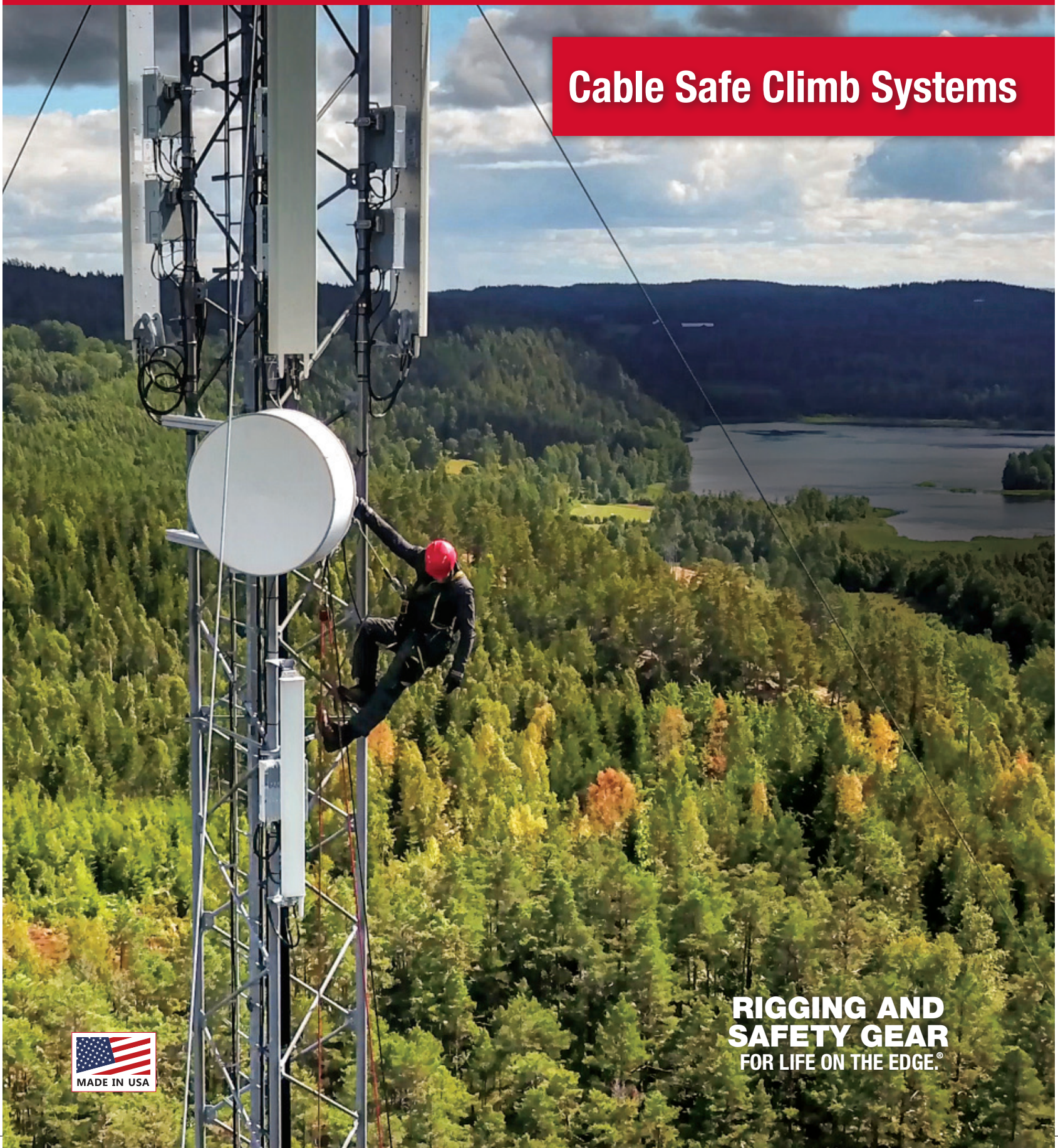


TUF-TUG
P R O D U C T S



TELECOMMUNICATIONS

Cable Safe Climb Systems



**RIGGING AND
SAFETY GEAR**
FOR LIFE ON THE EDGE.®



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General Information

About Us

Founded in 1987, Tuf-Tug is a premier global supplier of safety and rigging gear. As a market innovator trusted by industry leaders and end users, we are committed to climber safety and the secure rigging of valuable assets. As a customer-driven solutions provider, we earn credibility and establish successful relationships by exceeding expectations through unparalleled customer support, quality products and on-time delivery.

Headquartered in Dayton, Ohio, Tuf-Tug operates a state-of-the-art manufacturing facility with extensive capabilities that include full metal fabrication, testing and technical application engineering to design custom solutions and hardware for unique applications. Along with our custom design capabilities, Tuf-Tug offers the most extensive Safety Climb and Rigging Gear product offering in the industry.

Tuf-Tug products are ideal solutions that meet the demands of customers in a variety of industries. We look forward to the opportunity to be your premier supplier of rigging gear and Safety Climb systems.

Markets Served

Tuf-Tug products are trusted by industry leaders to provide safety and rigging gear for many different industries and markets.





Cable Safety Climb Systems

Product Overview

Cable Safety Climb Systems provide a vertical climbing safety solution that offers fall protection to technicians for a variety of accessed structures including ladders, tanks, towers and more. Cable Safety Climb Systems help ensure safe vertical climbing mobility and improved productivity without requiring climbers to disconnect from tie-off points along the climbing path. In the event of a fall, a fall arrestor automatically engages the vertical cable line

Tuf-Tug Safety Climb Systems are third-party tested to withstand stringent industry safety guidelines and are offered with many different features and options to assist in meeting specific application requirements such as corrosion-resistant materials, fall-protection gear and custom tie-off and cable guides.

Tuf-Tug offers the broadest Cable Safety Climb product offering in the industry. Supported by Engineers and Customer Service technicians with extensive experience designing and supplying standard and custom-designed solutions. Tuf-Tug employees are focused on safety, quality and complete customer satisfaction. Tuf-Tug offers Cable Safety Climb solutions to meet virtually any application and the ability to design and manufacture unique systems and hardware



The Tuf-Tug Cable Safe-Climb System Advantage

- Heavy-duty, all-steel construction
- Flexibly designed hardware offers simple system installation
- Double swaged fittings ensure 2x safety factor of cable attachment
- Sealed head assembly provides weather-tight fitting from harsh weather conditions
- Comprehensive product line with dozens of options offers a total safety-system solution
- Easy-to-adjust anchor eye bolt
- Adjustable cable hardware provides ease of tensioning
- High quality, made in USA construction
- Meets ANSI Z359.16 /OSHA, TIA 222 ladder safety requirements
- Serial numbered ID tag provided with system



Design Considerations

When designing your Tuf-Tug Cable Safety Climb System there are several factors to consider to ensure your design meets your application needs. Identifying and understanding your application requirements in advance of designing and ordering your system solution from Tuf-Tug will ensure proper field fitting and installation. Please consider and identify the following factors to design your Safety Climb system solution:

- A. Mounting Type:** Identifying the specific mounting application type that the system will be installed is the primary consideration for selecting the proper Safety Climb System. The mounting type refers to the specific tower design or structure type the Safety Climb system will be used on
- B. Service Use:** Tuf-Tug offers solutions for completed tower/structure installations.
- C. Obstructions:** Knowing any potential obstructions on the climbing path helps determine additional hardware fixtures that may need to be supplied with your system.
- D. Environmental Conditions:** Identified environmental, application, location and weather conditions are important considerations for designing your Safety Climb System. These factors will determine the proper materials selected. This may include: Off-shore applications, high humidity environments, etc.
- E. Measurements:**
The overall length of the Cable Safety Climb System is determined by the height of the structure and by taking into consideration obstructions and/or other limiting factors.
- F. Custom Requirements:** Tuf-Tug offers standard and custom Safety Climb System solutions. If your application requires unique or custom design considerations, please identify these requirements to your Tuf-Tug representative prior to order completion.



Universal Cable Kit



All kits include:

- 3/8" dia. wire rope assembly with 7x19 construction
- Sealed head assembly with impact attenuator
- Eyebolt connection with factory swaged fittings
- Provides minimum 5,000 lb. anchorage connection
- Interfaces with all Tuf-Tug mounting configurations
- Meets ANSI Z359.16, OSHA, TIA safety requirements
- Includes ID tag with Serial Number
- Universal cable guides supplied every 25 feet

Options include but not limited to:

- Galvanized head and wire rope
- Galvanized head and stainless steel wire rope
- 100% Stainless steel head and wire rope

What is a Universal Cable Kit?

A Universal Cable Kit is a configured set of components that are conveniently pre-packaged into assembled sets so that customers are not required to individually select all the necessary hardware components to configure a safe climb system. These sets assist in reducing our customers' time in configuring safe climb systems for quotations and assists by reducing lead times upon order acceptance. Simply select the proper cable length and material type with your Universal Cable Kit and your mounting type from the following pages to conveniently configure your desired safe climb system.

Universal Cable Kit Part Number

UCK — — —

Cable Length
(feet)

Material Type

- Blank** (Standard Galvanized)
- SSC** (Stainless Steel Wire Rope)
- 100SS** (All Stainless Steel Components)



UCK kits supplied with:

Cable Length (feet)	Cable Guide Count
100	3
125	4
150	5
175	6
200	7
250	9
300	11
350	13
400	15
500	19



Ladder Mount



- Heavy-duty, all-steel construction
- Supports multi-climber applications
- 3/8" diameter high strength 7x19 wire rope
- Flexible-designed hardware offers simple system installation
- Double swaged fittings ensure 2x safety factor of cable attachment
- Sealed head assembly provides weather-tight fitting with impact attenuator
- Meets ANSI Z359.16/OSHA, TIA 222 safety requirements
- Extra long uprights also available

Custom designed systems available upon request



Ladder System Part Number

TTCS — _____ — **L** — _____

Cable Length (feet) **Ladder** **Material Type**

Blank (Standard Galvanized)
 SSC (Stainless Steel Wire Rope)
 100SS (All Stainless Steel Components)

Climb face with optional diagonal clamp plate not shown

System Includes:

UCK Universal Cable Kit

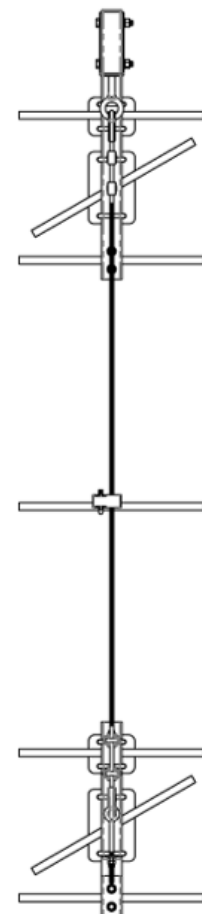
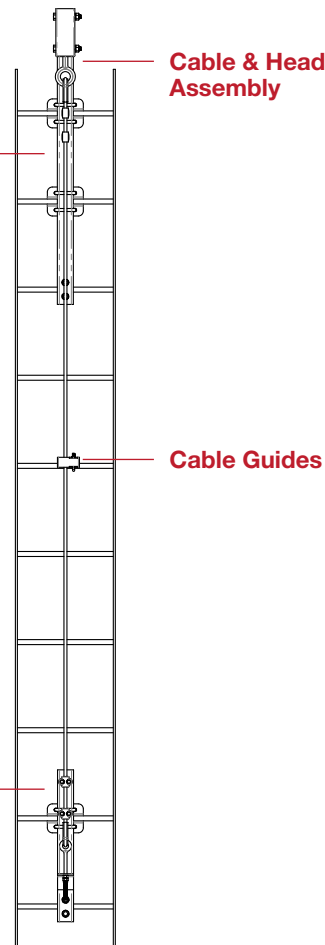
PLUS
 one of the following:

- LADDER-BP
ladder mount bracket pack
- LADDER-BP-STAINLESS
stainless steel ladder mount bracket pack
- XLLM-BP
extra long ladder mount bracket pack
- XLLM-BP-STAINLESS
stainless steel extra long bracket pack

Hardware INCLUDED

Heavy Duty Upright Mount Bracket
 P/N 115-114 (standard)
 OR 115-150 (extra long)

Base Anchor Bracket Assembly
 P/N 115-106/107 (standard)
 OR 115-151 (extra long)





Monopole



- Easily mounts to different pole designs
- Head extensions available for obstruction avoidance
- Standard systems in stock
- Many options available for OEM pole designs
- Meets ANSI Z359.16 /OSHA,TIA 222 safety requirements

Custom designed systems available upon request



Monopole System Part Number

TTCSCS — _____ — **MP** — _____

Cable Length
(feet)

Monopole

Material Type

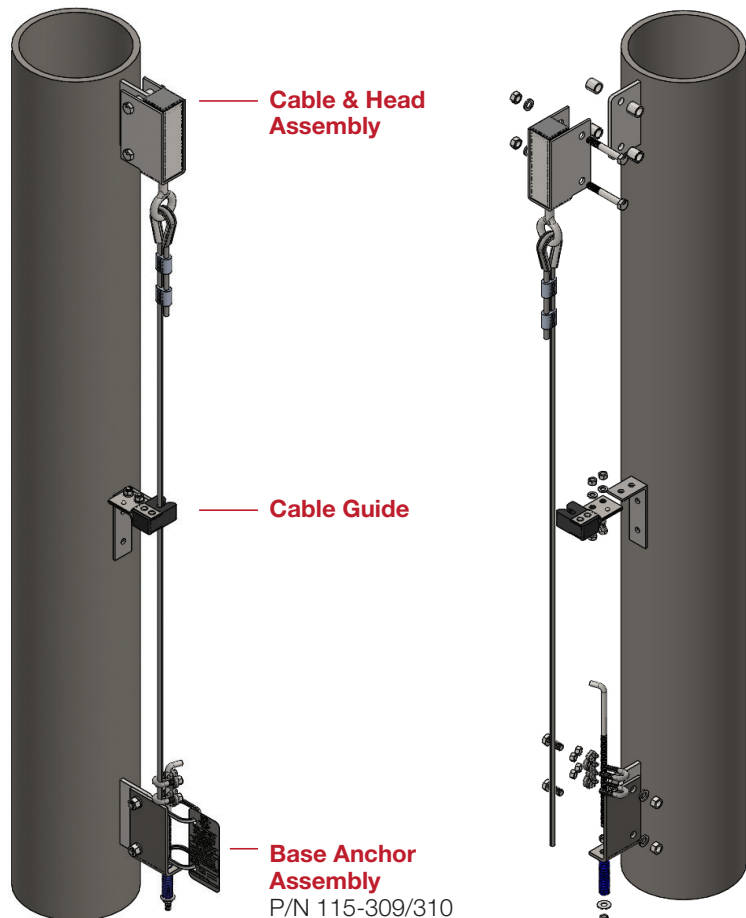
- Blank** (Standard Galvanized)
- SSC** (Stainless Steel Wire Rope)
- 100SS** (All Stainless Steel Components)

System Includes:

UCK Universal Cable Kit

PLUS
one of the following:

- **MONOPOLE-BP**
monopole mount bracket pack
- **MONOPOLE-BP-STAINLESS**
stainless steel monopole bracket pack



Cable & Head Assembly

Cable Guide

Base Anchor Assembly
P/N 115-309/310

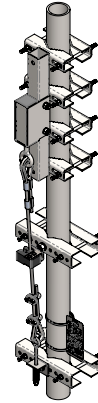


Round Climbing Leg



- Flexible design system fits multiple sizes
- Head adapter fits 1-1/2" - 5" round legs and 5" to 10"
- Special oversized leg adapters available
- Meets ANSI/OSHA, TIA 222 safety requirements

Custom designed systems available upon request



Round System Part Number

TTCS	—	_____	—	RCL	—	_____
		Cable Length (feet)		Round Climbing Leg		Material Type
						Blank (Standard Galvanized) SSC (Stainless Steel Wire Rope) 100SS (All Stainless Steel Components)

System Includes:

UCK Universal Cable Kit

PLUS
one of the following:

- RCL-BP
round climb leg bracket pack
- RCL-BP-STAINLESS
stainless steel round climb leg bracket pack
- XLRCL-BP
extra large round climb leg bracket pack

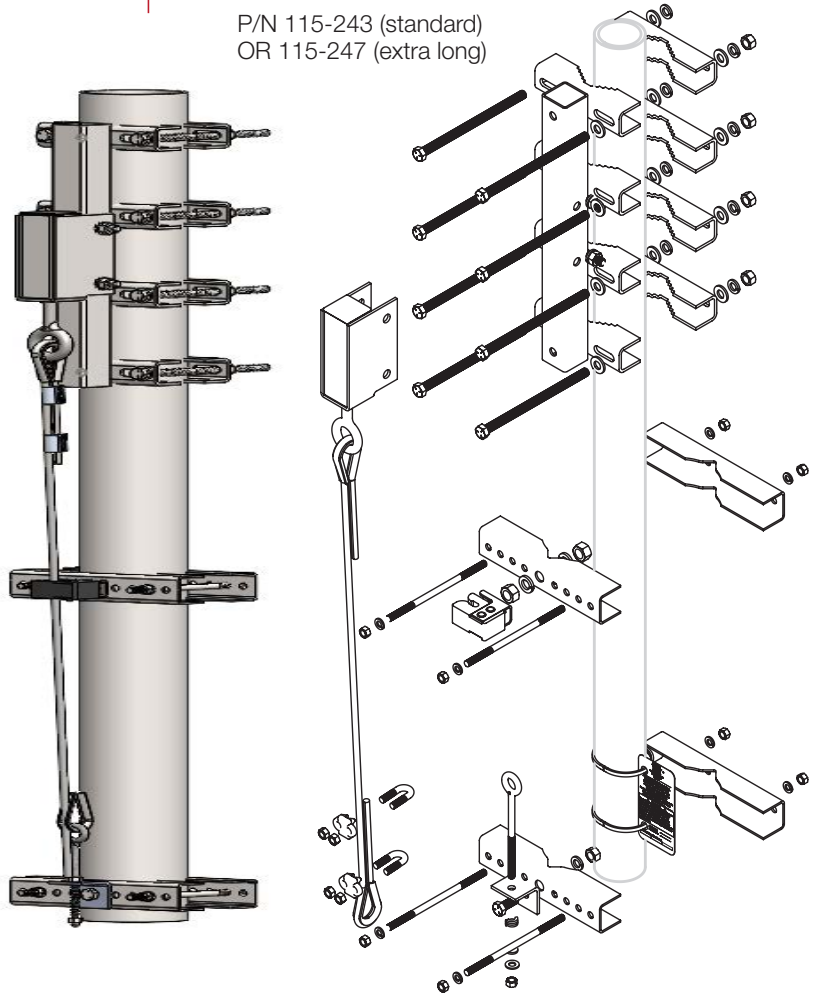
Hardware INCLUDED

Cable & Head Assembly

Optional Universal Leg Channel And Cable Guide Assembly
P/N 120-203 with 115-317

Universal Leg Channel And Base Anchor Assembly

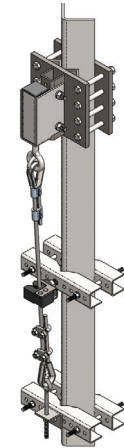
Universal Round Leg Head Adaptor
P/N 115-243 (standard)
OR 115-247 (extra long)



Universal Angle Climbing Leg



- Available to fit 2" to 4" Small Angle Climb Leg
 - Universal for 60° and 90° Angle Leg
 - Meets ANSI Z359.16/OSHA, TIA 222 safety requirements
- Custom designed systems available upon request*



Universal Angle Climbing Leg System Part Number

TTCS — _____ — **U-AICL-BP** — _____

Cable Length
(feet)

Climber

Material Type

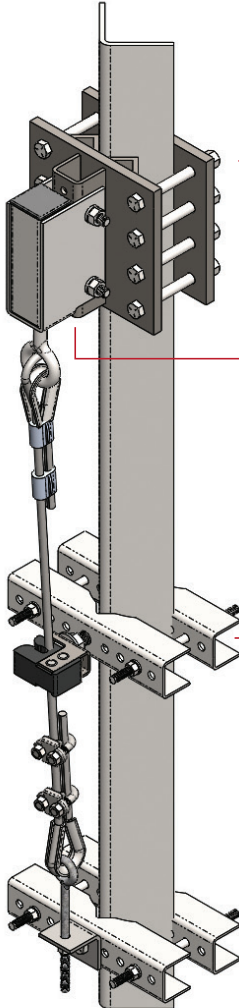
Blank (Standard Galvanized)
SSC (Stainless Steel Wire Rope)

System Includes:

UCK Universal Cable Kit

PLUS the following:

- AICLU-BP universal angle iron climb leg bracket pack

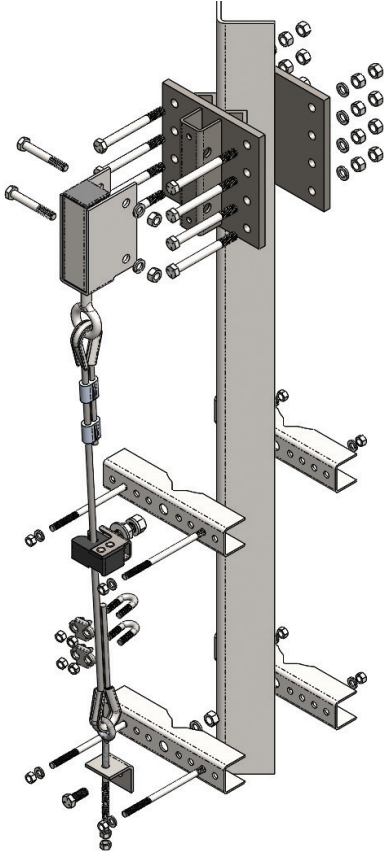


2-4" Small Angle Iron Head Adaptor Bracket
P/N 115-148

Cable & Head Assembly

Optional Universal Angle Leg Adaptor Channels With Cable Guide
P/N 120-205 with 115-317

Universal Angle Leg Adaptor With Base Anchor Assembly
P/N 120-205 with 115-107



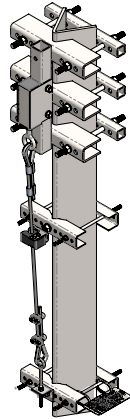


Angle Climbing Leg - Large



- Universal 90° angle leg head adaptor bracket with fasteners for 4" to 8" legs
- Universal 60° angle leg adaptor bracket with fasteners for leg sizes up to 6"
- Available in 60° and 90°
- Meets ANSI Z359.16/OSHA,TIA 222 safety requirements

Custom designed systems available upon request



Angle Climbing Leg System Part Number

TTCS — _____ — **AI/CL (90 or 60)** — _____

Cable Length
(feet)

Climber

Material Type

Blank (Standard Galvanized)
SSC (Stainless Steel Wire Rope)

System Includes:

UCK Universal Cable Kit

PLUS
one of the following:

- AICL60-BP
60 degree large angle iron climb leg bracket pack
- AICL90-BP
90 degree large angle iron climb leg bracket pack



Angle Iron Head Adaptor Bracket

P/N 120-214

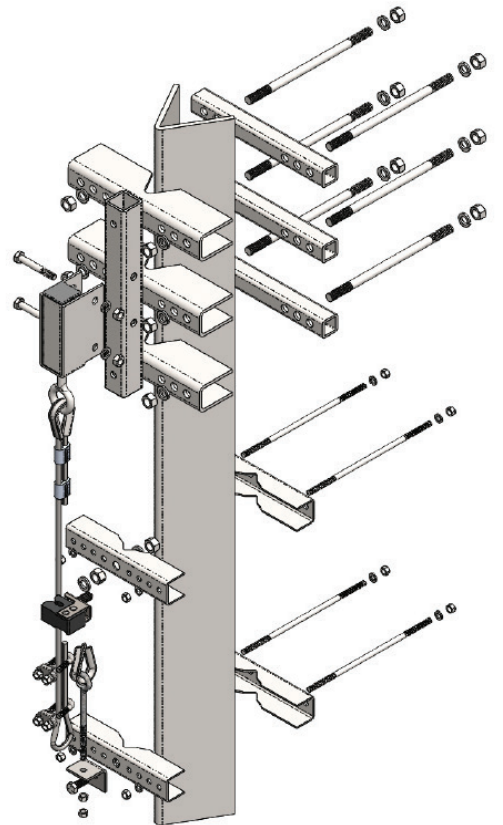
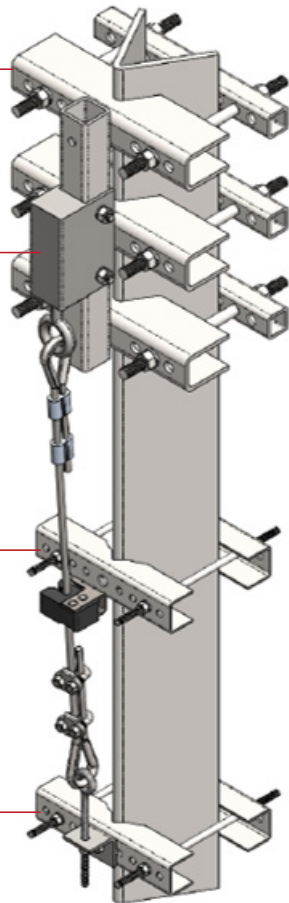
Cable & Head Assembly

Optional Universal Angle Leg Adaptor Channels With Cable Guide

P/N 120-205 with 115-317

Universal Angle Leg Adaptor With Base Anchor Assembly

P/N 120-205 with 115-107



Lightweight Tower



- Systems designed for round and angle legs
- Custom systems available up to 48" face width
- Information required with request: Leg Type, Leg Size, Face Width
- Meets ANSI Z359.16/OSHA,TIA 222 safety requirements

Custom designed systems available upon request



Lightweight Tower System Part Number

TTCS — _____ — **LWT** — _____

Cable Length (feet)	Lightweight tower type	Tower Type	Material Type
		25G	Blank (Standard Galvanized)
		45/55G	SSC (Stainless Steel Wire Rope)
		65G	
		Sabre 12	
		Sabre 18	
		48B (other)	

System Includes:

Cable and head assembly

Cable guide suited for application

PLUS one of the following bracket packs per tower type:

- 115-232-25G
- 115-232-45/55G
- 115-232-65G
- 115-232-12
- 115-232-18
- 115-232-48B



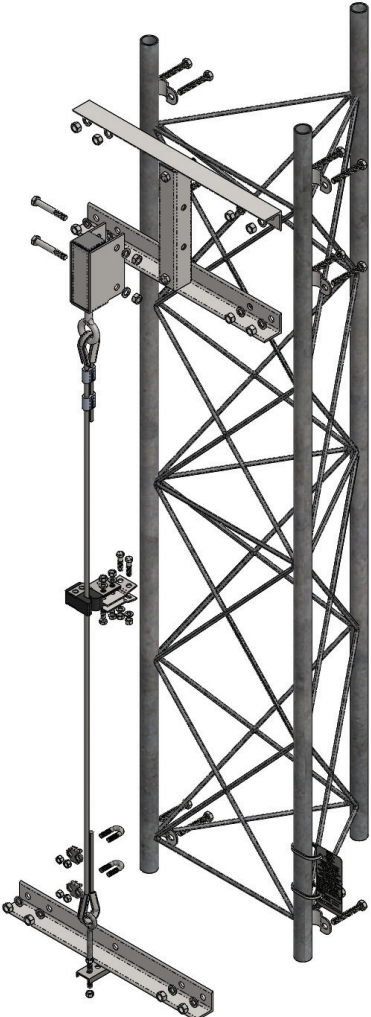
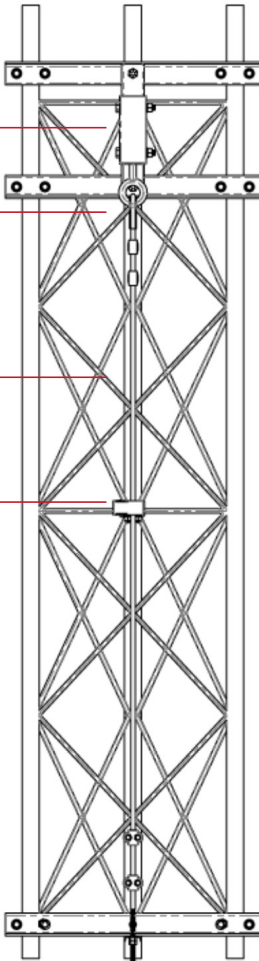
Cable & Head Assembly

Head Adaptor Bracket
P/N 115-232

Optional Cable Guide Adaptor
P/N 115-325

Cable Guide

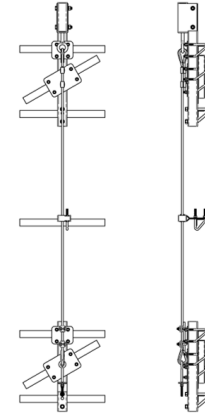
Base Anchor Adaptor Bracket with Tension Adjustment
P/N 115-233



Angle Iron Climb Face



- 1-1/2" and 2" angle iron kits available
- Meets ANSI Z359.16/OSHA, TIA 222 safety requirements
- *Custom designed systems available upon request*



Angle Climbing Face System Part Number

TTCS

Cable Length (feet)	Climb Face Angle	Material Type
	1.5 inches	Blank (Standard Galvanized)
	2 inches	SSC (Stainless Steel Wire Rope)

System Includes:

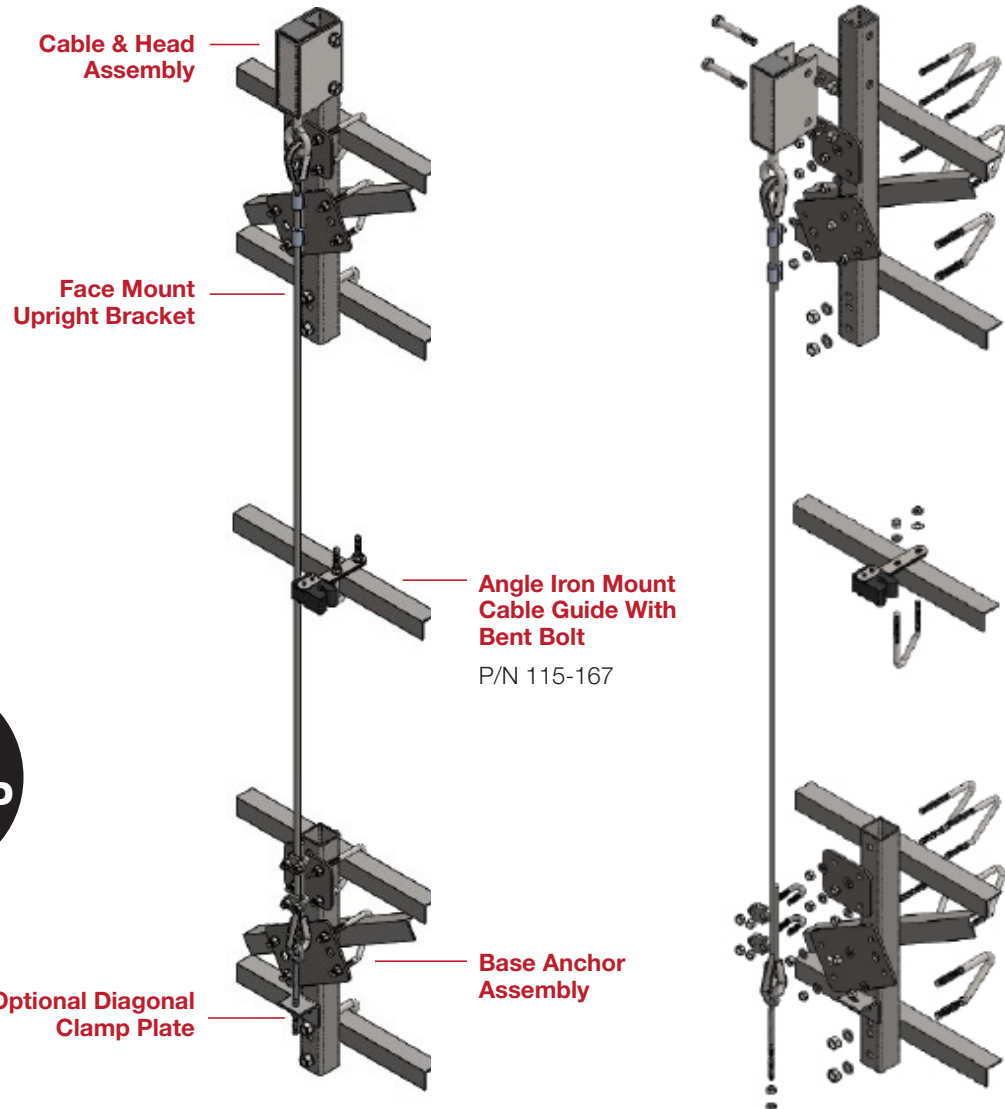
Cable and head assembly

Cable guide suited for application

PLUS
one of the following:

- AICF1.5-BP
1-1/2" angle iron climb face bracket pack
- AICF2-BP
2" angle iron climb face bracket pack

Hardware INCLUDED

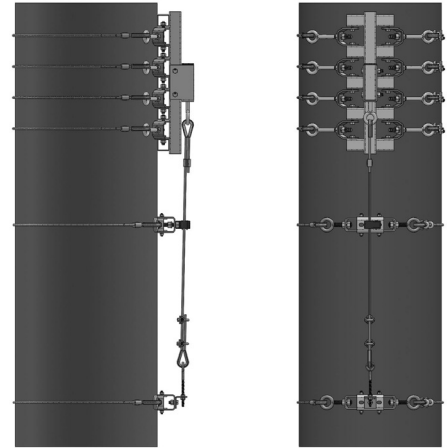


Universal Pole Mount



- Designed for field retrofit applications on tapered poles where the safe climb anchorage does not exist
- For poles 12 – 36 Inches in Diameter, 37 – 113 Inches Circumference
- Designed to provide a 5000 lb. anchorage for cable safe climb anchor attachment when installed
- Meets ANSI Z359.16/OSHA, TIA 222 safety requirements

Custom designed systems available upon request



Universal Pole System Part Number

TTCCS	—	_____	—	UPMCO	—	_____
		Cable Length (feet)		Universal Pole Mount		Material Type
						Blank (Standard Galvanized) SSC (Stainless Steel Wire Rope)

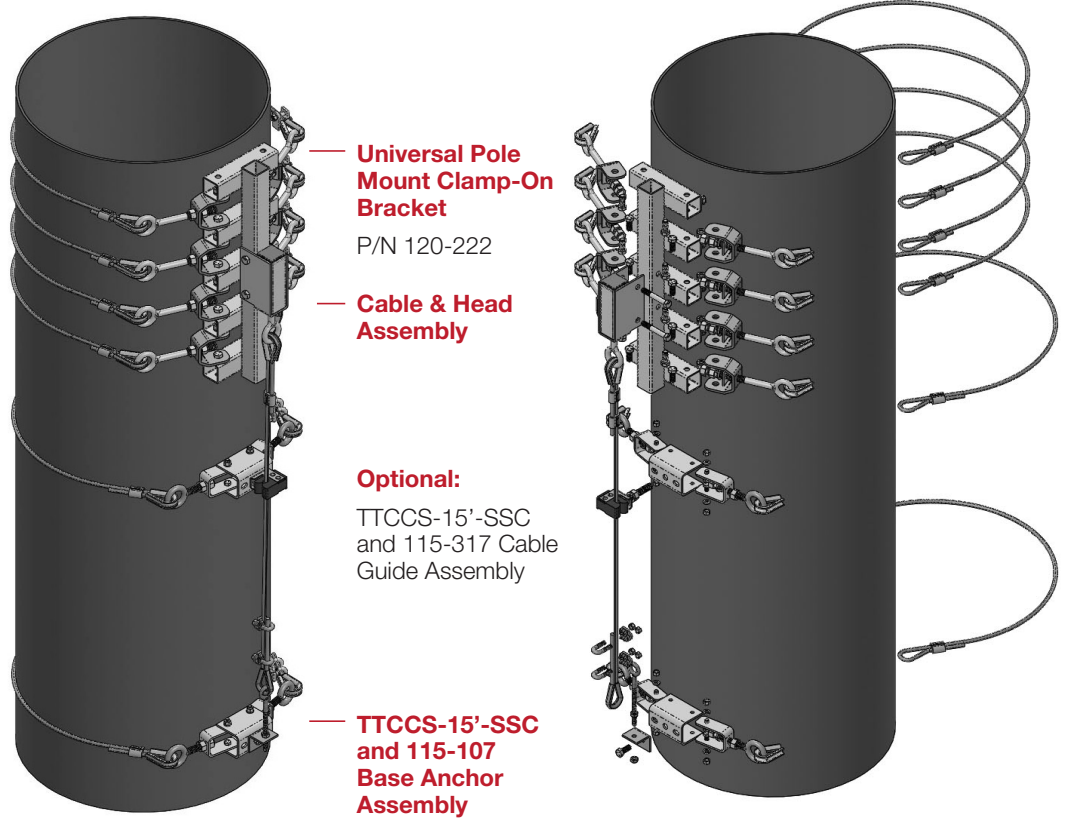
System Includes:

UCK Universal Cable Kit

PLUS the following:

- UPMCO-BP universal pole mount clamp on bracket pack

Hardware INCLUDED





Wood Pole



- Designed for wood poles from 10" to 16" in diameter
- Meets ANSI Z359.16/OSHA, TIA 222 safety requirements

Custom designed systems available upon request



Wood Pole System Part Number

TTCSCS — _____ — **WP** — _____

Cable Length
(feet)

Wood Pole

Material Type
Blank (Standard Galvanized)
SSC (Stainless Steel Wire Rope)

System Includes:

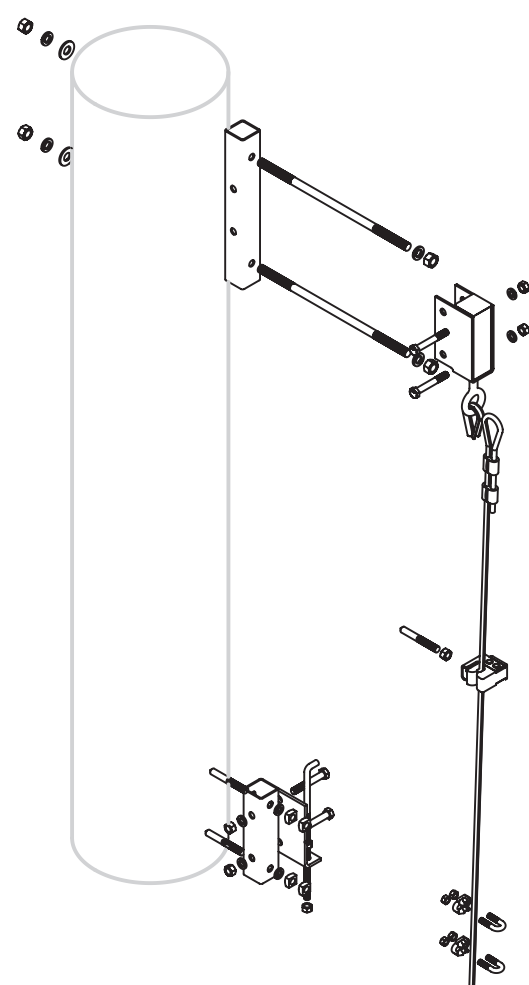
UCK Universal Cable Kit

PLUS the following:

- WOODP-BP wood pole mount bracket

Hardware INCLUDED

- Upright Mount** — P/N 115-320
- Cable & Head Assembly** —
- Cable Guide** —
- Base Anchor Assembly** — P/N 115-309/310
- Base Anchor Tube** — P/N 115-322



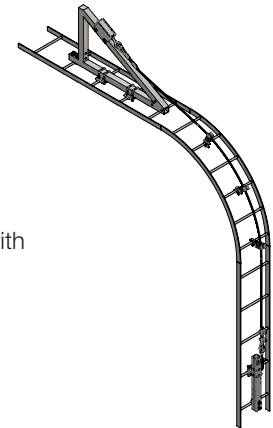


Water Tower



- Continuous climb from base to top
- Designed to match curved structure
- Systems for interior & exterior of tower
- Recommend Tuf-Tug 3/8" wire grab fall arrestor tested to ANSI Z359.16 functions to angles up to 45 degrees (included upon request)
- Meets ANSI Z359.16/OSHA, TIA 222 safety requirements
- Extra heavy duty 2" square steel tube supports with 5,000 lb. load rating up to four multiple users simultaneously

Custom designed systems available upon request

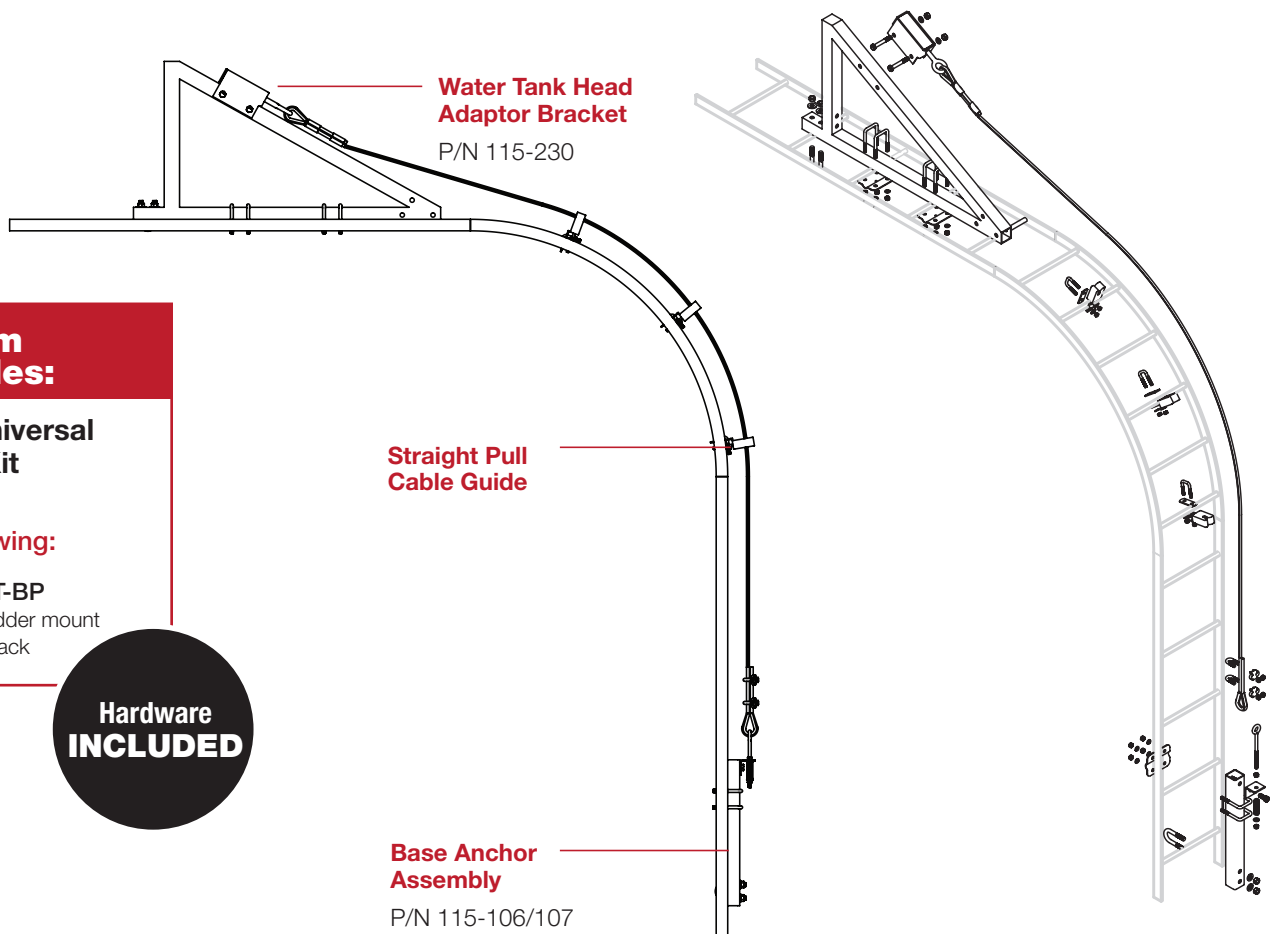


Water Tower System Part Number

TTCS — _____ — **WT** — _____

Cable Length (feet) **Water Tower** **Material Type**

Blank (Standard Galvanized)
SSC (Stainless Steel Wire Rope)



System Includes:

UCK Universal Cable Kit

PLUS the following:

- WATERT-BP curved ladder mount bracket pack

Hardware INCLUDED



Special Attachments



FWT Monopole Bracket Pack Cable Safe Climb System for Horizontal Mount

- Installation includes 2" x 2" head adaptor.
- Complete with 115-349 base anchor as required and monopole base anchor components (not included in kit).
- Includes mounting hardware

Special Attachment Part Number

FWTMP — BP

Kit includes:

- (1) Top bracket
- (1) Base bracket
- (2) ½" head bolts and fasteners
- (2) ½" bolts and fasteners for base
- (4) 5/8" mounting bolts and fasteners



115-343 - Top Attachment



115-349 - Bottom Attachment

Rohn Monopole Bracket Pack Cable Safe Climb System Head Adaptor for Top Attachments on Horizontal Mounts

- Installation can be attached with 2" x 2" head adaptor up as shown.
- Includes mounting hardware

Special Attachment Part Number

ROHNMP — BP

Kit includes:

- (1) Top attachment bracket
- (2) ½" head bolts and fasteners
- (4) ½" mounting bolts and fasteners



115-344



Fixed Rail Systems

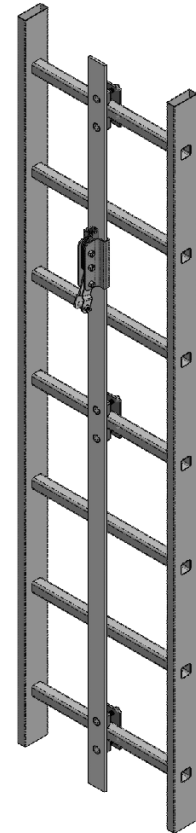


- Dependable Fall Protection
- Quoted upon request
- Designed for Ladders with 12" rung spacing standard
- Specify ladder size with rung type and spacing upon request
- Meets ANSI Z359.16 /OSHA safety requirements

Custom designed systems available upon request

Fixed Rail Systems Part Number

TTFRSCS — _____ **L**
 Ladder Height
 (feet)



FIXED-RAIL FALL ARRESTOR

- Meets ANSI Z359.16
- Removable at Base
- Automatic Hands-Free Climbing



**Safety Sleeve
 INCLUDED**

TTFRFA





Cable Guides



- Ladder Mount**
Model # 115-203
- Fits rungs up to 1"
 - Stainless steel option available



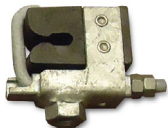
- Bent Bolt**
Model # 115-167
- 1-1/2" and 2" available
 - Angle iron applications



- Locking Ladder Mount**
Model # 115-242
- Locks cable to prevent damage to cable and climb structure



- Stud Mount**
Model # 115-317
- Several lengths available (3", 4", and 6")
 - Used in conjunction with many clamp channels for obstruction avoidance



- Locking Stud Mount**
Model # 115-334
- Locks cable to prevent damage to cable and climb structure



- Monopole**
Model # 115-303
- Bolt on application
 - Adaptor available for lightweight tower applications



- Cable Guide Extension**
Model # 115-135
- Extension for obstruction avoidance



- Universal Cable Guide Kit**
Model # 115-556



Obstruction Avoidance



Angle Clip Stand Off Assembly
Model # 120-123/115-317

- Angle clip stand-off cable guide assembly is intended to protect wire rope on safe climb system from rubbing against sharp edges of mounts.
- Tie-back included to secure the assembly to structure.



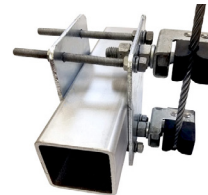
Angle Leg Cable Guide Assembly
Model # 120-205/115-317

- Designed to protect cable safe climb system from wearing against sector frames positioned in the climb path.
- Keeps cable safe for years of prolonged use.



Universal Round Leg Channel Mount Cable Guide Assembly
Standard Part # 120-203/115-317

- Fits round climb legs from 1-1/2" to 8".
- Designed to protect cable safe climb system from sharp edges of obstructions.



T-Boom/Mount Arm Stand Off Assembly
Standard Part # 115-352

- Designed to protect cable safe climb system from wearing against sector frames positioned in the climb path.
- Keeps cable safe for years of prolonged use.
- Adjustable from 2" to 4" square tube.



Stiff Arm Tie Back Cable Guide
Model # 115-359

- Designed to protect cable safe climb system from wearing against sector frames positioned in the climb path.
- Keeps cable safe for years of prolonged use.
- Adjustable from 1 1/2" to 5" pipe.



Blind Bolt Head Assembly Bracket

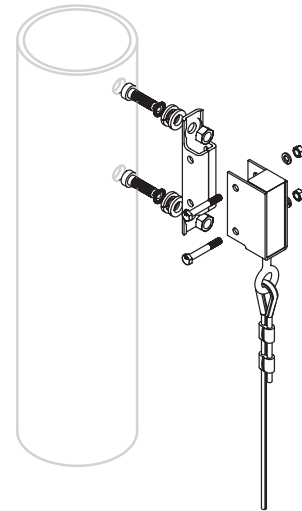


Monopole Cable Safe-Climb Head Adapter Retrofit Bracket with Blind Bolt Attachment

Standard Part # 115-175-BB

Extended Part # 115-356-BB

- Includes all the components required for monopole configurations of common tower heights
- This installation comes with two NEXGEN 2 blind bolts



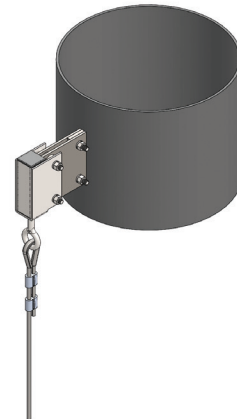
Head Extension Brackets



Monopole Head Extension Bracket

Model # 115-345

- Provide Fall Protection at a total of 9 inches clearance off the face of the pole to the center line of safe climb.
- Tested to 5000 lbs.
- Provide an engineered connection for (2) person simultaneous safe climb use with a TUF-TUG System.

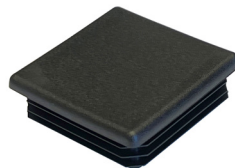


Additional Items



3rd pt attachment

Model # 115-UTPAK



Replacement Cap

Model # 115-127



Attenuator Replacement Kit



If the TUF_TUG System has been deployed, install the Attenuator Replacement Kit per the manufacturer's instructions

Model # TTARK

For qualified installations only




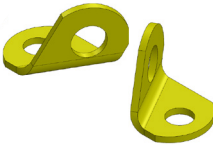
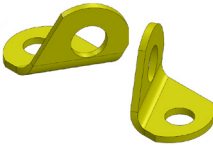


Tie-Off Anchor Brackets



Features

- 5000 lb single user (10,000 lb 2-person) load rating meets OSHA/ANSI Z359.18 anchorage requirements
- Single user weight rated @ 310 lbs.
- Available in corrosion resistant stainless steel construction or e-coat steel with safety yellow inish.
- Available with blind bolt fastening hardware
- Available with hot-dipped e-coat and painted to meet 720 hours of salt spray testing
- Easy and quick to install

Model #	Material	Finish	Mounting Hole Size	Safety Clip Hole Size	Hole Spacing	1 or 2 Person	Load Rating (Lbs.)
30° Angle							
 115-670Y	Steel	e-coat & Yellow	.75"	1.75"	–	2	10,000
 115-270-30Y	SS	Yellow	.75"	1.41"	–	1	5,000
45° Angle							
 115-154-45Y	SS	Yellow	.75"	.938"	–	1	5,000
90° Angle							
 115-154-90Y-SET **	SS	Yellow	.75"	.938"	–	1	5,000
 115-270-90Y-SET **	SS	Yellow	.75"	1.41"	–	1	5,000

* Blind Bolt Supplied
 ** Sold as a set of 2 pieces

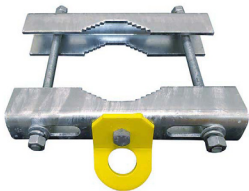
All Tie-Off Anchors are Certified by third party to meet the following standards:
 ANSI Z359.18, OSHA



Tie-Off Anchor Brackets



continued



For Fall Protection Safety On Round Legs

Model # 120-305

Universal 6 to 10 Inch Diameter Round Leg

Model # 400-103

Universal 1-1/2 to 5 Inch Diameter Round Leg

- 5000 lb load rated
- Meets ANSI/OSHA Requirements
- Easy field installation



For Fall Protection Safety On Angle Legs

Model # 120-304

Universal 4 to 8 Inch or 4 to 6 Inch Angle Leg

- 5000 lb load rated
- Meets ANSI/OSHA Requirements



TT4/6 AMTOA



Transition Tie-Off Anchor Bracket Cable Safe-Climb

Model # 115-378-90

- Load Rated to 10,000 lbs.
- Extra large hole for ladder hook attachment
- High Strength Steel with e-coat and yellow powder coat paint
- Meets ANSI, OSHA and EU (wind) PPE anchorage requirements
- Optional hex bolt attachment available



Maintenance Tie-off

Model # HALO-40

- Fits Pole Diameters from 12" to 40"
- Provides up to (3) tie off anchor points for 360 access safety on poles
- Load rated to OSHA/ANSI standards



Step Bolt Climber



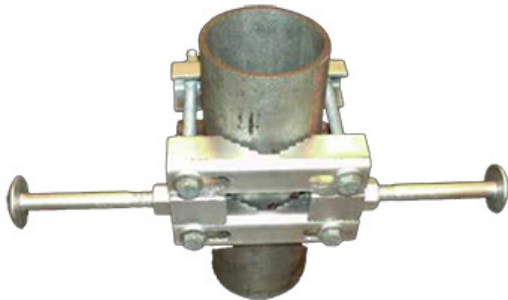
Step Bolt Climber and Cable Safe-Climb System

- Provides safe access on towers without climb facilities
- Step bolt climber retrofit packages available for round legs, angle legs and poles
- 100% Fall protection provided with cable safe climb system



Round climb leg install

Replacement Steps



Fits members 1-1/2" to 5" in diameter

Model # 115-178

- Universal design for round leg installation
- Tested to TIA 222 H
- Load rated for one person at 310 lbs. maximum
- Solid steel construction
- Hot-dip galvanize finish



Fits members from 5" to 10" in diameter

Model # 115-263

- Universal design for extra round leg installations
- Tested to TIA 222 H
- Load rated for one person at 310 lbs. maximum
- Solid steel construction
- Hot-dip galvanize finish



Fall Arrestor



Wire Grab Fall Arrestor with Self Aligning Swivel

Model # TTWG-500-BSEN

- For vertical fall arrest protection
- Features dual cams for double safety
- For use with 3/8" diameter Wire Rope cable
- Automatically travels with user
- Conforms to OSHA, ANSI Z359.16, CSA Z259.2.5, EN 353-1:2014+A1:2017 Safety Standards





Online Training



Safety Training for Climbers and Installation Technicians

TUF-TUG offers on-line training and safe climb certification to climbers and technicians. The training is developed using Personal Computer Simulation (PCS) that provides many practical and theoretical advantages over traditional training methods for a wide range of potential situations. Training Modules include telecom tower fall protection cable safe climb systems for the following installation:

- Ladder Mount
- Pole Mount
- Round Climb Leg
- Angle Climb Leg
- Lightweight Tower

Features

- Animated, PC based simulation training provides realistic consequence and decision-based learning.
- Authorized certifications provided immediately upon completion.
- TUF-TUG training management of climber certifications with automated reminders for recertification.
- Approved and accepted by major OEM's, tower manufacturers, owners and contractors.
- Complete Course at your convenience with a PC and internet connection. Anytime/anywhere – no travel required.



Training curriculum includes:

- Cable Safe Climb System & Wire Grab Fall Arresters
- System Anatomy
- Maintenance/Repair
- Safety Compliance
- Installation
- Inspection
- Use / Troubleshooting

For More Information or to Acquire Training Access:

visit
<https://tuf-tug.com/training/>

or call

937.299.1213



Maintenance Checklist



Equipment users must be fully trained as a competent climber and conversant with all regulatory requirements applicable to the workplace in which the fall protection equipment is to be used. If in doubt, contact your local OSHA office for clarification. These instructions are not a substitute for a formal climbing and Fall Protection Training program. Such training should include information about local circumstances, rules and regulations applicable to the work situation, a hands-on opportunity to learn how to wear and attach equipment properly, instructions about adequate anchor points and proper techniques for securing and connecting lanyards, drop lines or lifelines, and guidance and demonstration on how to inspect and maintain the equipment.

SYSTEM REQUIREMENTS:

Tuf-Tug Safety Climb Cable and Head Assembly Kit are designed to meet the performance requirements of OSHA/ANSI for personal fall arrest on permanent climb facilities. It utilizes a 3/8" wire rope with factory swaged sleeves to provide an anchorage capable of maintaining a min. 5,000 lb. tensile load. An impact attenuator is incorporated in the head anchor to help dampen any extreme shock loads that may occur as a result of a fall. Cable stand offs are provided for every 25 ft. with Tuf-Tug kits to stabilize and maintain the cable in a good operable condition. Base anchor attachment is required to maintain system tension load from 220 lbf. – 420 lbf.

NOTE: This cable safety climb system is intended to be used as part of a complete personal fall protection system. All components, subsystems and connectors should be compatible and meet the appropriate ANSI/OSHA requirements for the intended application. Substandard or non-approved components could compromise the reliability of the system and jeopardize the safety of the user. **USE ONLY TUF-TUG SUPPLIED OEM COMPONENTS TO ASSEMBLE THE COMPLETE CABLE SAFE CLIMB SYSTEM. DO NOT ATTACH TO OTHER MANUFACTURER'S, NON-APPROVED SAFE CLIMB MOUNT BRACKETS TO TUF-TUG CABLE AND HEAD ASSEMBLY. ALTERING SYSTEM DESIGN WILL VOID ALL CLAIMS AND WARRANTY.** The Tuf-Tug wire rope grab (TTWG-500-BSEN) and climbers/positioning full body harness (TTFBH-C/P), should be used in conjunction with the cable safety climb system to assure maximum reliability.

SAFE CLIMB SYSTEM LOADING:

Factored Live Loads +75 lb. average Tuf-Tug system weight = minimum top anchorage load calculations. For 2- 4 climbers per OSHA/ANSI, TIA are as follows:

- (2) Person factored live loads = 3,240 lbs.
- (3) Person factored live loads = 3,705 lbs.
- (4) Person factored live loads = 4,170 lbs.

Use

KNOW YOUR WORKPLACE:

Assess the workplace for hazards such as heat, flames, chemical, electrical, environmental, sharp objects, moving equipment, unstable/uneven or slippery surfaces. Identify the potential hazards and plan for the installation to avoid dangerous paths, obstructions and zones.

Have an emergency rescue/contingency plan in place in the event that an accident may occur per rescue/retrieval section.



Inspection



WARNING: USE ONLY TUF-TUG SUPPLIED OEM COMPONENTS TO ASSEMBLE THE COMPLETE CABLE SAFE CLIMB SYSTEM. DO NOT ATTACH TO OTHER MANUFACTURER'S, NON-APPROVED SAFE CLIMB MOUNT BRACKETS TO TUF-TUG CABLE AND HEAD ASSEMBLY. ALTERING SYSTEM DESIGN WILL VOID ALL CLAIMS AND WARRANTY.

Before Each Use:

Reference specific installation application for the climb facility in question. Inspect installation for obvious miscues from the ground. Points of caution may include one or more of the following: excessive corrosion, loose cable, loose brackets, over tensioned system/deployed eye bolt, etc. If any of these items are encountered and cannot be remedied, climb with extreme caution. A secondary fall protection system may be warranted until the issue can be identified, classified and/or corrected. Also, be aware of the current environmental hazards that these elements represent and plan for a safe climb accordingly with approved JHA/JSA documentation.

Use:

Cable safety climb system should be used in accordance with the PPE inspection outlined with the TTWG-500-BSEN Wire Rope Grab instructions that are supplied with specific bracket pack installation information. A climb log of the system's use should be kept per the specific climb facility's installation.

If the system arrests a fall, it should be removed from service and replaced to assure maximum reliability. If this is not immediately feasible, a qualified person/climber can make an assessment to the damage and provide short term recommendations/remediation.

Inspection:

Inspect system before each use for corrosion, wear, damage and/or defects during each climb. Record findings per the climb log. If system shows signs of any hazards, contact owners for corrective action immediately. It is recommended an annual or regular scheduled inspection should be made of the Cable Safety Climb System along with the supporting structure to assure its functionality.

WARNING: All users of fall protection equipment must be in good health, must not have a medical history of conditions that could be aggravated by a fall, must be mentally fit and must not be under the influence of alcohol or drugs. Inattention to these factors could cause falls, serious injury or death.

WARNING: Any component which has arrested a fall should be removed from service and replaced.

WARNING: Never alter or use a Safety Climb System that has been altered – the potential malfunctions could result in serious injury.

WARNING: Do not attempt to repair damaged equipment. Remove from service and replace.

WARNING: Discard equipment if there is any evidence of excessive wear, damage or malfunction.

ALWAYS BE CAREFUL! Your Safety is important to us. If a situation is questionable, consult a qualified professional for proper procedures or reference appropriate specification



Code Compliance



TUF-TUG Cable Safe Climb System & Wire Grab Fall Arrestor Certificate of Compliance

Please note that the TUF-TUG Cable Safe Climb System and Wire Grab Fall Arrestor meet the following Fall Protection Safety Standards:

USDOL OSHA: 1926.502 “M” – “Fall Protection Systems”

USDOL OSHA: 1910.27 – “Fall Arrest Systems”

USDOL OSHA: 1926.1053 – “Fixed Ladder Safety Devices”

ANSI Z359.16 – “Safety Requirements for Personal Fall Arrest Systems”

ANSI A14.3 Section 7 – “Fixed Ladder Safety Devices”

ANSI A10.48 – Criteria for Safety Practices with the Construction, Demolition,
Modification and Maintenance of Communication Structures

ANSI Z359.18 – Safety Requirements for Anchorage

CSA Z259.2.5 – “Canada Fall Protection Safety Requirements”

Tuf-Tug Inc. : File # 254565

IEEE 1307 – “IEEE Standard for Fall Protection for Utility Work”

TIA 222 “H” – “Structural Standards for Antenna Supporting Structures”

For specific test criteria/requirements, please contact: Engineering at TUF-TUG Products

WARRANTY

Limited 1 Year Warranty to Original Using Buyer

TUF-TUG Cable Safe Climb Systems are warranted for 1 year against defects when operated under normal conditions, within their rated capacities and in accordance with the operating instructions and use considerations.

Any part or mechanism that is recognized as defective by TUF-TUG Products will be replaced or repaired Free of Charge during the warranted period if it is returned, prepaid, to the factory with a return authorization. Claims for labor, delays, or damages are not covered by this warranty. This warranty does not apply if the unit has been altered, modified, or repaired by any source other than TUF-TUG Products.

Environmental / Corrosion considerations

- A) Macro-environmental: Installation exposure warranty for normal macroscopic rural, suburban, and temperate marine environments with moderate chemical, salinity, sulfur dioxide, and relative humidity, equals 10 years.
- B) Micro-environmental: Tuf-Tug safety climbs with increased exposure to near coastal (within 25 miles), tropical marine environments, high winds, chemical exposure, salinity exposure, sulfur dioxide exposure, and high humidity locations, anticipated time to first maintenance is 5 years.
- C) Extreme Micro-environmental: Direct exposure within 5 miles of the corrosive catalyst, to the afore mentioned microscopic extreme environments, including, but not limited to; direct coastal exposure, continuous exposure to tropical marine environments, high winds, caustic chemicals, high salinity, streaming sulfur dioxide, and extreme high humidity could reduce the first time to maintenance warranty period to TIA inspection requirements. These sites shall be identified and targeted for additional TIA maintenance and condition assessment to assure the validity of the safe climb system installation on the structure that has extreme environment exposure. Recommended first to maintenance inspection cycle should not exceed 2-year maximum timeline.







Additional High-Quality Products



Safe-Climb

- Wire Rope Systems
- Fixed Rail Systems
- Obstruction Avoidance
- Cable Guides
- Step Bolts / Step Bolt Climber



Fall Protection

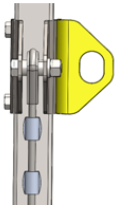
- Fall Arrestors
- Rescue Positioning Lowering Winch
- Rescue Retrieval Rope Blocks



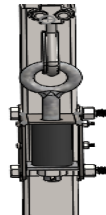
On-line Training

- Industrial Climbing Equipment
- Industry Standards & Codes
- Climbing Certification

Top Assembly

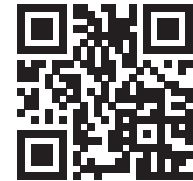


Bottom Assembly



New "Open Design" Safety-Climb System

- Wire Rope System
- Ability to complete inspection on the ground
 - Utilizing Drone or Binoculars
- Compatible with existing Tuf-Tug Bracketry



Visit our website



Founded in 1987, TUF-TUG is a premier global supplier of safety and rigging gear. As the market innovator trusted by industry leaders and end users, we are committed to climber safety and the secure rigging of valuable assets. As a customer-driven solutions provider, we earn credibility and establish successful relationships by exceeding expectations through unparalleled customer support, quality products and on-time delivery.

Headquartered in Dayton, Ohio, TUF-TUG operates an advanced manufacturing facility with extensive capabilities that include metal fabrication, testing and technical application engineering to design custom solutions for unique applications. Along with our custom design capabilities, TUF-TUG offers the most extensive Safety Climb and Rigging Gear product offering in the industry.

TUF-TUG products are ideal solutions that meet the demands of customers in a variety of industries. We look forward to the opportunity to be your premier supplier of rigging gear and Safety Climb systems.

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