

ENGINEERING REFERENCE · FIRST EDITION · 2026

The LoadGuider® Handbook Industrial Tagline Engineering

ENGINEERING REFERENCE SERIES · PSC HAND SAFETY INDIA

A practical engineering reference for lifting engineers, rigging supervisors, HSE managers and procurement professionals responsible for remote suspended-load directional control.

SUBJECT

Industrial Taglines & Suspended
Load Control

COVERAGE

Offshore · Steel · Construction ·
Fabrication · Marine

CENTRAL PRODUCT

LoadGuider® Anti-Tangle Tagline
System

AUDIENCE

Lifting Engineers · Rigging
Supervisors · HSE · Procurement

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INDUSTRIAL CRANE OPERATION · LARGE LOAD SUSPENDED FROM MOBILE CRANE · TWO OPERATORS MAINTAINING WORKING DISTANCE

LoadGuider® · A PSC Product · pschandsafety.com

Published by PSC Hand Safety India Private Limited

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This publication is an engineering reference guidebook intended to support professional judgement in industrial lifting operations. It does not constitute a regulatory requirement, a substitute for a site-specific risk assessment, or a replacement for a lifting plan prepared by a competent person.

Product specifications and part numbers are correct at time of publication and subject to change. Verify current specifications at pschandsafety.com before procurement.

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FOREWORD

The Tagline Problem

Every lifting operation ends the same way. The load descends, approaches its landing point, and requires directional control. At this moment, across fabrication yards, offshore decks, construction sites and steel plants the world over, someone reaches for a rope.

The rope is frequently whatever is available — cut from a larger length, borrowed from another task, improvised from whatever is at hand. It may be knotted, frayed, contaminated with drilling fluid or grease. It may be the wrong length for the lift height. In many cases, it has been used dozens of times without inspection.

The worker who picks up that rope is not acting carelessly. They are doing what every competent rigger has always done: taking control of a suspended load and guiding it to its destination. The problem is not the judgement. The problem is the interface.

PSC has spent more than a decade working in the environments where this problem presents itself daily — offshore crane decks, heavy fabrication workshops, structural steel erection sites, precast yards, port operations and industrial maintenance shutdowns. In those environments, the same pattern repeats: workers using whatever rope is available, managing the consequences of poor line behaviour, and accepting proximity to suspended loads that engineering should have made unnecessary.

LoadGuider® was developed in direct response to that pattern — not as a product in search of a problem, but as an engineering response to a clearly documented field condition. The current Polyex construction has been the primary production configuration since 2014 and has been supplied to customers in more than a dozen countries across steel, engineering, oil and gas, marine and heavy-industrial operations.

Where other interfaces — rigid push-pull tools, hook-attached taglines, or a different configuration — are more appropriate for a specific condition, this handbook identifies them.

Satish Agrawal

Business Head, PSC Group
PSC Hand Safety India Private Limited

PREFACE

How This Handbook Is Structured

This handbook is intentionally sequenced. The sequence reflects the order in which engineering decisions must be made before any tagline system can be responsibly selected, specified or used.

Chapters 1 through 3 address load behaviour and the hazard profile of crane lifting: why loads rotate, drift and swing; why workers instinctively move toward uncontrolled loads; and why the instinctive response places workers in the most hazardous position at the most hazardous moment of every lift.

Chapters 4 and 5 establish when a tagline is the appropriate engineering response, and when it is not. Chapters 6 through 10 address the engineering of the tagline itself: core architecture, braid stiffness and surface profile; grip and visibility requirements; length selection; attachment engineering; and handler positioning.

Chapter 11 provides the complete LoadGuider® engineering biography. Chapters 12 through 15 address sector applications, inspection and retirement, and specification and procurement language.

Specification without engineering understanding produces the wrong product in the wrong application.

HOW TO USE THIS HANDBOOK

READER	RECOMMENDED PATH
Lifting engineer or HSE professional	Chapters 1–5 for the engineering framework. Chapter 9 for attachment. Chapters 11–12 for product specification and applications. Chapter 15 for specification language.
Rigging supervisor or senior rigger	Chapters 2, 3 and 4 for load behaviour and tagline applicability. Chapters 7–10 for construction principles, length, attachment and line management.
Procurement or specification engineer	Chapter 11 for the LoadGuider® specification. Chapter 13 for the selection guide and product matrix. Chapter 15 for procurement language and all part numbers.
HSE manager or safety trainer	Chapters 1–3 for load physics and worker behaviour. Chapter 5 for conditions where taglines should not be used. Chapter 14 for inspection and retirement criteria.
Contractor or site standard developer	Chapter 15 for ready-to-copy specification language for site rules, contractor requirements and tender documents.

KEY TERMS

- Tagline** — A rope attached to a suspended load for remote directional control from a position outside the immediate load hazard zone.
- Working Distance** — The operator's distance from the suspended load. Correct working distance keeps personnel outside the load's swing path and closing pinch zones.
- Swing Path** — The arc through which a suspended load can travel under lateral force. Personnel in the swing path are in the primary load hazard zone.
- Anti-Tangle Construction** — Tagline design incorporating a structured core and body profile intended to reduce coiling and kink formation through repeated lift cycles.

About LoadGuider®

LoadGuider® is PSC's principal industrial tagline — developed to address the specific failure modes that cause general-purpose ropes to become unsafe or unmanageable in industrial lifting service.

The current Polyex polyester construction has been the primary production configuration since 2014, deployed in more than a dozen countries across offshore drilling, steel manufacturing, heavy fabrication, structural construction, port operations and marine environments. LoadGuider® is manufactured exclusively for PSC.

Its confirmed construction — a 6 mm rigid inner core, a stiff 12 mm braided Polyex body, and an external 6 mm spiral overwrap — provides the structured, highly visible interface that general-purpose rope cannot reliably deliver in industrial tagline service.

Control the load. Keep people out of the line of fire.



LoadGuider®

PSC-LGTC Series · 10–45 ft

Rigid Polyex core · stiff braid · spiral overwrap · 23 kN carabiner · fluorescent yellow



SafeGuider®

PSC-WEB-TLD Series · 10–45 ft

UV-resistant urethane-coated casing · self-locking scaffolding hook · orange and yellow



Guide-It® Safety Rigger

PSC-GISRT Series · 5–20 m

12 mm kernmantle · 360° swivel hook · double-action latch · HV orange-yellow



HSF LoadGrab Rigger TagLine

HSF-LG-TL Series · 5–30 m

12 mm white kernmantle · fixed scaffolding hook · double-action latch · stamped rating

CHAPTER 01 · FOUNDATIONS

Why Suspended Loads Require Directional Control

A suspended load is not stationary. Even when a crane holds its position, the load beneath it is subject to forces — gravity, momentum, wind, rigging geometry — that give it the capacity to move in ways that neither the crane operator nor the ground crew can fully predict.

CHAPTER PRINCIPLE

Directional control of a suspended load is not an optional precaution. It is an engineering requirement that follows from the physics of all suspended masses.

The Physics of a Suspended Mass

A load attached to a crane hook and lifted clear of the ground does not simply hang there. It becomes a pendulum.

A mass suspended from a fixed point and displaced from its equilibrium position oscillates about that point. The period of oscillation is determined by the effective suspension length and gravity — not by the mass itself. A steel column weighing five tonnes and a cargo basket weighing five hundred kilograms, suspended with the same effective suspension length, will swing at the same frequency.

This matters because the kinetic energy of a moving suspended load increases with its mass and with the square of its velocity. Arresting that movement requires a force that depends not only on the energy to be absorbed, but on the stopping distance and time available. The hand of a worker attempting direct contact cannot provide a safe stopping force — it can only be injured by the energy in the system.

ENGINEERING PRINCIPLE · EP-01-001

*A suspended load in motion cannot be safely stopped by direct hand contact. It can only be **guided** — its energy redirected gradually through a controlled interface that keeps the operator outside the load's swing path and impact zone throughout the manoeuvre.*



A steel section bundle showing significant rotation as it clears its stack. The load is still suspended and its energy remains in the system. A purpose-designed tagline is selected to resist this kind of rotation from a safe working distance — outside the rotation arc, not within it.

How Loads Move: Rotation, Drift and Swing

Industrial suspended loads exhibit three principal forms of uncontrolled movement. Each has a different cause and a different engineering response.

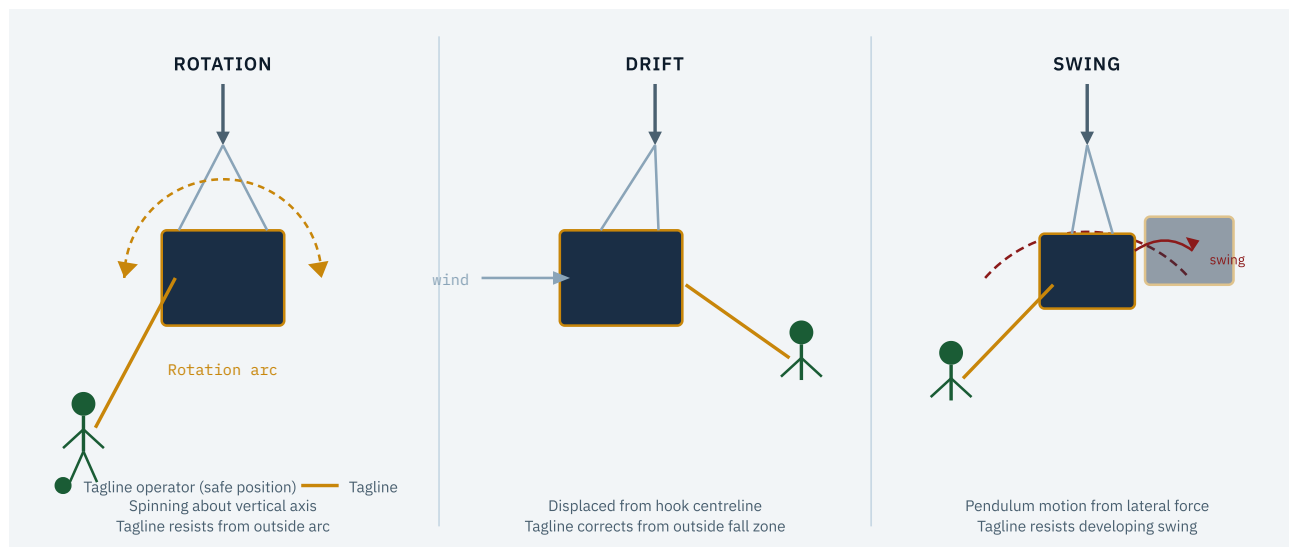


FIG 1.1. Three principal forms of uncontrolled suspended-load movement. Each requires a different engineering response.

ROTATION

Load rotation occurs because rigging geometry rarely distributes load perfectly symmetrically about the true centre of gravity. Any asymmetry, or any pre-existing torsional force in the rigging, will initiate rotation once the load is free to turn. Rotation can accelerate once begun — rigging elements wind against each other, storing torsional energy that releases rapidly at set-down.

DRIFT

Lateral drift occurs when a load does not hang directly beneath the crane hook. In outdoor environments, wind loading on the load's exposed surface generates a continuous lateral force. For a given load shape and projected area, aerodynamic lateral force increases approximately with the square of wind speed.

SWING

Pendulum swing is initiated by any lateral force. Once swing is established, the crane alone cannot always absorb it efficiently. A tagline in use can provide graduated resistance to developing swing — but it is a directional control interface, not a device for overpowering a load already in significant motion.

FIELD NOTE · FN-01-001

Load behaviour is not constant throughout a lift. A load that hangs steadily during initial ascent may begin to rotate once clear of the ground. Tagline operators must maintain their working position and readiness throughout the complete lift — not only during phases where movement is already visible.

ENVIRONMENTAL FORCES

Where wind speed or load area exceeds the capability of the tagline arrangement to manage safely, the lift should be paused or postponed. In offshore environments, vessel motion introduces continuous variation in hook height, horizontal displacement and load dynamics.

CHAPTER 02 · HUMAN BEHAVIOUR

Why Workers Move Toward Uncontrolled Loads

A suspended load approaching its landing point does not require a worker's hands to guide it into position. But that is what happens, in almost every industry, on almost every lifting site in the world.

CHAPTER PRINCIPLE

The instinct to reach for a moving object is not a training failure. It is a deeply embedded behavioural pattern. Engineering must accommodate it, not simply instruct against it.

The Moment Every Worker Knows

The load is almost in position. It needs only a small correction — a slight rotation, a nudge to the left, a correction to stop it swinging. Without conscious decision, the worker moves toward it.

This action is so routine that it is rarely questioned on site. It has happened on thousands of lifts without incident. The absence of an incident on previous occasions is processed, unconsciously, as evidence that the action is safe. It is not.

Touch as the Primary Control Strategy

Human beings learn to control the physical world through direct contact. This response pattern becomes deeply embedded through thousands of successful repetitions. In everyday experience, touch almost always works.

Industrial suspended loads are different in every way that matters. They are heavier by orders of magnitude. They possess momentum the hand cannot overcome. They continue moving after contact. They store energy during rotation and swing that releases unpredictably. The consequences of error are not a dropped glass but a crushed hand, a fractured wrist, or a worker drawn into the load's path.

The Final Correction Instinct

There is a specific moment in every lift where the approach instinct is strongest: the final approach to the landing point, when the load is only metres from its destination and a small correction appears to be all that separates a clean set-down from a restart of the sequence.

At this moment, the load is still suspended and still subject to all the physics described in Chapter 1. Its energy is not diminished by proximity to the ground. Structural elements are now within reach of the load, pinch zones are active, and the window for response to any unexpected movement has narrowed to seconds.

PRACTICAL OBSERVATION · P0-02-001

*The hazard does not diminish as the load approaches the landing point. It **concentrates**. The final metres of descent combine maximum exposure to pinch zones, maximum structural obstruction, and minimum response time. The tagline's working distance is most important precisely when it feels most inconvenient to maintain.*

The Engineering Argument for Reliable Tagline Performance

Training that instructs workers to maintain distance from a suspended load is necessary but not sufficient. Where the tagline performs unreliably — developing tangles, losing grip under contamination, becoming unmanageable — the worker faces a practical choice between following the procedure and completing the lift.

A tagline designed to resist tangling, that supports improved gloved handling in wet conditions, that remains visible throughout the lift — reduces the practical justification for approaching the load. It makes the correct behaviour the easier behaviour. That is the engineering objective.

CHAPTER 03 · THE HAZARD IN DETAIL

What Happens When Control Is Lost

03

The hazards of suspended loads are not uniformly distributed throughout a lift. They concentrate at specific moments, in specific positions, under specific conditions. This chapter maps the hazard profile of a typical industrial crane lift.

CHAPTER PRINCIPLE

The hazard is not simply the load. It is the combination of load energy, structural geometry, worker position and the response time available at each phase of the lift.

The Four Hazard Zones of a Crane Lift

A useful framework maps four zones within a standard crane lift, defined by the combination of load energy, structural geometry and the response time available.

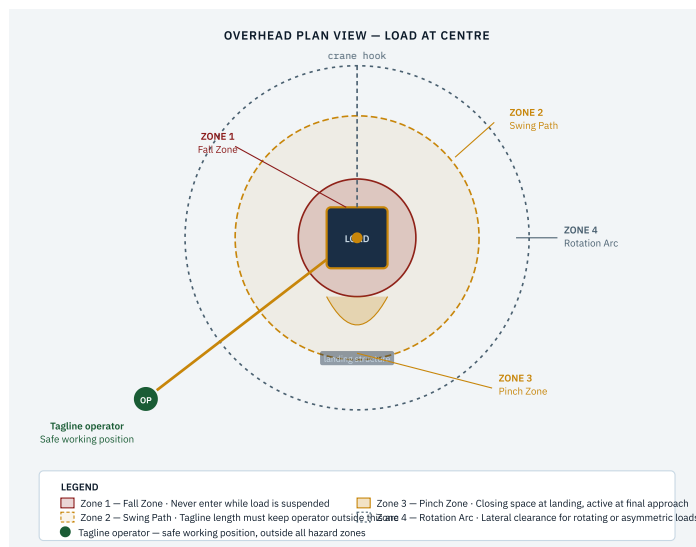


FIG 3.1. The four hazard zones of a standard industrial crane lift shown in overhead plan view. Tagline operators must remain outside Zone 1 and Zone 2 at all times.

ZONE 1 — THE FALL ZONE

The area directly beneath the suspended load, within the arc through which the load or rigging could fall. Tagline operators must never be positioned in the fall zone — including during retrieval.

ZONE 2 — THE SWING PATH

The arc through which the load can travel if subjected to lateral force while suspended. Tagline length must keep operators outside the swing path throughout the lift.

ZONE 3 — THE PINCH ZONE

The closing space between the load and any fixed structure as the load approaches the landing point. Pinch zones are most active at final approach — precisely when workers are most likely to be in close proximity.

ZONE 4 — THE ROTATION ARC

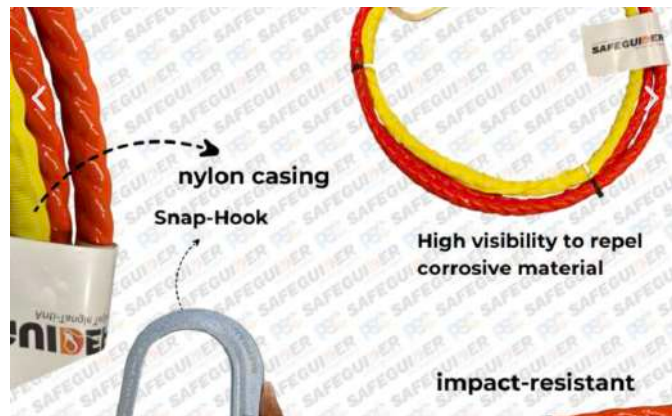
The lateral clearance required around a rotating load. Particularly significant for long or asymmetric loads where the rotating radius is a multiple of the load's cross-section.

Surplus Line Management and Structured Taglines

Ordinary flexible rope can collapse into loose loops, trail around the operator's feet, or be wrapped around the hand to manage excess length. LoadGuider® and SafeGuider® help surplus line remain in broad, open loops. Surplus length may be carried in the operator's open hand as broad, immediately releasable loops. The operator does not pass a hand or arm through the loops, and the loops are not gripped closed or wound tightly around any part of the body.



LoadGuider® surplus carried as broad open loops in the operator's open hand. The structured construction helps the loops remain open and manageable. The loops can be released immediately.



SafeGuider® surplus in broad open loops — same technique. The stiff urethane-coated casing helps the loops remain manageable. No limb is passed through any loop.

CAUTION · CAU-03-001

Never wrap or loop a tagline tightly around any part of the body. Never pass a hand, wrist or arm through a loop. Never grip loops closed. The hazard is wrapping or locking the rope against the body — not the natural broad loops formed by a structured tagline correctly carried in the open hand. The tagline must always be held in a manner that allows immediate release.

The Retrieval Problem

Retrieval — recovering the tagline after the load has been set — is one of the most consistently underestimated hazards in tagline operations. Once the load reaches its landing point, it is still suspended on the hook. The rigging is still under load. The tagline may be lying in Zone 1.

Entering Zone 1 to retrieve a tagline after load set-down is one of the most frequently observed boundary violations in crane operations. PSC's TRT-3P Tagline Retrieval Tool is designed to allow tagline recovery from outside the hazard zone. Where retrieval exposure is a consistent concern, the retrieval method should be specified as part of the lifting procedure.

CHAPTER 04 · ENGINEERING THE RESPONSE

When a Tagline Is the Right Answer

A tagline is not the appropriate response to every suspended-load directional control requirement. Correctly applied, it is an effective tool for remote load guidance. Incorrectly selected or deployed, it can transfer hazard rather than reduce it.

CHAPTER PRINCIPLE

A tagline should be selected because it addresses a confirmed directional control requirement in conditions that allow safe manual management — not because it is the only rope available.

What a Tagline Is Designed to Do

A tagline is a directional control interface, not a brake.

It transmits graduated correction force from the operator to the load. It can resist the development of rotation, assist in maintaining load orientation during travel, and provide continuous lateral correction during descent. What it cannot do is arrest a load already in significant uncontrolled movement, or overcome wind forces that exceed the operator's ability to maintain a stable working position.

ENGINEERING PRINCIPLE · EP-04-001

*A tagline must not be used to overpower a load whose movement exceeds the handler's ability to maintain a **stable position and immediate release capability**. When conditions reach that threshold, the correct response is to stop the operation and reassess – not to apply more people to the tagline.*

Conditions in Which a Tagline Should Be Planned

CONDITION	ENGINEERING RATIONALE
Load rotation anticipated	Tagline applies correction force without requiring approach to the rotation arc.
Wind loading present	Allows continuous lateral correction during descent from working distance.
Precise landing required	Provides controlled final approach guidance.
Congested lift path	Helps prevent contact that could create secondary hazards.
High surface-area loads	Manages the lateral correction requirement generated by wind.
Long loads with end-rotation risk	Dual taglines at each end allow independent control.

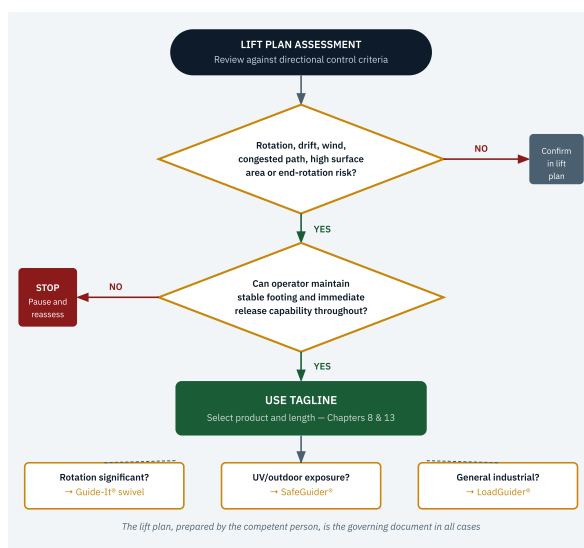


FIG 4.1. Tagline applicability decision process. The lift plan, prepared by the competent person, is the governing document in all cases.

When a Tagline May Introduce Additional Risk

CONFINED SPACES AND RESTRICTED ROUTING

In confined spaces, a tagline may become snagged on the structure, creating tension that can pull the operator toward the obstruction or arrest the load while the crane continues to lower. Confined-space lifts require specific assessment of tagline routing throughout the complete travel path before the lift begins.

ENTANGLEMENT IN DENSE RIGGING ENVIRONMENTS

Where a lift takes place with dense active rigging — multiple slings, shackles, spreader beams — a trailing tagline may become entangled, preventing the load from landing cleanly and generating tension in unexpected directions.

CONDITIONS EXCEEDING SAFE MANUAL CONTROL

Where wind speed, load momentum or sea state generates forces the tagline operator cannot manage while maintaining a stable position and clear escape path, the tagline should not be used as a substitute for stopping the operation.

WHEN A RIGID INTERFACE IS MORE APPROPRIATE

For the final positioning phase of a lift — when the load is within the last metre of its landing point and precise corrections are required at close quarters — a rigid push-pull interface may provide more controlled guidance than a flexible tagline. The tagline manages remote directional control throughout the lift; the rigid interface addresses precise final placement. This boundary is addressed in the closing section.

CHAPTER 05 · THE IMPROVISED ROPE PROBLEM

Why Improvised Rope Is Not a Tagline

Many tagline-related incidents do not occur because workers used no directional control. They occur because workers used whatever rope was available — not a rope selected and designed for tagline service.

CHAPTER PRINCIPLE

Improvised rope and a purpose-designed tagline are not interchangeable. The differences are engineering differences, and their consequences are engineering consequences.

Five Failure Modes of Improvised Rope in Tagline Service

FAILURE MODE 1 — TANGLING AND KNOTTING

Twisted-strand rope constructions store torsional energy through repeated use cycles. Over time, accumulated twist causes the rope to spontaneously form coils and loops when slack. A loop in a hanging rope can close into a kink when tension is reapplied — a condition that cannot be resolved during an active lift without slack in the line.

FAILURE MODE 2 — GRIP LOSS UNDER CONTAMINATION

Industrial sites present surfaces contaminated with drilling fluids, hydraulic oil, grease, cement slurry, salt spray, rain and mud. General-purpose rope constructions may become significantly more difficult to grip when contaminated. An operator who cannot maintain grip will instinctively move closer to the load — every step closer reduces working distance and increases exposure.

FAILURE MODE 3 — SNAG AND CATCH POINTS

Rope that develops surface irregularities through use — raised fibre ends, knot remnants, fraying — creates surfaces that catch on deck fittings, rigging hardware, structural edges and load corners. A snagged tagline generates tension in the wrong direction, pulling the operator off balance or toward the load.

FAILURE MODE 4 — VISIBILITY LOSS

Rope in natural, grey or faded colour may become difficult to track visually against common industrial backgrounds. A crane operator who cannot identify the tagline's location does not know where the tagline operator is standing relative to the load's path.

FAILURE MODE 5 — DEGRADATION WITHOUT CLEAR INDICATION

Core fibres may be damaged by UV exposure, chemical contamination or mechanical abrasion while the outer surface appears serviceable. Without defined inspection criteria, degraded rope may remain in service.

FIELD PRINCIPLE · FP-05-001

Each of the five failure modes above leads to the same operational consequence: the operator is drawn closer to the suspended load, **into the hazard zones that the tagline was selected to avoid**. A purpose-designed tagline addresses those failure modes through construction, not through additional procedural instruction.

Five Engineering Requirements

The five failure modes establish five engineering requirements for a purpose-designed industrial tagline: resistance to tangle formation; grip support under contamination; a profile designed to minimise snagging; full-length high-visibility identification; and a surface condition that can be assessed clearly through a defined inspection process.

ENGINEERING RESPONSE · HOW LOADGUIDER® ADDRESSES THE FIVE REQUIREMENTS



LoadGuider® · PSC-LGTC Series

PSC-LGTC-10 through PSC-LGTC-45 · 10 ft to 45 ft

Anti-tangle: Rigid 6 mm Polyex inner core and stiff 12 mm braided body are designed to resist twisting and coiling through repeated lift cycles.

Grip support: The external 6 mm spiral overwrap provides a more positive gloved-hand contact surface — field-confirmed in wet and oily conditions.

Reduced snagging: Structured profile with no loose surface fibres or knotted sections along the working length.

Visibility: Fluorescent yellow throughout the full working length, remaining identifiable through the product's service life.

CHAPTER 06 · CONSTRUCTION ENGINEERING

Tagline Construction Engineering

06

The performance difference between a purpose-designed tagline and improvised rope is determined by the engineering of the rope body — how the core, the braid and the surface profile work together to produce predictable behaviour under industrial crane service conditions.

CHAPTER PRINCIPLE

A tagline's construction determines its field behaviour more than any other single specification variable. Diameter and fibre type alone are insufficient specifications for purpose-designed tagline procurement.

Why Construction Determines Field Behaviour

Two ropes of the same nominal diameter and fibre material can behave entirely differently under identical tagline service conditions. A construction that stores torsional energy will release it as rotation at the free end. A construction with no dimensionally stable core will collapse under lateral force. A construction with a contamination-resistant outer surface will maintain its grip characteristic far longer under oily or muddy conditions.

Core Architecture: The Foundation of Anti-Tangle Performance

In general-purpose twisted-strand rope, the core is simply another strand, contributing to breaking strength but not to dimensional stability. Under repeated loading and unloading, a twisted-strand core progressively accumulates torsional energy. When this energy is sufficient, the rope coils and the free end rotates spontaneously.

A rigid core resists this accumulation. When the outer braid applies lateral force to a rigid core, the core holds its shape rather than yielding. This helps reduce the tendency for tight loops and kinks to form, because the core resists the collapse of the rope's cross-section that initiates them.

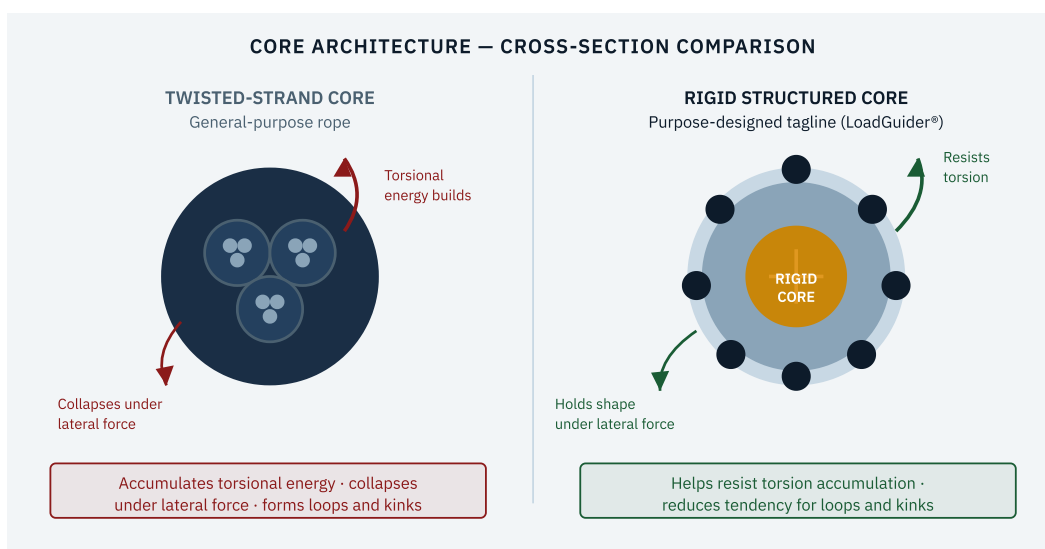


FIG 6.1. Core architecture comparison. A rigid core resists the lateral collapse of the rope's cross-section that initiates coil and kink formation in general-purpose twisted-strand rope.

Braid Stiffness as a Design Target

In a tagline designed for crane service, a degree of longitudinal stiffness in the braid is a design target, not a compromise. A stiffer braid resists the spontaneous formation of coils and kinks between lifts. It maintains a more predictable deployed shape when hanging slack. It provides more consistent feedback to the operator's gloved hand throughout the lift sequence.

Surface Profile: Engineering the Grip Interface

A surface that becomes slippery under contamination changes the operator's behaviour — drawing them closer to the load to reduce the tagline tension until grip becomes recoverable. A raised surface profile maintains some grip contact at the raised points even when the groove between them is wet or contaminated. The engineering basis for structured surface treatments such as spiral overwrap profiles on purpose-designed taglines.

FIELD NOTE · FN-06-001

A structured grip surface accumulates contamination in grooves between raised elements in environments with high concentrations of drilling mud or concrete dust. Inspect the grip zone during pre-use checks and wash down the rope before reissue if grip-surface contamination is significant.

CHAPTER 07 · GRIP AND VISIBILITY

Grip Engineering and Visibility

A tagline's grip surface and visibility are the two properties most directly connected to whether the operator maintains safe working distance under actual site conditions — not ideal ones.

CHAPTER PRINCIPLE

A tagline must maintain a usable grip interface and full visual identification under the contamination, lighting and handling conditions of its intended operating environment — not only under clean, new-product conditions.

Grip Performance Under Contamination

The grip interface between a gloved hand and a tagline rope is determined by the friction between the glove material and the rope surface. For smooth-surfaced ropes, this friction can drop severely when contaminated.

LoadGuider®'s external spiral overwrap is designed to support grip contact between the glove surface and the raised spiral ridges, even when the groove between ridges is wet or contaminated. This grip support in wet and oily conditions has been confirmed through practical field use — it is field-demonstrated performance, not the result of formal laboratory certification.

FIELD NOTE · FN-07-001

Grip gloves significantly affect tagline handling performance. An operator wearing light work gloves in wet conditions will experience different grip than one wearing heavy nitrile-coated rigger gloves. Site lifting procedures should specify the minimum glove standard for tagline operations.

Colour as a Safety-Critical Design Element

The high-visibility colour of a tagline is not a product identification choice. It is an engineering requirement. In a lifting zone — where multiple workers, multiple pieces of rigging, and moving equipment occupy the same visual field — the ability of all team members to identify the tagline's location and path at all times is a safety-critical requirement.

LoadGuider® is fluorescent yellow throughout its construction rather than surface-coated. The high-visibility colour therefore remains identifiable throughout the product's service life, subject to normal soiling, wear and environmental exposure. SafeGuider® uses an orange UV-resistant urethane-coated nylon casing over the main working length and a yellow anti-abrasion sleeve at the load end.



FIG 7.1. The yellow tagline is traceable from the operator's hands to the load attachment point. This visibility allows all members of the lift team to read the tagline's path and the operator's separation from the suspended load at all times.

Full-Length Visibility and Operator Position

Visibility of the tagline provides all members of the lift team with real-time information about where the tagline operator is standing. A visible tagline creates a visual line between the operator's hands and the load. A tagline operator who has moved inside the swing path or the pinch zone becomes visible to the team through the change in the tagline's angle and tension. This shared situational awareness is a practical safety benefit of high-visibility taglines that is consistently valued in the field.

CHAPTER 08 • LENGTH SELECTION

Tagline Length Selection

08

Tagline length is the variable that determines working distance. Working distance is the variable that determines whether the operator is inside or outside the load's hazard zones during each phase of the lift.

CHAPTER PRINCIPLE

Tagline length must be selected to maintain the operator's working position outside the fall zone and swing path throughout the complete lift cycle — including during final approach, set-down and retrieval.

Selecting a Length for the Complete Lift Cycle

Select a tagline length suitable for the complete planned lift cycle.

The selected length must provide adequate working distance at every phase of the lift — lift-off, travel, final descent and set-down. Any change of tagline during a lift shall occur only when the load is safely supported and the equipment can be changed outside an active suspended-load hazard condition. Mid-lift tagline changes while the load is suspended and in motion are not an acceptable operational technique.

FIELD NOTE · FN-08-001

If the required working distance falls between two standard LoadGuider® lengths, select the longer. Never shorten a tagline by knotting or folding the excess — this creates a catch point and compromises the rope's structured profile.

Length Guidance by Lift Type

LIFT TYPE	INITIAL GUIDANCE	PRIMARY CONSIDERATION
Offshore cargo basket	30–45 ft	Vessel deck motion requires operator to maintain working distance through continuous hook movement.
Structural steel beam or column	20–35 ft	Beam length creates wide rotation arc. Operators need distance from rotation hazard and pinch zones at landing structure.
Precast concrete panel	25–40 ft	High surface area generates significant wind load. Operator needs distance to manage lateral correction force safely.
Machinery or equipment — indoor crane	15–25 ft	Lower wind loading, controlled environment. Length selected primarily to keep operator outside fall zone and pinch zones.
Pipe bundle or long load	20–35 ft per tagline	Two taglines typically required. Length at each end selected for that end's proximity to structural elements.
Overhead crane — workshop	10–20 ft	Short lift height, controlled environment. Shorter lengths may be appropriate subject to lift plan assessment.

Managing Surplus Length

Select the shortest standard length that provides adequate working distance throughout the complete lift cycle — minimising the surplus to be managed. As described in Chapter 3, LoadGuider® and SafeGuider®'s structured construction helps surplus line remain in broad, open loops that can be carried in the operator's open hand without compromising immediate release capability.

Length and the Offshore Environment

In offshore crane operations, longer taglines — typically 30 to 45 ft — are preferred because they allow the operator greater freedom of movement in response to deck motion while maintaining the load at a safe distance.

CHAPTER 09 · ATTACHMENT ENGINEERING

Attachment Engineering

The attachment of a tagline to a suspended load is not a secondary detail. A correctly selected and verified attachment is the foundation of the tagline's load control function. An incorrect attachment can create the hazards the tagline was selected to prevent.

CHAPTER PRINCIPLE

The tagline attachment must be appropriate to the load's geometry, the attachment point's structural adequacy, and the forces the tagline will apply during the lift. All three must be confirmed in the lift plan before lifting begins.

Selecting the Attachment Point

The attachment point should be identified in the lift plan and confirmed before the load is rigged. A suitable attachment point is structurally adequate for the forces the tagline will apply, allows effective directional correction in the intended plane, does not create a snagging hazard as the load moves, and can be reached for attachment and release without requiring the rigger to enter the hazard zones.

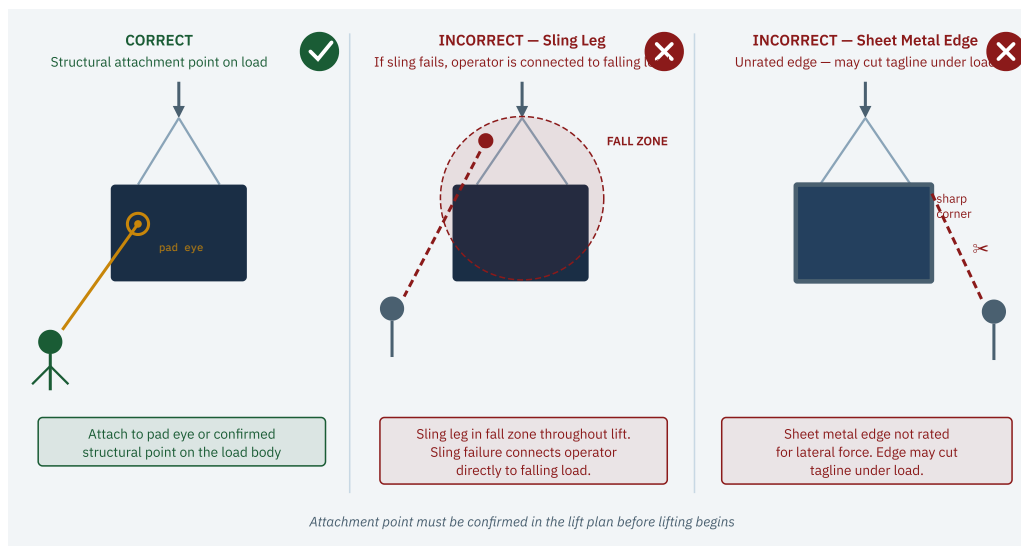


FIG 9.1. Tagline attachment point selection. Attach to the load structure at a confirmed structural point — not to sling legs or unrated projections.

CAUTION · CAU-09-001

Attaching a tagline to a loaded sling leg places the attachment point in the fall zone throughout the lift. If the sling fails, the tagline operator is directly connected to the falling load. Attach taglines to the load structure itself — a pad eye, a dedicated attachment point, or a suitable structural element identified in the lift plan.

Carabiner and Hook Selection

LOADGUIDER® ATTACHMENT CARABINER

LoadGuider® is supplied with a rated carabiner at the attachment end. Rating: 23 kN. Gate opening: 1.5 inch for PSC-LGTC-10 to PSC-LGTC-25; 2 inch for PSC-LGTC-30 to PSC-LGTC-45. Verify the carabiner is fully locked before the crane takes the load.



FIG 9.2. LoadGuider® rated carabiner. The knurled locking sleeve must be rotated to the locked position before lifting begins. A carabiner that does not lock positively must be removed from service.

SAFEGUIDER® SELF-LOCKING HOOK

SafeGuider® is supplied with a large self-locking scaffolding/rebar hook at the attachment end. Confirm the hook is fully engaged on the attachment point and the self-locking mechanism is closed before lifting.



FIG 9.3. SafeGuider® attachment hook. The permanently stamped rating marking is visible on the hook body. Confirm the stamped value before each use period. The hook must be fully engaged and the self-locking mechanism closed before the crane takes the load.

GUIDE-IT® SAFETY RIGGER SWIVEL HOOK

Guide-It® Safety Rigger is fitted with a heavy-duty galvanized scaffolding/rebar hook with a full 360-degree swivel and double-action safety latch. Gate opening: approximately 50 mm. The hook carries a permanently stamped rating — confirm before use. The swivel is designed to help reduce the transfer of load rotation into the tagline.



FIG 9.4. Guide-It® Safety Rigger swivel hook. The double-action latch mechanism and swivel connection are visible. The double-action latch must be fully engaged before lifting.

HSF LOADGRAB RIGGER TAGLINE FIXED HOOK

The HSF LoadGrab uses a heavy-duty galvanized fixed scaffolding/rebar hook with approximately 50 mm gate opening and double-action safety latch. The hook carries a permanently stamped rating — confirm before use.

FIELD NOTE · FN-09-001

Verify hardware rating and latch function at each pre-use inspection. A hook whose latch does not close positively must be removed from service. Do not continue with a tagline whose attachment hardware is in doubt — re-attachment after the crane has taken the load requires entering the hazard zone.

CHAPTER 10 · HANDLER POSITIONING

Handler Positioning and Line Management

10

The engineering of the tagline system extends beyond the rope and its attachment. How the operator positions themselves throughout the lift, and how surplus line is managed during deployment and retrieval, determines whether the system works as designed.

CHAPTER PRINCIPLE

Working distance is maintained by operator discipline and is enabled by tagline design. A tagline that cannot be managed comfortably at working distance will eventually be managed at a shorter distance.

Operator Position Throughout the Lift

The tagline operator's position must be established before the lift begins and maintained throughout. The position must simultaneously satisfy three conditions: outside Zone 1 (fall zone); outside Zone 2 (swing path); and offering stable footing and a clear escape path in all directions.

FIELD NOTE · FN-10-001

Before each lift, the tagline operator should walk the working arc — from their initial position to where they will be standing during final approach — and confirm that the footing is safe, the escape path is clear, and no obstructions will force them inside Zone 2 during the lift. This takes less than sixty seconds and should be standard practice before every tagline operation.



FIG 10.1. Tagline operator in correct working position. The rope is taut between the operator's gloved hands and the suspended load. The operator is at working distance, footing is stable, and the body position allows immediate movement in any direction.

Managing Surplus Line During a Lift

Two methods are appropriate for managing surplus, and the correct choice depends on the work area:

METHOD 1 — REPOSITION TO MAINTAIN TENSION

Where the work area permits, the operator steps back as the load descends — increasing working distance gradually and maintaining rope tension throughout. This keeps the line taut, provides continuous directional control authority, and eliminates the need to manage surplus line in the hand. This is the preferred method where space allows.

METHOD 2 — CARRY SURPLUS AS OPEN LOOPS

Where repositioning is constrained by the work area, surplus structured tagline may be carried in the operator's open hand as broad, immediately releasable loops. The loops are not wound around the wrist or arm, the operator does not pass a limb through them, and the loops are not gripped closed.

The Pre-Lift Check

- ◇ **Tagline inspected and serviceable** — see Chapter 14 for criteria

- ◇ **Hardware confirmed** — carabiner or hook correctly engaged and locked

- ◇ **Length correct** — appropriate for the planned working distance throughout the complete lift

- ◇ **Working position identified** — footing safe, escape path clear

- ◇ **Team briefed** — all members know tagline operator's position and role

- ◇ **Communication confirmed** — protocol between tagline operator, banksman and crane driver agreed

- ◇ **Retrieval method agreed** — before the crane lifts, not improvised at set-down

Retrieval After Set-Down

The correct retrieval sequence: hold position at working distance after load set-down; confirm the load is stable and the crane driver is aware; where a PSC TRT-3P retrieval tool is in use, recover the tagline from outside the hazard zone; where no retrieval tool is in use, confirm the load is fully de-rigged, the hook has been raised clear, and Zone 1 has been reopened before approaching.

The retrieval method must be specified in the lift plan. Improvised retrieval at the end of each lift cycle compounds risk with every repetition.

CHAPTER 11 · ENGINEERING BIOGRAPHY

The LoadGuider® Engineering Biography

LoadGuider® is not a rope with a product name. It is a structured engineering response to a documented field problem. This chapter provides the complete construction rationale, design history, confirmed technical specification and product differentiation.

CHAPTER PRINCIPLE

Every confirmed design characteristic of LoadGuider® corresponds to a failure mode that general-purpose rope exhibits in industrial tagline service.

Development History

LoadGuider® was developed to address the failure modes — tangling, grip loss, snagging, poor visibility — that cause workers to approach suspended loads unnecessarily in industrial lifting operations. The current Polyex construction has been the primary production configuration since 2014, representing approximately 12 years of continuous field use and supply across more than a dozen countries.

The continuity of the core construction since 2014 reflects PSC's decision to retain a field-established design rather than repeatedly alter the product architecture. LoadGuider® is manufactured exclusively for PSC.

PROCUREMENT NOTE

LoadGuider® is made exclusively for PSC. Verify that the supplier is an authorised PSC source. The PSC part number system (PSC-LGTC-xx) is the controlled reference for procurement. Verify current specifications at pschandsafety.com before placing orders.

The Three-Element Construction

Chapters 6 and 7 established the generic engineering principles behind core architecture, braid stiffness and surface profile. This section applies those principles to the specific confirmed construction of LoadGuider®.



FIG 11.1. LoadGuider® external spiral overwrap. The photograph shows the braided Polyex body and the helical spiral overwrap profile. The groove between spiral ridges engages the gloved hand across multiple contact points.



LoadGuider® PSC-LGTC Series — complete product. The stiff structured construction is visible in the way the rope holds its form in the hand. Rated carabiner at the attachment end; plain free end at the operator end.

ELEMENT 1 — THE RIGID INNER CORE (6 MM POLYEX)

The 6 mm Polyex rigid inner core is the structural backbone of LoadGuider®'s anti-tangle design. It helps maintain the rope's dimensional integrity under the lateral forces that cause general-purpose rope to deform, collapse and initiate coiling. The rigid core helps resist the lateral collapse of the rope's cross-section that tends to initiate loop formation when the rope is slack.

ELEMENT 2 — THE STIFF BRAIDED BODY (12 MM POLYEX)

The 12 mm braided Polyex main body surrounds the core and provides the majority of the rope's structural strength. Its stiffness is a design target — achieved through braid geometry and yarn selection. The stiff braid resists the longitudinal deformation that causes a flexible rope to take a "set." LoadGuider® can be stored coiled, but deploys to a substantially straight working shape because the braided body's stiffness resists the memory of the storage position. The combined profile of core and braided body produces an overall diameter of approximately 18 mm.

ELEMENT 3 — THE EXTERNAL SPIRAL OVERWRAP (6 MM)

The 6 mm external spiral overwrap runs helically around the main braided body, providing the raised contact surface that the operator's gloved hand engages. The spiral geometry supports grip contact between the glove and the raised ridges regardless of the radial position of the hand.

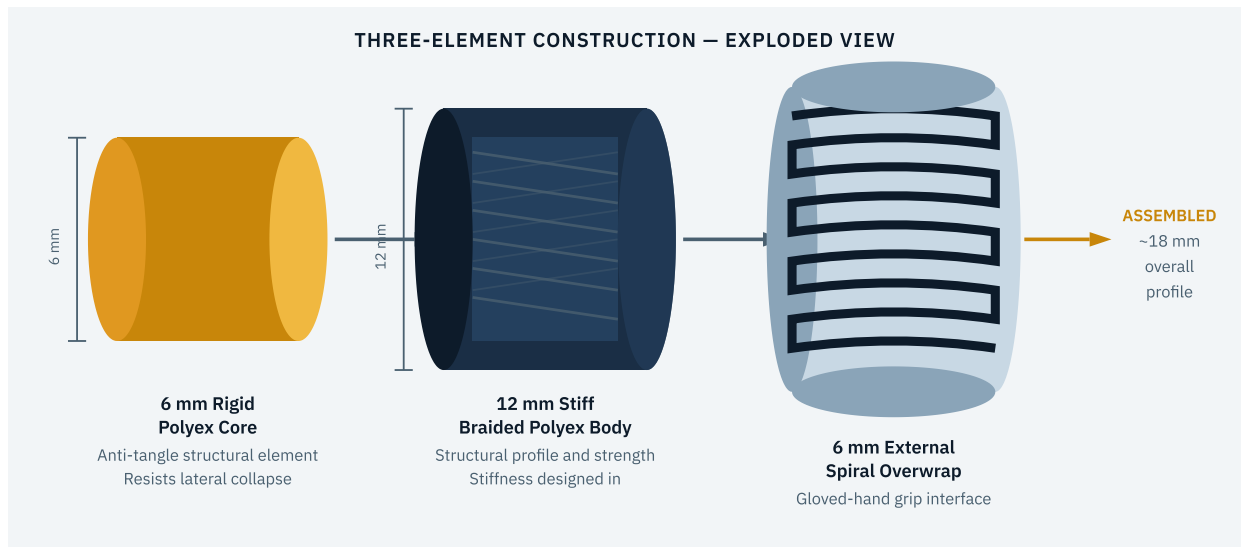


FIG 11.2. LoadGuider® three-element construction — exploded view. The rigid core, stiff braided body and spiral overwrap function as an integrated system.

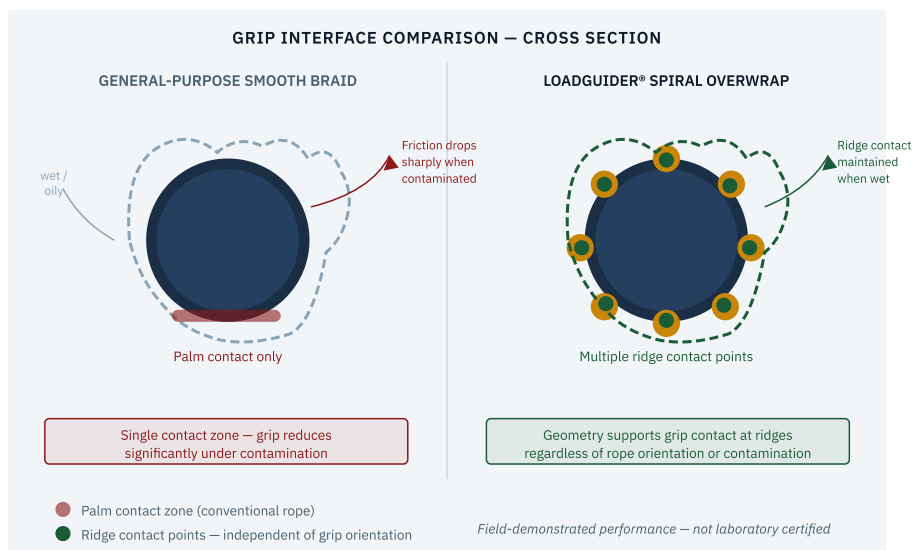


FIG 11.3. Grip interface comparison. The spiral overwrap geometry is designed to support grip contact regardless of grip orientation, supporting performance under contaminated conditions.

Confirmed Technical Specification

Product name	PSC LoadGuider® Anti-Tangle Tagline
Manufacture	Made exclusively for PSC
Material (current)	Polyex — PSC trade name for the high-strength polyester yarn in the current construction
Core	6 mm rigid inner core
Main body	12 mm stiff braided Polyex cover
Spiral overwrap	6 mm external spiral overwrap
Overall diameter	Approximately 18 mm; spiral overwrap increases local outside profile
Colour	Fluorescent high-visibility yellow throughout construction
Attachment end	Spliced eye with supplied rated carabiner
Carabiner rating	23 kN
Gate opening	1.5 inch: PSC-LGTC-10 to PSC-LGTC-25 · 2 inch: PSC-LGTC-30 to PSC-LGTC-45
Cleaning	Water and mild detergent; rinse; hang to dry
Storage	Broad, relaxed coils or hang from a suitable hook. Do not bind tightly, crush, impose sharp bends or store under sustained compression.
Service life	Condition-based; no fixed replacement period
Primary config. since	2014
Countries supplied	More than a dozen

The PSC Tagline System: How the Products Relate

PRODUCT	PRIMARY DIFFERENTIATOR	PREFERRED APPLICATION
LoadGuider®	Rigid core + stiff Polyex braid + spiral grip profile	General industrial and offshore; the standard PSC tagline
SafeGuider®	UV-resistant urethane-coated nylon casing over PP rope base	Outdoor and exposed conditions; UV and weather durability primary requirements
Guide-It® Safety Rigger	360-degree swivel; 12 mm kernmantle construction	Lifts where significant load rotation makes swivel functionality important
HSF LoadGrab Rigger TagLine	Fixed hook; 12 mm white kernmantle	General-use hook-attached option where swivel is not required

CHAPTER 12 · SECTOR APPLICATIONS

Sector Applications

The engineering requirements for tagline systems vary by operating sector. Offshore crane operations, steel and fabrication environments, construction and precast sites, and general industrial maintenance each present different combinations of load type, environmental condition and operational tempo.

CHAPTER PRINCIPLE

The correct tagline solution is determined by the combination of load type, operating environment and lift frequency — not by a single universal specification applied across all applications.

Offshore and Marine Operations

Offshore crane operations represent the most demanding tagline application environment. Load dynamics from vessel motion, continuous salt-spray exposure, and high-cycle operational tempo compound simultaneously. A tagline that requires pre-deployment straightening, that may tangle under salt-spray conditions, or that is difficult to inspect quickly between lifts becomes a source of delay and safety pressure.

LoadGuider® PSC-LGTC-30 to PSC-LGTC-45 may be considered for standard platform supply vessel transfers, subject to the lift plan assessment. SafeGuider® may be considered where outdoor UV exposure and weather durability are the primary requirements.

Steel and Fabrication Applications

Steel manufacturing and fabrication environments involve high-cycle overhead crane operations in relatively confined space, with loads including structural steel beams, coils, plates, bundles, machinery and fabricated modules. Steel plate lifts by crane magnet or lifting clamp present a specific rotation challenge as the plate's centre of gravity shifts from the stacked to the suspended position.



FIG 12.1. LoadGuider® tagline in use during a fabrication yard module lift. The fluorescent yellow tagline is traceable from the operator's position to the load attachment point. The operator is managing directional control at working distance while the module is elevated and being positioned.

LoadGuider® PSC-LGTC-15 to PSC-LGTC-25 may be considered for standard fabrication bay lifts, subject to the lift plan assessment. Guide-It® Safety Rigger may be considered where significant load rotation is anticipated and swivel functionality is the appropriate engineering response.

Construction and Precast

Structural steel erection requires precise load orientation — a single degree of rotation in a column translates to a significant misalignment at the base plate connections. Precast panels present large projected areas that generate significant wind loading in outdoor installation conditions. Two taglines — one at each vertical edge — are appropriate for large panel lifts in exposed conditions.

LoadGuider® PSC-LGTC-25 to PSC-LGTC-35 may be considered for structural steel erection. PSC-LGTC-30 to PSC-LGTC-45 may be considered for large precast panels in exposed outdoor conditions, subject to lift plan assessment.

CHAPTER 13 · SELECTION GUIDE

Tagline Selection Guide and Product Matrix

This chapter translates the engineering content of the preceding chapters into a structured selection framework — a decision-based guide for matching lift conditions to the appropriate PSC tagline solution.

CHAPTER PRINCIPLE

Product selection that bypasses the engineering criteria produces the wrong tagline in the wrong application. The selection sequence exists to prevent that.

The Four-Question Selection Process

- Question 1 — Is a tagline appropriate?** Apply Chapter 4 criteria. If the lift plan confirms a tagline is appropriate, proceed.
- Question 2 — What length is required?** Apply Chapter 8 selection principles. Select the shortest standard length that provides adequate working distance throughout the complete lift cycle.
- Question 3 — What are the specific demands of this environment?** Apply Chapter 12 sector guidance. Consider rotation tendency (swivel needed?), UV/weather exposure (SafeGuider® appropriate?), attachment geometry, and retrieval method.
- Question 4 — Which product?** Use the matrix below.

PRIMARY REQUIREMENT	RECOMMENDED PRODUCT
Anti-tangle performance is the priority	LoadGuider® — rigid core, stiff braid, spiral overwrap
Outdoor UV and weather durability	SafeGuider® — urethane-coated casing, UV-resistant by design
Full-length fluorescent-yellow visibility, structured handling	LoadGuider®
Rugged orange-and-yellow visibility with UV-resistant coating	SafeGuider®
Load rotation significant; swivel required	Guide-It® Safety Rigger — 360-degree swivel
Simple fixed-hook; general indoor use	HSF LoadGrab Rigger TagLine
Gloved handling support in wet and oily conditions	LoadGuider® — spiral overwrap geometry, field-confirmed performance



LoadGuider®

PSC-LGTC Series · 10–45 ft · 8 lengths

PSC flagship structured Polyex anti-tangle tagline

Rigid 6 mm core · Stiff 12 mm Polyex braid · 6 mm spiral overwrap · 23 kN carabiner · Fluorescent yellow throughout · ~18 mm profile



SafeGuider®

PSC-WEB-TLD Series · 10–45 ft · 8 lengths

Rugged UV-resistant coated tagline for outdoor conditions

18 mm PP rope base · Orange UV-resistant urethane-coated nylon casing · Yellow abrasion sleeve at load end · Self-locking scaffolding/rebar hook



Guide-It® Safety Rigger



HSF LoadGrab Rigger TagLine

Construction and Hardware Comparison

CHARACTERISTIC	LOADGUIDER®	SAFEGUIDER®	GUIDE-IT® SAFETY RIGGER	HSF LOADGRAB
Core	6 mm rigid Polyex	PP rope base (flexible)	Kernmantle kern	Kernmantle kern
Body / casing	12 mm stiff Polyex braid	Orange urethane-coated nylon casing	12 mm kernmantle sheath	12 mm kernmantle sheath
Grip element	6 mm external spiral overwrap	UV-resistant urethane coating	Kernmantle outer sheath	Kernmantle outer sheath
Colour	Fluorescent yellow throughout	Orange casing + yellow load-end sleeve	HV orange and yellow	White
Hardware	23 kN carabiner; twist-lock gate	Large self-locking scaffolding hook	360° swivel hook; ~50 mm gate; double-action latch	Fixed hook; ~50 mm gate; double-action latch
Swivel	No	No	Yes — 360 degrees	No
Available lengths	10–45 ft (8 lengths)	10–45 ft (8 lengths)	5–20 m (4 lengths)	5–30 m (6 lengths)

TABLE 13.2. PSC tagline construction and hardware comparison. Specifications as confirmed in the PSC Tagline Product Data Controlled Technical Master, August 2026. Verify current hardware ratings at pschandsafety.com before procurement.

CHAPTER 14 · INSPECTION AND RETIREMENT

Inspection, Identification and Retirement

A tagline is a safety-critical item in the lifting equipment inventory. Its fitness for service must be confirmed before each use. This chapter provides inspection criteria, retirement thresholds and identification requirements for all PSC tagline products.

CHAPTER PRINCIPLE

A tagline inspection is not a paperwork exercise. It is the point in the lift preparation sequence at which a serviceable tagline is confirmed and an unserviceable one is removed before it causes a hazard.

Pre-Use Inspection: The Four-Point Check

POINT 1 – ROPE CONDITION ALONG THE FULL WORKING LENGTH

Run the full length of the rope through gloved hands, feeling for and visually identifying:

- ◇ Cuts, nicks or deep abrasion through the outer braid or coating
- ◇ Crushing or severe flattening of the rope cross-section that does not recover when straightened
- ◇ **Core exposure** – visible inner core material at any point along the length
- ◇ Glazing – a hardened, shiny surface indicating heat damage
- ◇ Severe kinking – a sharp angular deformation that does not return to the rope's normal profile under tension

Minor surface fibre wear and light surface scuffing do not automatically require retirement. Remove from service when the inner core becomes exposed, the rope is deeply cut, or any structural distortion is identified.

POINT 2 – ATTACHMENT END: EYE, STITCHING AND HARDWARE

Inspect the spliced eye: stitching intact; eye retains shape; no core exposure at splice entry. Inspect the attachment hardware: gate closes and locks correctly; sleeve rotates to locked position (LoadGuider® carabiner); swivel rotates freely without binding (Guide-It® Safety Rigger); no visible deformation, cracking or severe corrosion.

POINT 3 – FULL-LENGTH VISIBILITY

Confirm that the high-visibility colour is maintained and clearly readable along the full working length. Significant fading or contamination masking that cannot be removed by cleaning should trigger assessment of whether the visibility function is compromised.

POINT 4 – OPERATOR END

For LoadGuider®, the operator end is a plain free end. Confirm the end is not frayed to a degree that creates loose fibres that could snag during handling.

Retirement Thresholds

REMOVE FROM SERVICE IMMEDIATELY

LoadGuider®: Inner core exposed; deep structural cut through braid; severe crushing not recovering; eye stitching broken; carabiner gate does not lock positively; carabiner deformed or cracked.

SafeGuider®: Anti-abrasion sleeve cut sufficiently to expose PP rope beneath; rope deeply cut or severely abraded; hook bent, cracked or severely corroded; hook latch fails to close positively.

Guide-It® Safety Rigger: Rope deeply cut, severely abraded, glazed or heat damaged; hook bent, cracked or severely corroded; latch fails to close; swivel seized or distorted preventing free rotation.

HSF LoadGrab: Rope deeply cut, severely abraded, glazed or heat damaged; hook bent, cracked or severely corroded; latch fails to close positively.

ASSESS AND DECIDE – NOT AUTOMATIC RETIREMENT

- Minor surface fibre wear on outer braid or kernmantle sheath
- Light surface scuffing on SafeGuider® urethane coating without loss of stiffness
- Minor cosmetic corrosion on hardware without structural damage
- Moderate fading of high-visibility colour – confirm visual identification remains adequate

CHAPTER 15 · SPECIFICATION AND PROCUREMENT

Specification, Procurement and the PSC Portfolio

This chapter provides controlled specification language for procurement documents, site lifting standards and contractor requirements; a complete part-number reference for all four PSC tagline products; and the invitation to engage PSC for application-specific support.

CHAPTER PRINCIPLE

A tagline specification that describes engineering characteristics produces consistent procurement results. One that describes only colour and length does not.

Controlled Specification Language

GENERAL ENGINEERING REQUIREMENT FOR INDUSTRIAL TAGLINES

Suspended loads requiring remote directional control shall be managed using a purpose-designed, high-visibility industrial tagline of appropriate construction and length. Improvised ropes, general-purpose utility rope, damaged lines and uncontrolled knots shall not be used as taglines. The tagline system shall permit personnel to maintain a position outside the load's fall zone, swing path and closing pinch zones throughout the complete lift cycle, including during tagline retrieval after load set-down.

LOADGUIDER® SPECIFIC SPECIFICATION

Purpose-designed high-visibility industrial tagline with a rigid Polyex core, stiff Polyex braided body and external spiral overwrap, intended to resist tangling and coiling and support positive gloved handling. Fluorescent high-visibility yellow throughout its full working length. Attachment end fitted with a spliced eye and a supplied rated carabiner (23 kN rated; 1.5-inch gate for lengths up to 25 ft; 2-inch gate for lengths of 30 ft and above). To be used only for suspended-load directional guidance and not as lifting gear or to arrest significant uncontrolled load movement. Part numbers: PSC-LGTC-[10/15/20/25/30/35/40/45] per required length.

SAFEGUIDER® SPECIFIC SPECIFICATION

High-visibility industrial tagline, 18 mm polypropylene rope base, approximately 6 ft yellow anti-abrasion sleeve at the load end, UV-resistant urethane-coated nylon casing over the remaining working length. Supplied with a self-locking scaffolding/rebar hook. To be used only for suspended-load directional guidance. Part numbers: PSC-WEB-TLD-[110/115/120/125/130/135/140/145] per required length.

GUIDE-IT® SAFETY RIGGER SPECIFIC SPECIFICATION

High-visibility 12 mm kernmantle suspended-load control tagline fitted with a heavy-duty galvanized scaffolding/rebar hook, approximately 50 mm gate opening, double-action safety latch and full 360-degree swivel. The swivel is designed to help reduce the transfer of load rotation into the tagline. Part numbers: PSC-GISRT-[05/10/15/20] per required length in metres.

HSF LOADGRAB RIGGER TAGLINE SPECIFIC SPECIFICATION

General suspended-load guidance tagline, 12 mm white kernmantle rope fitted with a heavy-duty galvanized fixed scaffolding/rebar hook, approximately 50 mm gate opening and double-action safety latch. Part numbers: HSF-LG-TL-[5/10/15/20/25/30] per required length in metres.

Site Rules: Ready-to-Copy Language

- 1

Suspended loads requiring remote directional control shall use a purpose-designed tagline supplied as part of the approved lifting equipment inventory. General-purpose rope, utility rope and improvised lines shall not be used as taglines.
- 2

The tagline shall be inspected before each use in accordance with the manufacturer's inspection criteria. Taglines failing inspection shall be removed from service and quarantined pending replacement or written manufacturer assessment.
- 3

The tagline shall be of a length that maintains the operator's working position outside the fall zone and swing path throughout the complete lift cycle, including during final approach and after load set-down.
- 4

The tagline shall never be wrapped around any part of the operator's body. The operator shall maintain immediate release capability throughout the lift. Structured taglines may be carried as broad, open loops in the operator's open hand — loops shall not be wound around the wrist or arm, and no limb shall be passed through a loop.
- 5

The tagline shall not be used to arrest significant load swing or rotation that exceeds the operator's ability to maintain stable footing and controlled handling. When such conditions arise, the lift shall be paused and reassessed.
- 6

The method of tagline retrieval after load set-down shall be specified in the lift plan. Personnel shall not enter the fall zone to retrieve a tagline while the load remains suspended on the hook.

Complete Part Number Reference

LOADGUIDER® — PSC-LGTC SERIES

LENGTH	PART NUMBER	GATE
10 ft	PSC-LGTC-10	1.5"
15 ft	PSC-LGTC-15	1.5"
20 ft	PSC-LGTC-20	1.5"
25 ft	PSC-LGTC-25	1.5"
30 ft	PSC-LGTC-30	2"
35 ft	PSC-LGTC-35	2"
40 ft	PSC-LGTC-40	2"
45 ft	PSC-LGTC-45	2"

SAFEGUIDER® — PSC-WEB-TLD SERIES

LENGTH	PART NUMBER
10 ft	PSC-WEB-TLD-110
15 ft	PSC-WEB-TLD-115
20 ft	PSC-WEB-TLD-120
25 ft	PSC-WEB-TLD-125
30 ft	PSC-WEB-TLD-130
35 ft	PSC-WEB-TLD-135
40 ft	PSC-WEB-TLD-140
45 ft	PSC-WEB-TLD-145

GUIDE-IT® SAFETY RIGGER — PSC-GISRT SERIES

LENGTH	PART NUMBER
5 m	PSC-GISRT-05
10 m	PSC-GISRT-10
15 m	PSC-GISRT-15
20 m	PSC-GISRT-20

HSF LOADGRAB RIGGER TAGLINE — HSF-LG-TL SERIES

LENGTH	PART NUMBER
5 m	HSF-LG-TL-5
10 m	HSF-LG-TL-10
15 m	HSF-LG-TL-15
20 m	HSF-LG-TL-20
25 m	HSF-LG-TL-25
30 m	HSF-LG-TL-30

QUICK REFERENCE

Tagline Selection Reference Card

For inclusion in the lifting equipment kit or site procedure appendix.

QUICK SELECTION GUIDE

Step 1 – Is a tagline appropriate?

Confirm in the lift plan that tagline use is appropriate. Consider snagging, entanglement and safe manual control limits.

Step 2 – What length is required?

Select the shortest length that maintains operator separation from fall zone, swing path and pinch zones throughout the complete lift cycle, including final approach and after set-down. Select the next longer standard length if the requirement falls between sizes.

Step 3 – Which product?

Anti-tangle; offshore or general industrial	LoadGuider®
Outdoor UV and weather durability	SafeGuider®
Swivel to reduce rotation transfer	Guide-It® Safety Rigger
Fixed hook; general indoor use	HSF LoadGrab Rigger TagLine

Step 4 – Inspect before use

Rope condition full length · Eye and stitching · Hardware locks positively · High-visibility colour readable

Step 5 – Maintain working distance

Attach before lifting · Stay outside fall zone and swing path · Never wrap around body parts or pass limbs through loops · Step back or carry open loops as load descends · Confirm retrieval method before the crane lifts

ENGINEERING BOUNDARY

Where Tagline Control Ends

A tagline manages the load from lift-off through descent to close approach. For most lifts, the tagline remains the appropriate control interface throughout. But there is a phase in specific lifts — the final positioning of the load onto a precise landing point — where the engineering requirements change.

In this phase, the load is close to its landing position. A flexible tagline, which can only pull and cannot push, is a less precise instrument than a rigid interface that transmits both push and pull force with direct positional feedback.

PSC's RiggerSafe® Load-It and related rigid load-positioning tools address this final positioning phase. They do not replace the tagline during the body of the lift. The lift plan should specify when the transition between tools occurs. For the full engineering treatment of final load positioning tools, refer to the *PSC RiggerSafe® Guidebook (First Edition · 2026)*.

APPLICATION SUPPORT

Technical Consultation

PSC operates as a technical partner in suspended-load safety — not only as a product supplier. For customers developing tagline specifications, revising lifting procedures, evaluating application requirements or planning equipment procurement, PSC provides direct technical consultation.

WE CAN HELP WITH	
Application assessment	Review of specific lift types and operating environments to confirm which PSC tagline product and length configuration best matches the requirement.
Specification support	Assistance developing site-specific tagline specifications for lifting procedures, contractor requirements and approved-product lists.
Site-standard development	Working with HSE managers and lifting engineers to develop tagline requirements suited to specific site operations and jurisdictional regulations.
Product demonstrations	Arranging product demonstrations or trials in your specific operating environment, where operationally appropriate.

CONTACT PSC

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LoadGuider® Anti-Tangle Tagline

Control the load. Keep people out of the line of fire.

PSC Hand Safety India Private Limited

sales@pschandsafety.com · www.pschandsfree.com

LoadGuider® · SafeGuider® · Guide-It® Safety Rigger · HSF LoadGrab Rigger TagLine

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