



USER INSTRUCTIONS – LADDER/RIGID RAIL CLIMBING SYSTEM

This document serves as the Manufacturer's Instructions, and is to be used as part of an employee training program for the system, as required by OSHA.

ATTENTION: This product serves as part of a fall protection system. All users must read, understand, and follow the manufacturer's instructions for each and every component of the system. All instructions must be followed for proper application, installation, use, and maintenance of this product. Changing the product, misuse of the product, or failure to follow instructions may result in serious injury or death.

Record the system data on the Inspection and Maintenance Log.

If you have any questions concerning the application, installation, use, or maintenance of this product, please contact FrenchCreek Production.

ATTENTION: Improper use of this system or failure to follow instructions and markings may result in serious injury or death.

1.0 APPLICATION

1.1 PURPOSE:

FCP's Vertical Rail Systems are designed to be incorporated into a fall arrest or travel restraint system where worker mobility and fall protection is required. When installed on a ladder and used in conjunction with an FCP rail trolley, and harness, the system allows users to move freely along a rail without the need to push, pull or hold any part of the system while also providing fall protection if a slip or fall occurs, where the trolley will lock onto the rail immediately to arrest the fall.

1.2 LIMITATIONS:

The following limitations apply to the installation and use of FrenchCreek Production's Vertical Rail System. Other limitations may also apply.

a. CONNECTION LENGTH: The connection between the carrier or rail and the point of attachment to the body harness may not exceed 9 inches. Using FrenchCreek Production supplied carabiner, the linkage length is 7 inches.

b. ANCHORAGES: When mounting rail to a ladder, intermediate mounting clamps must be placed with no more than 6' of spacing in between. The top and bot-

tom clamp must be within 12" of the top and bottom of the rail, respectively.

c. SYSTEM CAPACITY: The maximum capacity for the FCP Vertical Rail Trolley is 310 lbs. 1-4 users may climb in succession providing only 1 user is on a rail span between consecutive mounting brackets at a time. Multiple users may not be attached to a single trolley.

d. FALL CLEARANCE: Proper clearance must be present below the worker to arrest a fall and avoid striking a lower level, obstruction, or the ground. It is important to maintain an unobstructed climbing path or envelope for the climber and the system.

e. BODY SUPPORT: Proper body support is essential. A FrenchCreek full body harness must be used when connecting to the FCP Vertical Rail System.

f. PHYSICAL / ENVIRONMENTAL HAZARDS: Additional precautions may be necessary to reduce injury to the user or damage to the system, in locations that present physical or environmental hazards. Hazards may include, but are not limited to: heat, chemicals, corrosive environments, high voltage power lines, gases, machinery, and sharp edges. Please contact FrenchCreek Production if you have questions about using this product where hazards may exist.

1.3 APPLICABLE STANDARDS:

Meets or exceeds ANSI Z359.16, OSHA 1910.29(i) standards. Refer to the national standards including ANSI Z359.0, 1, 2 and 16, local, state, and federal including OSHA 1910.29(i) requirements for more information on personal fall arrest systems.

2.0 SYSTEM REQUIREMENTS

2.1 PERSONAL FALL ARREST SYSTEM COMPONENTS:

FCP's Vertical Rail System is designed for use with FrenchCreek approved components and subsystems. Other components may be incompatible, which could directly affect the safety and reliability of the entire system and could lead to serious injury or death. Substitutions with ANSI compliant components should only be made under the supervision of a competent person and none of the components or subsystems can interfere with the intended function of the system. Substitutions or replacements made with non-ANSI Z359 compliant components or subsystems may jeopardize the compatibility of equipment and may affect the safety and reliability of the complete system. Personal fall arrest components used with this system must meet all applicable OSHA and ANSI requirements. The complete climbing system and connecting subsystem(s) must limit fall arrest forces to 1,800 lbs. or less with an average force less than 1,350 lbs. or less. A FrenchCreek full body harness with front waist attachment point is highly recommended for use with this system.

2.2 PERSONAL FALL ARREST SYSTEM CONNECTORS:

Connectors used in attaching to the vertical rail system (hooks, carabiners, etc....) must support at least 5,000 lbs. Connectors and attachments must be compatible in size, shape, and strength. Non-compatible connectors may disengage. Only use locking connectors with this system.

2.3 ANCHORAGE CONNECTORS:

All connectors used in attaching the rail to the ladder must be compatible with the connection point on the system. The connection must be positive and capable

of sustaining a 3,600 lb. load without failure.

2.4 CONNECTING SUBSYSTEM:

The connecting subsystem is the portion of the personal fall arrest system that is used to connect between the vertical rail subsystem and harness fall arrest attachment element.

3.0 OPERATION AND USE

ATTENTION: Do not alter the components, intentions, or use of this system. Use caution when using this system around hazards that include, but are not limited to: heat, chemicals, corrosive environments, high voltage power lines, gases, machinery, and sharp edges. Use caution when using the system around moving machinery and electrical hazards. Additionally, caution should be used when connecting subsystems and personal fall arrest systems may be exposed to sharp edges or abrasive surfaces.

ATTENTION: Age and fitness level can affect your ability to withstand fall arrest forces. If for any reason, you doubt your body's ability to withstand fall forces, please consult a doctor before using this system. Pregnant women and minors are not approved to use this system.

ATTENTION: Do not shorten, extend or modify the connection linkage length. Do not use combinations of components or subsystems which may interfere with the safe function of each other.

3.1 BEFORE EACH USE:

Before each use, inspect this product according to the steps listed in section 5.3. Do not use this product if inspection reveals an unsafe or defective condition. Examine, analyze, consider, and plan all factors that may affect the safety of the workers, while using the FCP Vertical Rail System.

- a. Read and understand all of the manufacturer's instructions for each component of the FCP Vertical Rail System. All FCP harnesses and connecting systems are supplied with separate user instructions. Keep all instructions for future reference.
- b. Test the system to ensure that the trolley is locking as intended.

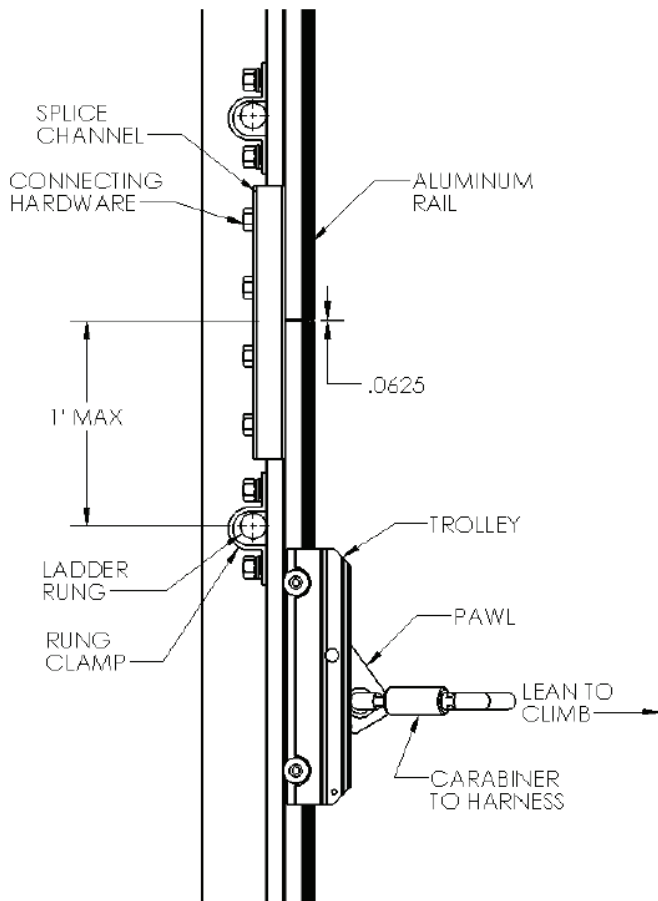
3.2 INSTALLATION – ALUMINUM RAIL:

General Installation

The Safety rail consists of a bottom rail, one or more intermediate rails and a top rail. Start the bottom rail approximately 3' from the bottom of ladder, ground or platform. Locate rail midway on ladder or climb-way to give ample foot room on steps. The first clamp should be located within 1' of lower end of bottom rail. Throughout the remaining height of ladder or tower, attach clamps at 4' to 6' intervals. Clamps are attached to the T-slot of the rail with 3/8" bolts. After the bottom rail is secured, the regular section in turn can be raised and similarly secured. The top rail can be installed with stop-bolt at top.

Note: On steel ladders or towers, leave approximately 1/16" expansion gap between rail sections.

Maintain straightness and joint evenness. Keep rail free of burrs. Do not Paint.



Center Mounted

1. Lay out all rail sections on ground.
2. Place mounting bolts in the T-slot located on the back of rail section. Predetermine clamp locations based on standard 4' to 6' spacing. Clamp location for the first or lower rail section should be within 6" to 12" from lower end of rail.
3. To prevent bolts from falling out of position when raising rail to a vertical position, place a piece of masking tape below each bolt at the predetermined locations. The two bolts used for each clamp location would be spaced accordingly to coincide with the clamp hole spacing and to ensure that the ladder rungs fit between the mounting bolts when safety rail section is placed against the ladder. Following this procedure will allow the installer to easily place the attachment clamps over the ladder rungs and tighten with lock washers and nuts.
4. When more than one rail section is being installed, attach a splice channel to the top end of the lower rail section before attaching to ladder. Intermediate and top sections can now be added. Follow previous instructions with regard to bolts and attachment clamps.

Note: A mounting clamp should be located directly below the splice channel (closest rung). It is important that a 1/16" expansion gap be maintained between rail sections.

5. A stop bolt can be used whenever the top rail section terminates at the top of a ladder. A stop bolt is supplied when this is requested. The stop bolt is used to restrict the safety trolley from being removed accidentally from the safety rail. If the trolley were to be removed and dropped to ground level, it could present a safety hazard to the climber as they would no longer be able to attach themselves to the rail system while still on the ladder.

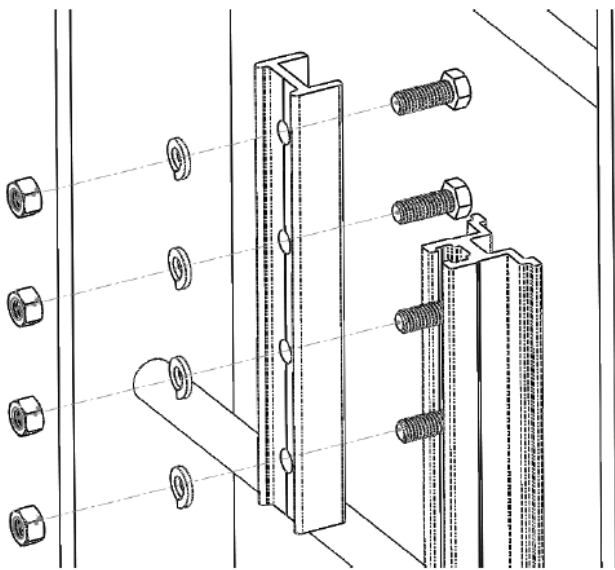
6. A removable extension may be used to access a permanent rail system/ladder from the top when a permanent extension is not possible or desirable. The extension is positioned into the existing permanent rail with a machined high-strength alignment bar and support channel.

Note: When safety rail is installed on a ladder that accesses a landing or platform, the safety rail can be extended a minimum of 3.5' to a maximum of 4.5' above the platform floor. This allows the climber to step onto the platform while still attached to the safety rail. The rail can also be terminated 6" – 1' above the top rung. The climber will need to use a lanyard to tie off to an approved anchor point. The climber can then disconnect from the trolley and continue the climb and step through the walkthrough of the ladder.

7. It is normally recommended that one rail section be raised/ installed at a time. However, it is possible to raise up two 20' rail sections. The splice channel joining the two sections must be properly tightened before raising.

8. Safety harness is supplied with center waist D-rings and side waist D-rings for attaching to carabiner of safety trolley

Note: Raising/installing more than one section at a time can only be done if proper equipment is available to lift section and when rail is being installed on an exterior non-enclosed ladder only. This would not apply to interior ladders.



Side Mounted

1. Attach angle brackets to safety rail before final attachment to ladder riser (stringer). After positioning brackets at recommended spacing, it is suggested that mounting bolts and nut/lock washer assemblies be finger tight only to allow for final adjustment if required.

When safety rail section is positioned against ladder riser, attach U-bolts and companion brackets.

Note: It is suggested that safety rail be installed on right hand ladder riser (stringer)

2. Safety harness is supplied with center waist D-rings and side waist D-rings for attaching to carabiner of safety trolley.

3.3 INSTALLATION – STAINLESS RAIL

The stainless safety rail consists of a bottom rail, one or more intermediate rails, and a top rail. The design of the rail is specific to your system and the holes have already been punched for the necessary rung clamp attachment. The rail is installed using 5/16 x 1-1/4" carriage bolts. The heads have been ground to allow for proper trolley clearance.

1. Install bottom section (shortest section of rail) by placing rail in center of ladder to give ample foot room on rungs on either side of the rail. Rail will start approximately 3' up from the ground or on 3rd rung. There will be six (6) inches of rail below this rung. Rail is oriented to the user with the center of the rail mating with the rungs or steps. The wings of the rail should not contact the rungs or steps.

2. The end holes on the rail are spaced 1-1/8" apart on center and are for connecting the other sections of rail. Holes that are spaced 2-3/4" apart are for the clamps.

3. Install carriage bolts into the square holes provided for the rung clamps. Place the two (2) hole spacer bar onto the two bolts and against the back side of the rail. Place Rail against ladder so that one of the bolts is above and one is below the rung to be clamped to. Place clamp onto bolts so the rung is encapsulated. Use a lock washer and nut on each bolt. Tighten bolts to a snug fit. Some adjustment may be required when installing several sections of rail together.

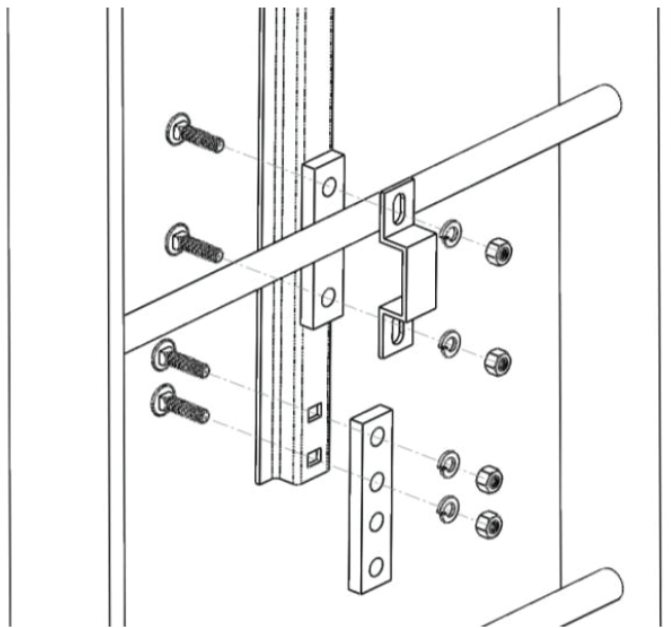
4. Secure next section of rail in place by using the four (4) hole splice bar. The two square holes on the end of the rail just installed will be attached to the first two holes on the splice bar. Use carriage bolts provided. The splice bar will have two more holes for connection to the next piece of rail. Clamp next section of rail into place using step #3.

5. Install next section of rail using the steps 3 and 4.

6. If a removable extension is to be used with the system, the top section of rail must have the mating channel located at the top of the system. The top section will have a channel welded onto the back side of the rail to accept the removable extension. Mount this section of rail in the same manner as above. There should be sufficient clearance between the top section of rail and any hatch cover or lid.

7. After all sections are installed and alignment is correct, all bolt assemblies must be tightened.

8. The trolley is installed with the arrows pointing up and will freely travel up the rail. The trolley will lock onto the rail when pulled downward.



3.4 COMPATIBILITY

Rail	Trolley	Removable Extension	Hardware Material
1-1100-AR (Aluminum)	2-1200A-AT 2-1221A-AT 2-1224A-AT	5-1501	Stainless Steel. Galvanized Steel.
1-1105-SS (Stainless Steel)	2-1224A-AT	5-1502B	Stainless Steel.
1-1100-CR (Curved)	2-1221A-AT 2-1200A-AT		Stainless Steel. Galvanized Steel.

3.5 OPERATION:

1. Ensuring that the trolley is positioned in the correct orientation with indicator arrows pointing upward, pull back on the trolley pawl and slide onto rail. The pawl mechanism should engage the center of the rail and stay locked in place.

2. Attach harness snugly around waist (Refer to separate instructions for donning body harness). Put excess strap through loop. With d-ring at front, attach to carabiner.

3. Lean slightly away from rail to disengage pawl. Then, begin to climb, keeping tension on the harness/trolley while climbing or descending. Safety trolley should be level with climber's waist when climbing or descending

4. Trolley engages rail and locks when outward tension ceases.

ATTENTION: Do not use this system for work positioning. A separate work positioning system must be utilized

ATTENTION: Holding the sleeve during ascent or decent could hinder the safe operation of the braking mechanism and should be done only from a safe position where there is no risk of a fall.

ATTENTION: The user must establish a rescue plan and the means at hand to implement that plan whenever the system is in use.

4.0 TRAINING

4.1 It is the responsibility of all users of this equipment to fully understand these instructions, to become trained in the proper methods concerning the application, installation, use, maintenance, and removal of this product, and to be aware of the consequences of improper methods concerning the application, installation, use, maintenance, and removal of this product.

This document is not a substitute for a comprehensive training program. Training should be provided on an ongoing basis to ensure user proficiency.

5.0 INSPECTION

5.1 PRIOR TO INSTALLATION: All system components must be inspected by a qualified person, in accordance to the manufacturer's guidelines. A formal inspection by a qualified person (other than the user) must be performed, at minimum, on an annual basis. Items found to be defective must be removed from the workplace immediately, and replaced. Record the results of each inspection in an inspection and maintenance log.

5.2 INSTALLED SYSTEMS: An inspection by a qualified person must be completed after the vertical rail system is installed. The system must be inspected prior to each days use. Periodic inspections should be performed at least monthly, or more frequently as site conditions change or require. Inspections of installed systems should include the inspection steps listed in section 5.3.

5.3 PRIOR TO SYSTEM USE:

Please follow the following steps:

1. Inspect all metal parts for damage (rust, corrosion, cracks, deformities, etc....)
2. Inspect the Trolley

5.4: If this equipment is ever subjected to the forces of a fall or if it fails to pass inspection, it must be immediately removed from service and destroyed, or returned to FrenchCreek Production for inspection and/or repair.

5.5 USER EQUIPMENT: Inspect, maintain, service, and store all equipment used with this vertical rail system according to the Manufacturer's instructions.

6.0 MAINTENANCE, SERVICE, STORAGE

FCP's Vertical Rail components require no scheduled maintenance other than the repair or replacement of items found defective during inspections. See section 5.0. If components become heavily soiled with grease, paint, or other substances, clean with appropriate cleaning solutions. Do not use corrosive chemicals that may damage the system or the system components. Store all components for the system in a clean, dry, cool exposure.

ATTENTION: Only FrenchCreek Production or entities

authorized in writing by FrenchCreek Production may repair vertical rail system and system components.

7.0 SPECIFICATIONS

7.1 MATERIALS:

1-1100-AR

- 6061-T6 Aluminum w/ A22 Anodic Coating
- Options of Galvanized and 316 stainless steel mounting hardware

1-1105-SS

- 316 Stainless Steel – cold formed from 11 gage
- 316 Stainless Steel Mounting Hardware

2-1200A-AT, 2-1224A-AT, 2-1222-AT, 2-1223A-AT

- 6061-T6Aluminum w/ A22 Anodic Coating
- Stainless Steel Pawl
- Stainless Steel Expansion Spring
- Alloy Steel Carabiner
- Polyoxymethylene Wheels
- Various Stainless Steel Pins

See lanyard and harness instructions for material specifications

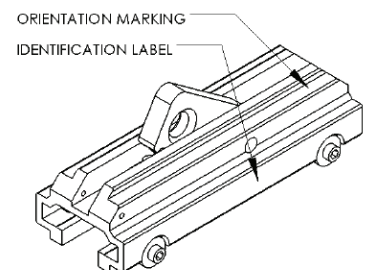
7.2 MARKINGS:

Identification Labels:

FrenchCreek Production, Inc.
Franklin, Pennsylvania 16833 877.226.9237
Model No. 2-1200A-AT Date Mfg: Aug. 2022
Lot: 117245 Serial No: 1234567 Cast: 311ts.
Meets or exceeds ANSI Z556.16, OHSIA 1910.26(i)

For use with FrenchCreek rail systems
Warning: Follow manufacturer's instructions included at time of shipment
Warning: inspect before each use
Warning: Do not hold or grasp the carrier sleeve while actively climbing.

Orientation Marking:



INSPECTION AND MAINTENANCE LOG

DATE OF MANUFACTURE: _____

MODEL NUMBER: _____

DATE PURCHASED: _____

INSPECTION DATE	INSPECTION ITEMS NOTED	CORRECTIVE ACTION TAKEN	MAINTENANCE PERFORMED
Approved By: _____			
Approved By: _____			
Approved By: _____			
Approved By: _____			
Approved By: _____			
Approved By: _____			
Approved By: _____			

HOW TO USE TS SAFETY RAIL SYSTEM

1. Attach harness belt snugly around waist. Put excess strap through loop. With D-ring at front, attach to trolley snap. (Refer to separate instructions for donning full body harness)
2. Lean slightly away from rail to disengage pawl. Then begin to climb, keeping tension on harness while climbing or descending. (*The safety trolley should be level with the climber's waist when climbing or descending*)
3. Trolley engages rail and locks when outward tension ceases.
4. Do not leave trolley and safety harness on TS rail when not in use.

Warnings

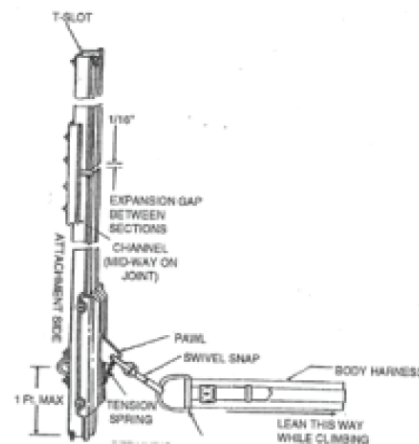
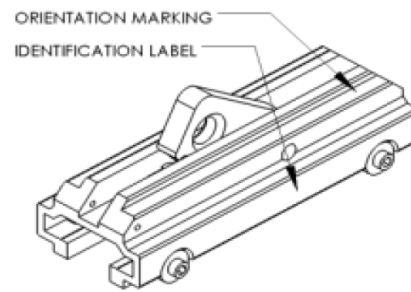
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4. Do not hold or grasp the carrier sleeve while actively climbing.

Labels

FrenchCreek Production, Inc.
Franklin, Pennsylvania 16323 877-228-9327
Model No: 2-1200A-AT Date Mfg: Aug, 2022
Lot: 117245 Serial No: 1234567 Capacity: 310 lbs.
Meets or exceeds ANSI Z359.16, OSHA 1910.29(i)



For use with FrenchCreek rail systems
Warning: Follow manufacturer's instructions included at time of shipment.
Warning: Inspect before each use.
Warning: Do not hold or grasp the carrier sleeve while actively climbing.



Capacity: 310 lbs. ANSI

Meets or exceeds ANSI Z359.16 and OSHA 1910.20(i)