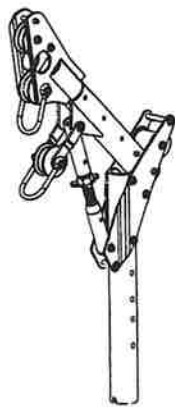
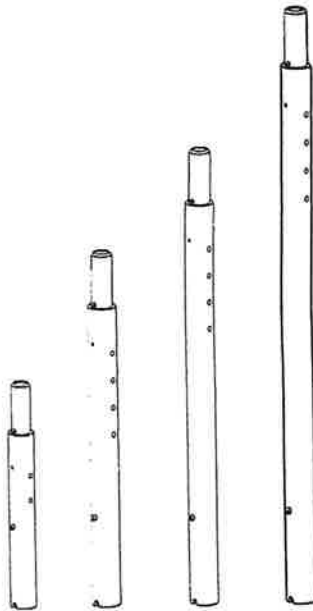


## Confined Space Davit System

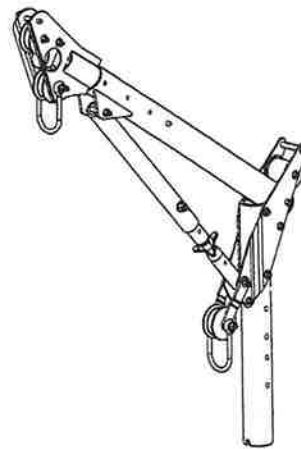
### User Instruction Manual



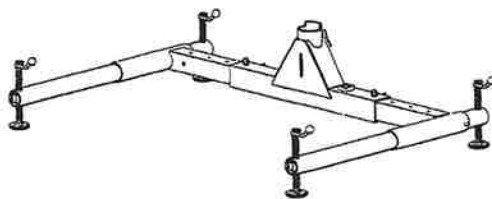
**12" to 29" Offset Davit Arm**



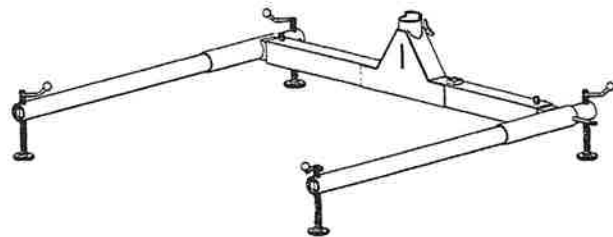
**21", 33", 45", and 57" Lower Mast Extensions**



**24" to 44" Offset Davit Arm**



**3pc Portable Base for 12" to 29" Offset Davit Arm**



**3pc Portable Base for 24" to 44" Offset Davit Arm**

This manual is intended to meet the Manufacturer's Instructions as required by the American National Standards Institute (ANSI) Z359 and should be used as part of an employee training program as required by the Occupational Safety and Health Administration (OSHA).

## Table of Contents

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For the purposes of this manual, the Confined Space Davit System may be referred to as the Davit, the system, or the unit.

Throughout this manual, ANSI Z359.0-2012 fall protection words, phrases and terms are used. These terms are all formally defined in Section 8.0 of this manual.

## 1.0 Warnings and Important Information

### WARNING

- Avoid moving machinery, thermal, electrical, and/or chemical hazards as contact may cause serious injury or death.
- Avoid swing falls.
- Follow the weight restrictions and recommendations in this manual.
- Remove from service any equipment subjected to fall arrest forces.
- Remove from service any equipment that fails inspection.
- Do not alter or intentionally misuse this equipment.
- Consult FallTech when using this equipment in combination with components or subsystems other than those described in this manual.
- Do not connect rebar hooks, large carabiners, or large snap hooks to the FBH dorsal D-rings as this may cause a roll-out condition and/or unintentional disengagement.
- Avoid sharp and/or abrasive surfaces and edges.
- Use caution when performing arc welding. Arc flash from arc welding operations, including accidental arcs from electrical equipment, can damage equipment and are potentially fatal.
- Examine the work area. Be aware of the surroundings and workplace hazards that may impact safety, security, and the functioning of fall arrest systems and components.
- Hazards may include, but are not limited to, cable or debris tripping hazards, equipment failures, personnel mistakes, or moving equipment such as carts, barrows, fork lifts, cranes, or dollies. Do not allow materials, tools, or equipment in transit to contact any part of the fall arrest system.
- Do not work under suspended loads.

### IMPORTANT

This product is part of a personal fall arrest, restraint, work positioning, suspension, or rescue system. A Personal Fall Arrest System (PFAS) is typically composed of an anchorage and a Full Body Harness (FBH), with a connecting device, i.e., a Shock Absorbing Lanyard (SAL), or a Self-Retracting Lanyard (SRL), attached to the dorsal D-ring of the FBH.

These instructions must be provided to the worker using this equipment. The worker must read and understand the manufacturer's instructions for each component or part of the complete system. Manufacturer's instructions must be followed for proper use, care, and maintenance of this product. These instructions must be retained and be kept available for the worker's reference at all times. Alterations or misuse of this product, or failure to follow instructions, may result in serious injury or death.

A Fall Protection Plan must be on file and available for review by all workers. It is the responsibility of the worker and the purchaser of this equipment to assure that users of this equipment are properly trained in its use, maintenance, and storage. Training must be repeated at regular intervals. Training must not subject the trainee to fall hazards.

Consult a doctor if there is reason to doubt your fitness to safely absorb the shock of a fall event. Age and fitness seriously affect a worker's ability to withstand falls. Pregnant women or minors must not use this equipment.

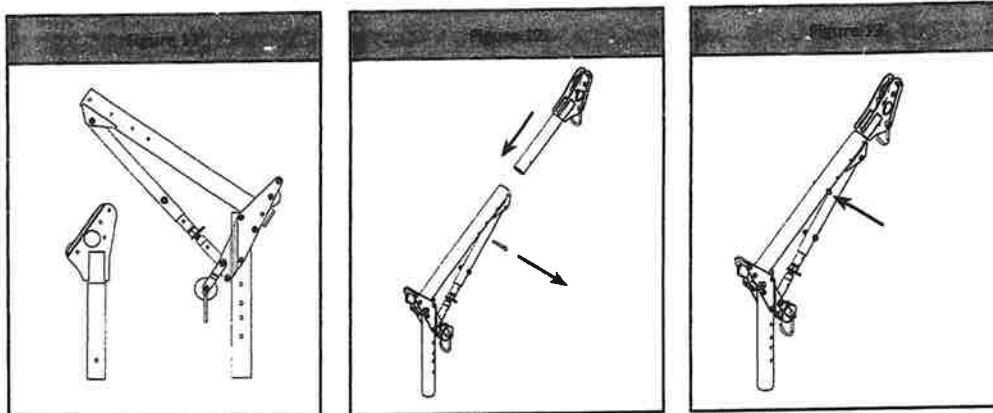
ANSI limits the weight of fall protection equipment users to a maximum of 310 lbs. Products in this manual may have a rated capacity exceeding ANSI capacity limits. Heavy users experience more risk of serious injury or death due to falls because of increased fall arrest forces placed on the user's body. In addition, the onset of suspension trauma after a fall event may be accelerated for heavy users.

The user of the equipment discussed in this manual must read and understand the entire manual before beginning work.

NOTE: For more information consult the ANSI Z359 body of standards.

#### 4.3.2 24" to 44" Offset Davit Arm

The 24" to 44" Offset Davit Arm is shipped partially disassembled, see Figure 11. Remove the detent pin as shown and insert the extension tube into the arm sleeve, see Figure 12. Insert the detent pin into the desired Pin Position as shown in Figure 13.



The Davit Arm is a dynamic anchorage system that will vary in its performance depending upon the configured offset. Care should be taken to understand the capacity of the system and anchorage strength requirements; see Figure 14 for the load ratings for the 24" to 44" Offset Davit Arm.

**Davit Arm Offset Range**

		Mast Pin Position			
		PP1	PP2	PP3	PP4
MIN	MAX	27" (685.8 mm)	29.3" (744.2 mm)	32.3" (820.4 mm)	35" (889 mm)
		35" (889.0 mm)	38" (965.2 mm)	41.5" (1054.1)	45" (1143.0 mm)

**Acceptable Load Ratings**

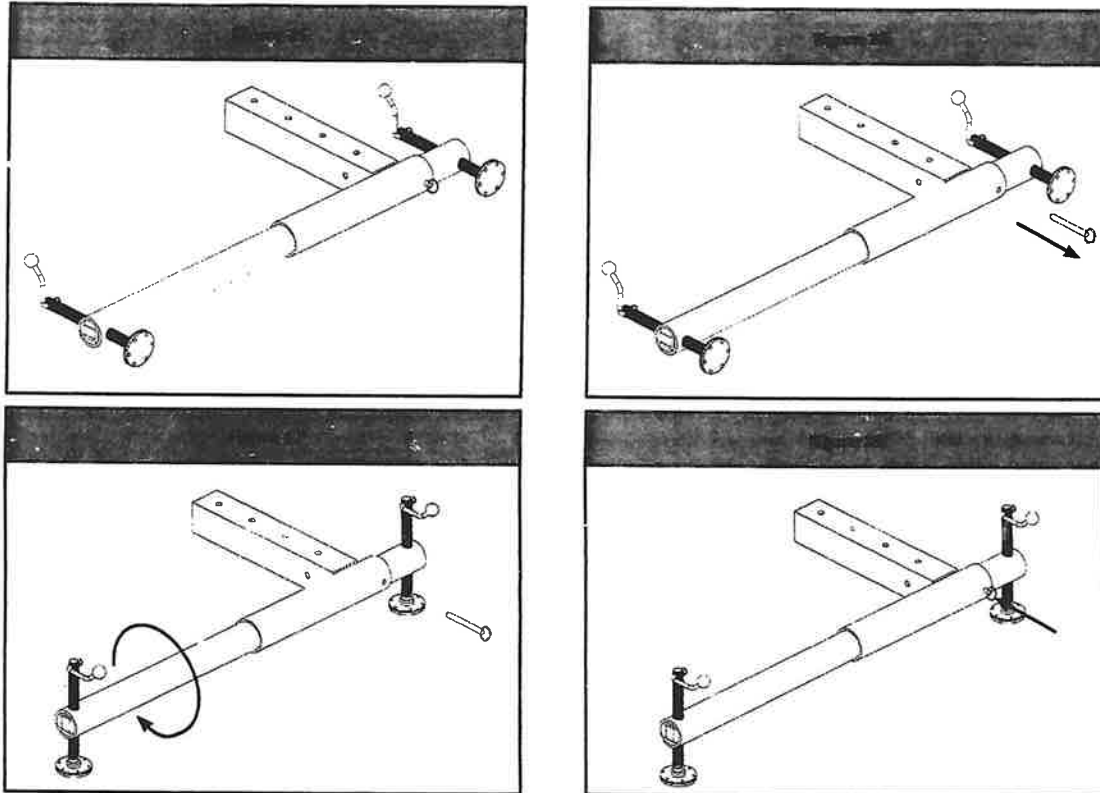
		Mast Pin Position			
		PP1	PP2	PP3	PP4
Anchor Point	AP	1800 lbs (8 kN)	1800 lbs (8 kN)	1800 lbs (8 kN)	1800 lbs (8 kN)
	TP	1800 lbs (8 kN)	1800 lbs (8 kN)	1800 lbs (8 kN)	1800 lbs (8 kN)
	BP	1800 lbs (8 kN)	1800 lbs (8 kN)	1800 lbs (8 kN)	1800 lbs (8 kN)
	RP	5000 lbs* (22.2 kN)	5000 lbs* (22.2 kN)	5000 lbs* (22.2 kN)	5000 lbs* (22.2 kN)

\*\* Davit configuration suitable for two-man rescue with a 4 to 1 safety factor.

#### 4.4 3pc Portable Base Assembly (Applies to both base sizes)

**IMPORTANT** Please see Table 2 in Appendix A for 3pc Portable Base compatibility.

The davit base legs are shipped in a different orientation to optimize packaging and storage when not in use, Figure 15. To assemble, the legs must be rotated from the packed position to the proper orientation for use. On both legs, remove the detent pins as shown in Figure 16. Rotate the round tube of the leg to the use position, as shown in Figure 17. Align the holes of the round tubes and reinsert the detent pins, as shown in Figure 18.

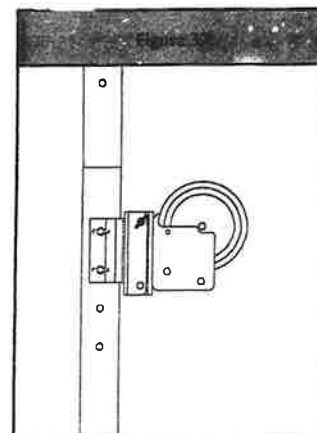
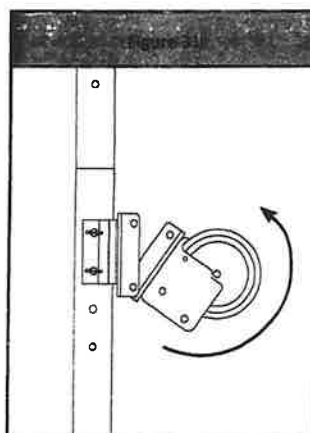
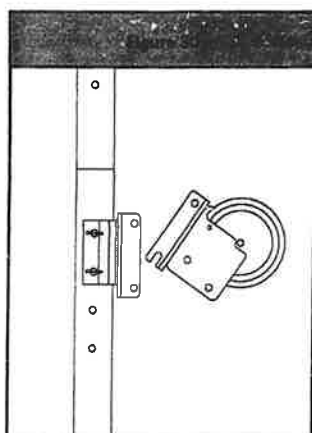


Before inserting the legs into the base center section, refer to the table in Figure 19 to match the Base Position with the Pin Position of the Davit Arm. To install the Davit Base Legs, ensure the red thumb screws are loosened (turn counter-clockwise). Insert the legs into the base center section and determine the offset your application requires; align the holes and insert the detent pins, Figure 20. Tighten the red thumb screws (clockwise) to ensure they are locked in place as shown in Figure 21.

		Davit Arm Pin Position				
		Short			Long	
		PP1	PP2	PP3	PP4	
Base Position	Narrow	1	Yes	No	No	No
		2	Yes	Yes	No	No
		3	Yes	Yes	Yes	No
	Wide	4	Yes	Yes	Yes	Yes

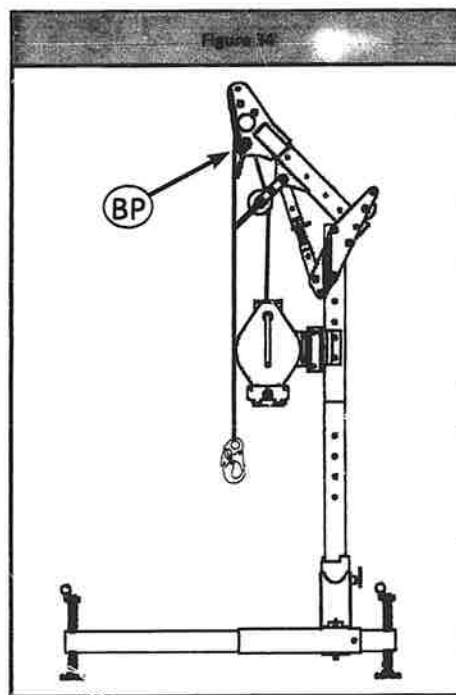
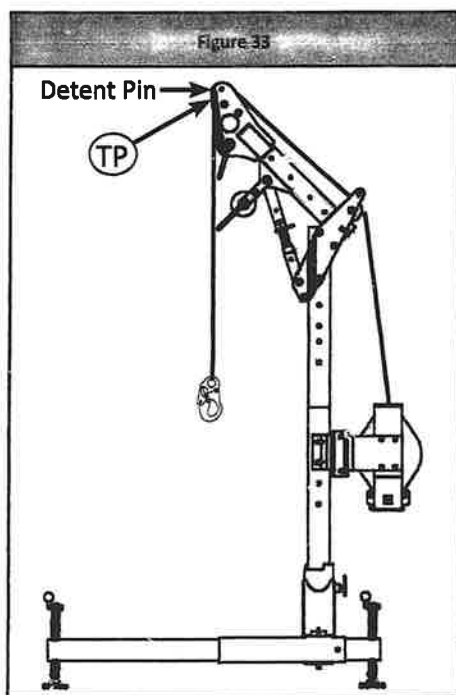
Base Positions

To attach a winch or 3-Way to the Davit Device Receiver Bracket, place the notch in the device side bracket over the bottom bar of the bracket as shown in Figure 30. Rotate to align the upper holes, see Figure 31. Insert the provided detent pin, see Figure 32.



#### 4.9 Cable Routing

If using a rear mounted device, use the Top Pulley (TP). Run the line of the device over the rear pulley of the Davit Arm; remove the detent pin and run the line over the top pulley and reinsert the detent pin, see Figure 33. If using a front mounted device, use the Bottom Pulley (BP). Run the line over the bottom pulley and around lower the pulley in the front of the davit arm, see Figure 34. The lifeline must be routed through both pulleys for all front mounted devices.



## 5.0 Maintenance, Service, and Storage

**Maintenance:** No scheduled maintenance is required, other than the replacement of items that failed inspection.

**Service:** There are no specific service requirements for this system component.

**Storage:** If the unit is removed from its installation location, it should be stored in a dry area free of corrosive elements that may harm or cause the product not to function.

## 6.0 Inspection

### 6.1 Pre-Use Inspection:

- 6.1.1 Inspect the additional equipment used on the davit arm per the user instruction manual for the specific equipment. Do not use if the equipment fails inspection.
- 6.1.2 Inspect the Confined Space Davit System thoroughly for damage. Inspection should include checking the structure for dents, cracks, deformed, or bent tubing.
- 6.1.3 Inspect all hardware for damage, wear, or missing parts.
- 6.1.4 Check all rollers and pulleys for to ensure proper movement. Check for damage such as cracks, chips, and excessive wear.
- 6.1.5 Ensure all detent pins are properly secured before every use.

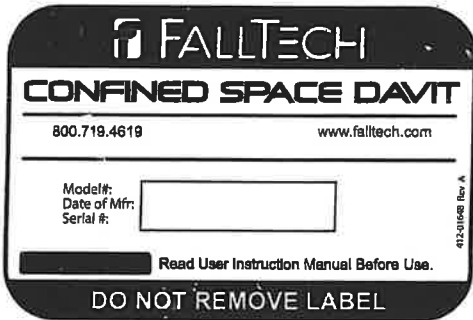
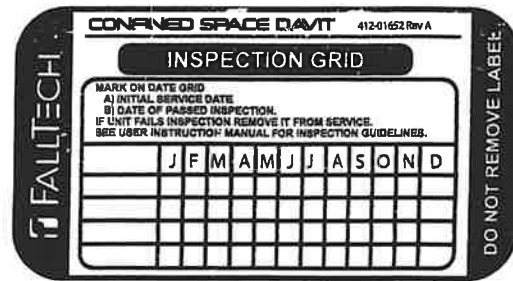
**Do not use the FallTech Confined Space Davit or additional equipment if it fails any part of this inspection.**

### 6.2 Inspection Frequency:

**Pre-Use:** Inspect the Confined Space Davit System and additional equipment weekly as outlined in section 6.1. All installations must be approved to local standards by a Qualified Person.

**Annually:** The Confined Space Davit System and additional equipment must be inspected by a Qualified Person annually and recorded on the Inspection Record provided or equivalent document.

### 3pc Portable Base for 24" to 44" Offset Davit Arm





## 8.0 Definitions

The following are general definitions of fall protection terms as defined by ANSI Z559.0-2012.

**Anchorage** - A secure connecting point or a terminating component of a fall protection system or rescue system capable of safely supporting the impact forces applied by a fall protection system or anchorage subsystem.

**Anchorage Connector** - A component or subsystem that functions as an interface between the anchorage and a fall protection, work positioning, rope access or rescue system for the purpose of coupling the system to the anchorage.

**Arrest Distance** - The total vertical distance required to arrest a fall. The arrest distance includes the deceleration distance and activation distance.

**Authorized Person** - A person assigned by the employer to perform duties at a location where the person will be exposed to a fall hazard.

**Available Clearance** - The distance from a reference point, such as the working platform, to the nearest obstruction that an authorized person might contact during a fall which, if struck, could cause injury.

**Capacity** - The maximum weight that a component, system or subsystem is designed to hold.

**Certification** - The act of attesting in writing that the criteria established by these standards or some other designated standard have been met.

**Certified Anchorage** - An anchorage for fall arrest, positioning, restraint or rescue systems that a qualified person certifies to be capable of supporting the potential fall forces that could be encountered during a fall.

**Clearance** - The distance from a specified reference point, such as the working platform or anchorage of a fall arrest system, to the lower level that a worker might encounter during a fall.

**Clearance Requirement** - The distance below an authorized person that must remain clear of obstructions in order to ensure that the authorized person does not make contact with any objects that would cause injury in the event of a fall.

**Competent Person** - An individual designated by the employer to be responsible for the immediate supervision, implementation and monitoring of the employer's managed fall protection program who, through training and knowledge, is capable of identifying, evaluating and addressing existing and potential fall hazards, and who has the employer's authority to take prompt corrective action with regard to such hazards.

**Component** - An element or integral assembly of interconnected elements intended to perform one function in the system.

**Connecting Subsystem** - An assembly, including the necessary connectors, comprised of all components, subsystems, or both, between the anchorage or anchorage connector and the harness attachment point.

**Connector** - A component or element that is used to couple parts of the system together.

**Deceleration Distance** - The vertical distance between the user's fall arrest attachment at the onset of fall arrest forces during a fall, and after the fall arrest attachment comes to a complete stop.

**Energy (Shock) Absorber** - A component whose primary function is to dissipate energy and limit deceleration forces which the system imposes on the body during fall arrest.

**Fall Arrest** - The action or event of stopping a free fall or the instant where the downward free fall has been stopped.

**Fall Hazard** - Any location where a person is exposed to a potential free fall.

**Free Fall** - The act of falling before a fall protection system begins to apply forces to arrest the fall.

**Free Fall Distance** - The vertical distance traveled during a fall, measured from the onset of a fall from a walking working surface to the point at which the fall protection system begins to arrest the fall.

**Harness, Full Body** - A body support designed to contain the torso and distribute the fall arrest forces over at least the upper thighs, pelvis, chest and shoulders.

**Horizontal Lifeline** - A component of a horizontal lifeline subsystem, consisting of a flexible line with connectors or other coupling means at both ends for securing it horizontally between two anchorages or anchorage connectors.

**Horizontal Lifeline Subsystem** - An assembly, including the necessary connectors, comprised of a horizontal lifeline component and, optionally, of:  
a) An energy absorbing component or, b) A lifeline tensioner component, or both. This subsystem is normally attached at each end to an anchorage or anchorage connector. The end anchorages have the same elevation.

**Horizontal Lifeline** – A component of a horizontal lifeline subsystem, consisting of a flexible line with connectors or other coupling means at both ends for securing it horizontally between two anchorages or anchorage connectors.

**Horizontal Lifeline Subsystem** – An assembly, including the necessary connectors, comprised of a horizontal lifeline component and, optionally, of:  
a) An energy absorbing component or, b) A lifeline tensioner component, or both. This subsystem is normally attached at each end to an anchorage or anchorage connector. The end anchorages have the same elevation.

**Lanyard** – A component consisting of a flexible rope, wire rope or strap, which typically has a connector at each end for connecting to the body support and to a fall arrester, energy absorber, anchorage connector or anchorage.

**Lanyard Connecting Subsystem** – An assembly, including the necessary connectors, comprised of a lanyard only, or a lanyard and energy absorber.

**Personal Fall Arrest System (PFAS)** – An assembly of components and subsystems used to arrest a person in a free fall.

**Positioning** – The act of supporting the body with a positioning system for the purpose of working with hands free.

**Positioning Lanyard** – A lanyard used to transfer forces from a body support to an anchorage or anchorage connector in a positioning system.

**Qualified Person** – A person with a recognized degree or professional certificate and with extensive knowledge, training and experience in the fall protection and rescue field who is capable of designing, analyzing, evaluating and specifying fall protection and rescue systems.

**Self-Retracting Device (SRD)** – A device that contains a drum wound line that automatically locks at the onset of a fall to arrest the user, but that pays out from and automatically retracts onto the drum during normal movement of the person to whom the line is attached.

After onset of a fall, the device automatically locks the drum and arrests the fall. Self-retracting devices include self-retracting lanyards (SRLs), self-retracting lanyards with integral rescue capability (SRL-Rs), and self-retracting lanyards with leading edge capability (SRL-LEs) and, hybrid combinations of these.

**Snaphook** – A connector comprised of a hook-shaped body with a normally closed gate or similar arrangement that may be opened to permit the hook to receive an object and, when released, automatically closes to retain the object.

**Swing Fall** – A pendulum-like motion that occurs during and/or after a vertical fall. A swing fall results when an authorized person begins a fall from a position that is located horizontally away from a fixed anchorage.

The following are general definitions of fall protection terms as defined by OSHA 1910.146.

**Confined Space - OSHA defines a Confined Space as:**


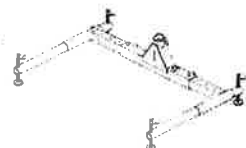
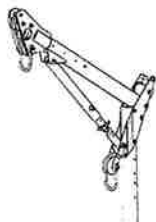
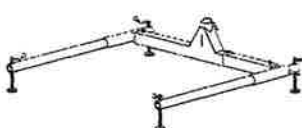
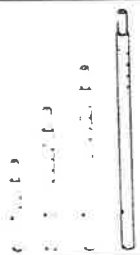
- Is large enough for an employee to enter fully and perform assigned work;
- Is not designed for continuous occupancy by the employee; and
- Has a limited or restricted means of entry or exit.

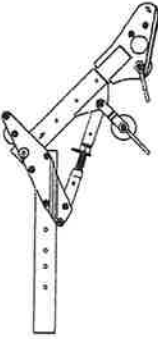
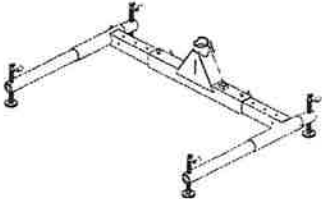
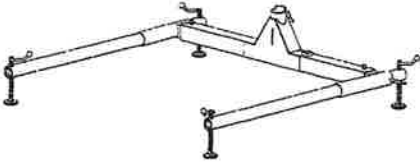
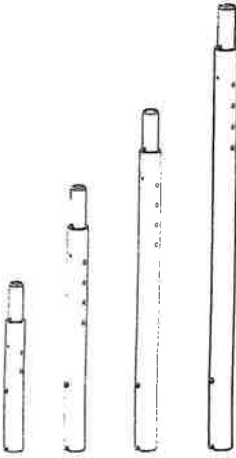
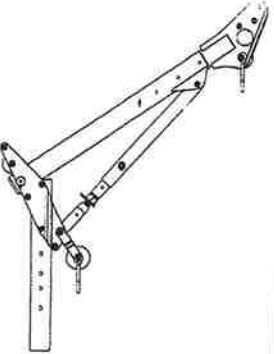
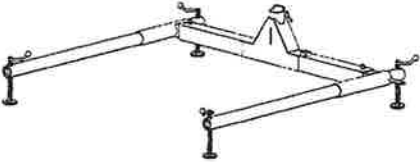
These spaces may include underground vaults, tanks, storage bins, pits and diked areas, vessels, silos and other similar areas.

**Permit Required Confined Space has one or more of these characteristics:**

- Contains or has the potential to contain a hazardous atmosphere;
- Contains a material with the potential to engulf someone who enters the space;
- Has an internal configuration that might cause an entrant to be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward and tapers to a smaller cross section; and/or
- Contains any other recognized serious safety or health hazards.

## Appendix A

Part Numbers	Minimum Tensile Strength and Material	Maximum User Capacity	Standards & Regulations	Image
12" to 29" Offset Arm 6500128	6061-T6 Aluminum Zinc Plated Steel  Minimum 5,750 ft-lb Moment Rated  Minimum 5,000 lbs Rated In Rescue Point Configuration	Maximum Two Workers at up to 310 lbs. Each (620 lbs. Total) for Rescue Configurations  Maximum One Worker up to 310 lbs. for Normal Confined Space Entry/ Egress Operations	OSHA 1926.502	
3pc Portable Base for 12" to 29" Offset Davit Arm 6500728	Minimum 1,800 lbs Rated in Normal Operation  See Figure 10 for Complete Minimum Load Ratings			
24" to 44" Offset Arm 6500244	6061-T6 Aluminum Zinc Plated Steel  Minimum 81,000 in-lb (9,151 Nm) Moment Rated  Minimum 5,000 lbs Rated in Rescue Point Configuration			
3pc Portable Base for 24" to 44" Offset Davit Arm 6500844	Minimum 1,800 lbs Rated in Normal Operation  See Figure 14 for Complete Minimum Load Ratings			
Lower Mast/Extensions  6500321 6500433 6500545 6500657	6061-T6 Aluminum Zinc Plated Steel			

Davit Arm	Compatible 3pc Portable Base	Compatible Lower Mast Extension
 <p data-bbox="250 743 467 793">6500128 12" to 29" Offset Davit Arm</p>	 <p data-bbox="691 485 862 575">6500728 3pc Portable Base for 12" to 29" Offset Davit Arm</p>  <p data-bbox="686 793 857 884">6500844 3pc Portable Base for 24" to 44" Offset Davit Arm</p>	
 <p data-bbox="245 1325 462 1367">6500244 24" to 44" Offset Davit Arm</p>	 <p data-bbox="686 1192 857 1283">6500844 3pc Portable Base for 24" to 44" Offset Davit Arm</p>	<p data-bbox="1175 968 1252 1058">6500321 6500433 6500545 6500657</p> <p data-bbox="1122 1087 1305 1108">Lower Mast Extensions</p>

Part Number	Description	12" to 29" Offset Davit Arm	24" to 44" Offset Davit Arm
6500728	3pc Portable Base-only for 12" to 29" Offset Davit Arm	Yes	No
6500844	3pc Portable Base-only for 24" to 44" Offset Davit Arm	Yes	Yes
6501528	3pc Vehicle Hitch-mount Base for 12" to 29" Offset Davit Arm	Yes	No
6501644	3pc Vehicle Hitch-mount Base for 24" to 44" Offset Davit Arm	Yes	Yes
65020BFZ	Flush-mount Fixed Base Zinc for Confined Space Davit	Yes	Yes
65020BFS	Flush-mount Fixed Base SST for Confined Space Davit	Yes	Yes
65030CFZ	Flush-mount Fixed Base Zinc for Confined Space Davit	Yes	Yes
65030CFS	Flush-mount Fixed Base SST for Confined Space Davit	Yes	Yes
65040CMZ	Center-mount Fixed Base Zinc for Confined Space Davit	Yes	Yes
65040CMS	Center-mount Fixed Base SST for Confined Space Davit	Yes	Yes
65050CRZ	Core-mount Fixed Base Zinc for Confined Space Davit	Yes	Yes
65050CRS	Core-mount Fixed Base SST for Confined Space Davit	Yes	Yes
65060FMZ	Floor-mount Fixed Base Zinc for Confined Space Davit	Yes	Yes
65060FMS	Floor-mount Fixed Base SST for Confined Space Davit	Yes	Yes
65070WMZ	Wall-mount Fixed Base Zinc for Confined Space Davit	Yes	Yes
65070WMS	Wall-mount Fixed Base SST for Confined Space Davit	Yes	Yes
65080SCZ	Sleeve Cap Zinc for Confined Space Bases	N/A	N/A
65080SCS	Sleeve Cap SST for Confined Space Sleeves	N/A	N/A
650124MH	22"-24" Diameter Manhole Sleeve for Confined Space Davit	Yes	No
65012F	Fixed Barrel Mount Sleeve for Confined Space Davit	Yes	Yes

Note: The above listing shows the most common FallTech masts, bases and sleeves that are compatible with the FallTech Confined Space Davit System. Contact FallTech for additional information regarding other components not on this list.

Table A.114 of Confined Space Davit Systems	
Part Number	Description
6050128	5pc Confined Space Davit System 12" to 29"
6050228W	5pc Confined Space Davit System 12" to 29" w/60' Winch
6050328R	5pc Confined Space Davit System 12" to 29" w/60' SRL-R
6050428WR	5pc Confined Space Davit System 12" to 29" w/60' Winch + 60' SRL-R

