Place the eye over the knot and rest the knot close to the crossover point. Secure the eye by pulling the same body leg in the opposite direction. Tighten the eye by hand.


- 6** Secure patent-pending secondary locking tag system tightly around crossover as close to the button knot as possible. This hook and loop closure system ensures that the connection is maintained even when load is removed from the shackle and visually indicates positive latch during operations.


- 7** The shackle should be loaded so that the bearing points are covered by chafe protection. Orient the *Link-It Max* with the patent-pending secondary locking tag system approximately midway between the elements being connected. To keep this system in good condition for future use, do not place the locking tag system on a bearing surface.



## RIGGING CONSIDERATIONS



For angles other than vertical, multiply by the sling angle factor

SLING ANGLE

Vertically oriented slings offer full strength utilization.

When using *Link-It Max* in a multi-leg or bridle configuration, the lift plan should take into account the angle by which each leg deviates from vertical, and reduce your acceptable load capacities according to the Load Angle Factor in the table below.

For angles other than vertical, multiply by factor in table below to obtain reduced rating based on calculated sling lift angle.

### SLING ANGLE AND LOAD ANGLE FACTOR

SLING ANGLE (FROM VERTICAL)	0°	15°	30°	45°	60°	75°
LOAD ANGLE FACTOR	1.000	.966	.866	.707	.500	.259

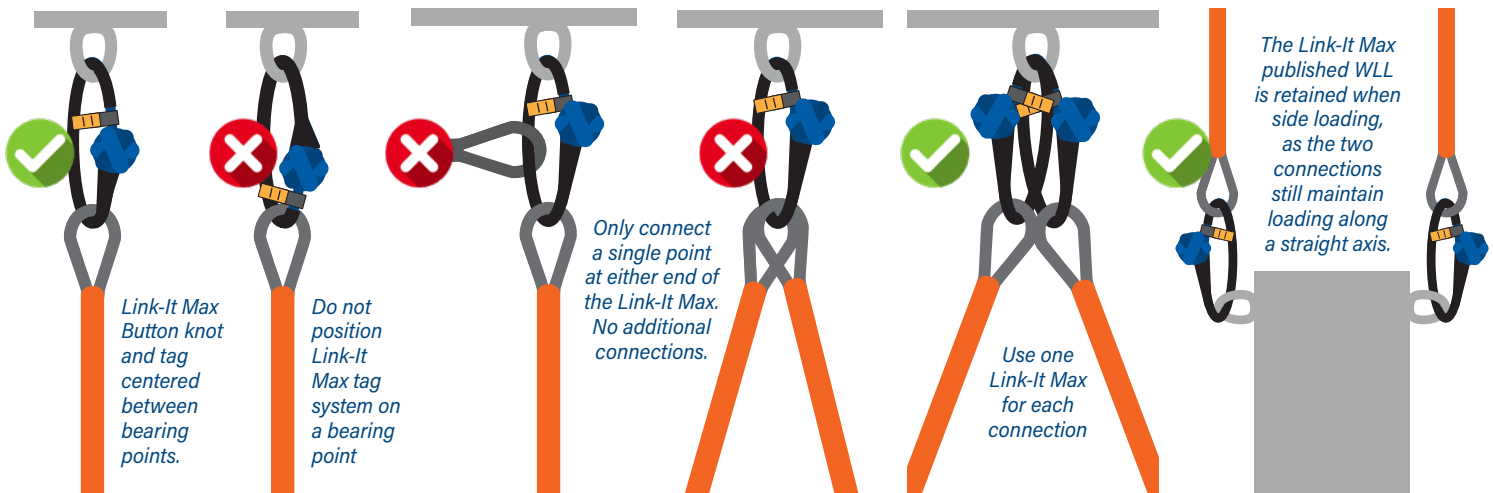
*Link-It Max* offers many benefits over traditional metal shackles. No need to worry about:

- > Mixing up whether the bow or the pin should be placed on the hook
- > Using spacers or washers to keep loads centered on the shackle pin to avoid asymmetric loading
- > Side loads
- > Pins becoming accidentally unscrewed, getting lost, damaged, or misplaced
- > Damaging, scratching, or marring the surface of high value payloads

The rope components in *Link-It Max* will naturally align and balance in the direction of the applied tension, and the loop will remain securely fixed on the knot in any straight-pull orientation. We recommend not placing the tag on a bearing surface to keep this system in good condition for future use.

### RIGGING DOS & DON'TS:

Your *Link-It Max* is designed to support load along a straight axis. Only two elements at a time may be connected to a *Link-It Max*. *Link-It Max* should not be used to replace a master link in a multi-leg or bridle configuration. Instead each leg should have its own *Link-It Max* making the critical connection:







## INSPECTION PROCEDURES

*Link-It Max* shall be inspected prior to each use. Once you become familiar with this product this can be done quickly during the course of use.

Synthetic rope can degrade due to wear, misuse, or overloading. Never use a shackle that is worn-out, damaged, or abused. If in doubt about the condition of the shackle, retire it. If you notice anything unusual, replace the shackle immediately.


LOCATION	PASS	FAIL
<b>TAG</b>	Tag is present, information is legible.	Tag is missing, information is no longer legible.
<b>ACTION</b>		
If the tag is missing or is no longer clearly readable, the unit should be retired to protect against use in an inappropriate loading scenario.		


LOCATION	PASS	FAIL
<b>TAG CLOSURE</b>	Hook-and-loop is clean and adheres well to itself when closed.	Hook-and-loop contains debris or is otherwise no longer able to maintain adhesion during use.
<b>ACTION</b>		
Attempt to clean the hook-and-loop. If cleaning does not improve the adhesion, retire the unit. (NOTE: While the hook-and-loop latch will not affect the reliability or performance of the <i>Link-It Max</i> , the absence of this visual indicator of closure may render the unit out of compliance with applicable lifting regulations.)		

LOCATION	PASS	FAIL
<b>BACK OF THE EYE (and other rope areas)</b>	<p>Abrasion is less than or equivalent to the following:</p>  <p>The observation of compression (flattened or shiny fibers) is ok for continued use.</p>	<p>Abrasion is greater than or equivalent to the following:</p> 
<b>ACTION</b>		
Retire the unit when abrasion wear becomes excessive in this (or any) area.		

LOCATION	ACTION
<b>BUTTON KNOT</b>	If the shackle has been overloaded and the button knot has changed shape from its original state, please discontinue use and contact Samson.

## INSPECTION PROCEDURES *CONTINUED*

LOCATION	PASS	FAIL
<b>CHAFE SLEEVE</b>	The chafe protection is intact and free of holes. If the chafe protection is intact, the rope will also have low exposure to abrasion. The chafe material is more prone to wear than the rope.	Chafe protection is completely or partially worn through.
		
	<b>ACTION</b> If the chafe protection is completely or partially worn through and the rope core is in good condition, the chafe sleeve may be replaced. The unit must be retired if there is any damage to the rope core. Repairs should be made only by Samson-qualified distributors.	

LOCATION	PASS	FAIL
<b>TWIST</b>	The core rope and <i>Link-It Max</i> overall appears straight and free of twist.	<i>Link-It Max</i> appears twisted.
		
	<b>ACTION</b> Twist can result in a reduction of strength. The operation should be paused while the <i>Link-it Max</i> is disconnected, straightened out, and reconnected in a manner that will not twist when operations continue.	

LOCATION	PASS	FAIL
<b>UV DAMAGE</b>	Rope has been kept out of direct sunlight when not in use. Rope appearance and feel on exposed and shaded areas (areas covered by chafe) are similar.	Rope has experienced prolonged exposure to sunlight. Fibers appear discolored or faded*. Fibers are rough and splintered on the surface of the rope.
		<i>*Note that discoloration does not necessarily indicate strength loss.</i>
	<b>ACTION</b> Prolonged UV exposure can degrade fiber over time. While this can be difficult to identify through a simple visual inspection, when combined with usage history, an appropriate retirement decision can be made.	

## LINK-IT MAX INSPECTION CHECK LIST

Link-It Max ID: \_\_\_\_\_ Description: \_\_\_\_\_ WLL: \_\_\_\_\_

Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_

ZONE	PASS	FAIL	Observations or Actions Taken
Tag			
Tag Closure (hook-and-loop)			
Back of Eye			
AmSteel®-Blue Rope Core			
Chafe Sleeve			
Twist			
UV Damage			
Other: _____			

*Note: If the shackle has been overloaded and the button knot has changed shape from its original state, please discontinue use and contact Samson.*

OVERALL INSPECTION RESULT (circle one)    **PASSED**    **FAILED**

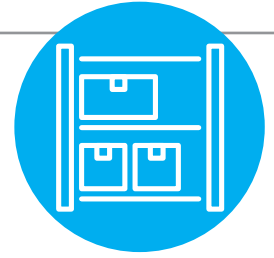
## ROPE STORAGE & CLEANING

### STORAGE

All rope should be stored in a clean, dry area, out of direct sunlight, and away from extreme heat. It should be kept off the floor and on racks to provide ventilation underneath. Never store rope on a concrete or dirt floor, and under no circumstances should cordage and acid or alkalis be kept in the same vicinity. Some synthetic rope (in particular polypropylene and polyethylene) may be severely weakened by prolonged exposure to ultraviolet (UV) rays unless specifically stabilized and/or pigmented to increase UV resistance. UV degradation is indicated by discoloration and the presence of splinters and slivers on the surface of the rope. No shelf life has been established for synthetic fiber ropes and shelf life will vary based on storage conditions.

### CLEANING

Full cleaning guide available at **SamsonRope.com**  
[www.samsonrope.com/resources/general/rope-cleaning](http://www.samsonrope.com/resources/general/rope-cleaning)



## HANDLING

- Handle by lifting the whole unit, do not carry by the knot or eye only
- Do not pull individual strands
- Avoid dragging on ground
- Avoid contact with rough surfaces and sharp edges