

# AP LIBERTY<sup>®</sup>

## Polemount / Padmount Fiber Distribution Hub

### *Installation and Operation Manual*

AML-281818-7RU

AML-342418-17RU



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## Contacting Us

American Products can be contacted for any issues that arise with the supplied product.

Technical assistance is available 9am to 4pm central standard time.


- Toll Free: (855) 736-2135
- Phone: (417) 736-2135
- Fax: (417) 736-9535
- Email: [Sales@amprod.us](mailto:Sales@amprod.us)
- Web: [www.amprod.us](http://www.amprod.us)





When calling, please have available, or if faxing or emailing, be sure to provide:

- Part Number
- Serial Number
- Date of Purchase
- Date of Installation

## Safety First

This publication provides a description of the American Products AP LIBERTY® Enclosure. The mechanical descriptions, typical applications, installation instructions, safety guidelines, grounding and bonding are included. Five types of messages may appear throughout this manual, identified by the following icons and signal words:

	<p>Read equipment manufacturer's manual and this material before using this product. Failure to do so can result in serious injury or death</p>
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 <b>DANGER</b>	Indicates a hazardous situation that, if not avoided, will result in death or serious injury. This signal word is to be limited to the most extreme situations.
 <b>WARNING</b>	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
 <b>CAUTION</b>	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
<b>NOTICE:</b>	Indicates information considered important, but not hazard-related (e.g. messages relating to property damage). The safety alert symbol shall not be used with this signal word. When a signal word is used for messages relating to property damage, NOTICE is the choice of signal word.
 <small>Invisible Laser Radiation Avoid Direct Exposure to the Beam Do Not Look Into Ends of Open Fibers</small>	<b>WARNING: Never look directly into the end of a fiber that may be carrying laser light.</b> Laser light is invisible and can damage your eyes. Viewing it directly does not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.

## Tools and Equipment Required

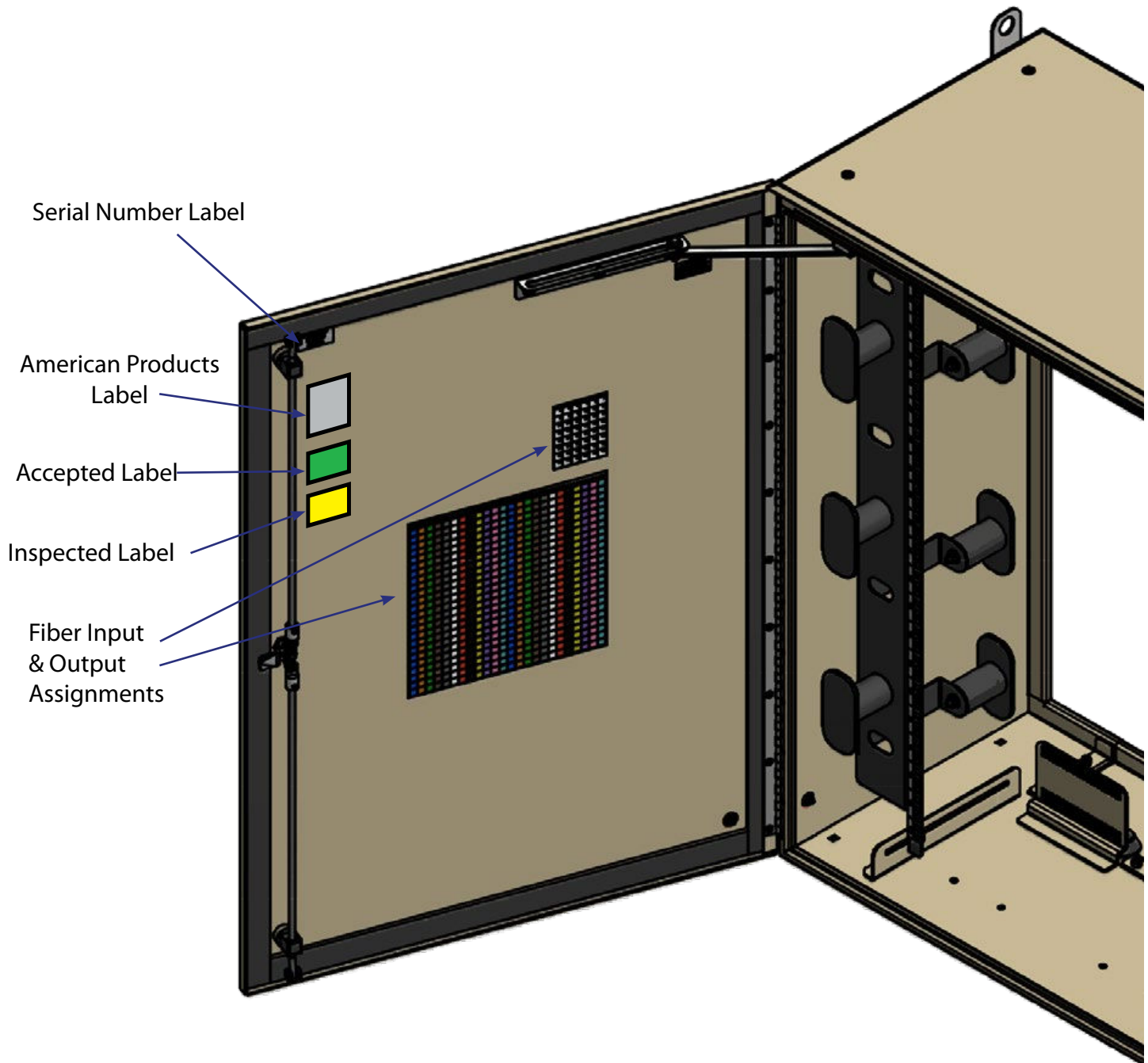
Installers should have the following tools and equipment available for this installation:

### Safety Equipment

Use approved safety equipment as required by local health and safety regulations including (but not restricted to)

- Safety glasses
- Safety gloves
- Safety footwear
- Appropriate handling equipment for batteries and other heavy items
- Appropriate platform(s) and access for working at height (if required)

## Important Labeling Information



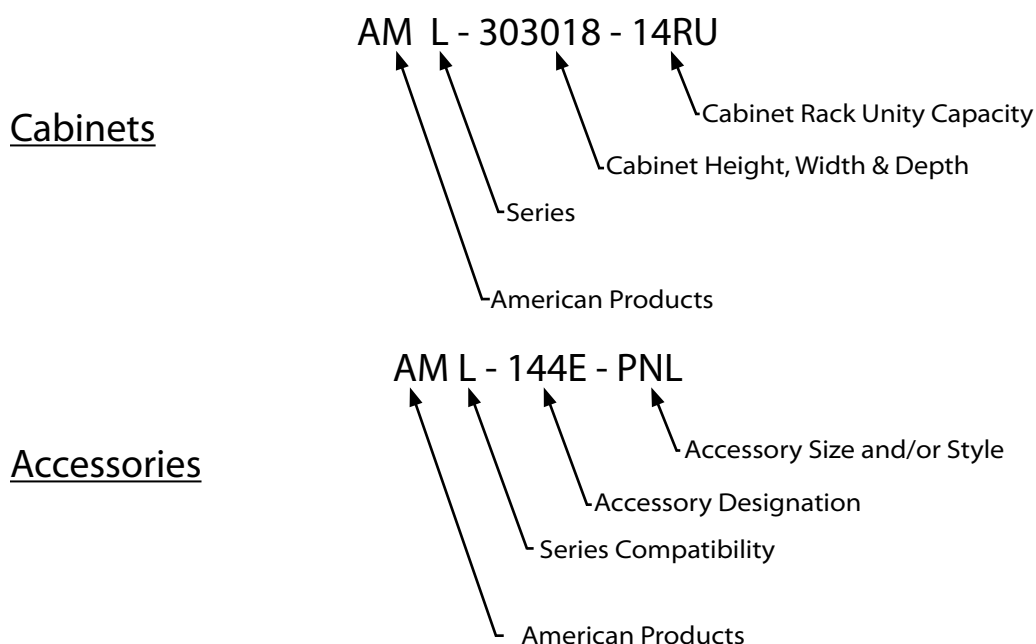
*AP LIBERTY®* Enclosure for Type 4

Tested to Standards:  
CSA C22.2 No. 94.1-2, UL 50, UL 50E

## Product Overview

- The NEMA4 rated *AP LIBERTY®* enclosure is constructed of Aluminum with a Telcordia GR-487 powder coat painted finish for reduced weight and superior corrosion resistance. The front & rear doors are equipped with three point pad-lockable door latches. The top of the cabinet includes a solar shield to reduce the effects of solar radiation and for structural integrity.
- The equipment-mounting bay has a 16RU to 22RU of vertical 19" rack space in the front of the equipment bay. The 19" rack is also adjustable from front to rear.
- The cabinet utilizes stainless steel hardware, UL recognized EPDM edge gasketing (temp range of - 40F to +212 F.
- When installing cabling or equipment that enters the cabinet, Type 4 entrances, fittings or equipment is to be used to maintain the integrity of the enclosure.
- No live equipment or components are to be installed at any time.
- The enclosure is designed to allow various accessories to be mounted on the enclosure to meet customer requirements. For part number structure for parent enclosure and accessories see diagram below:

### PART NUMBERING EXAMPLE

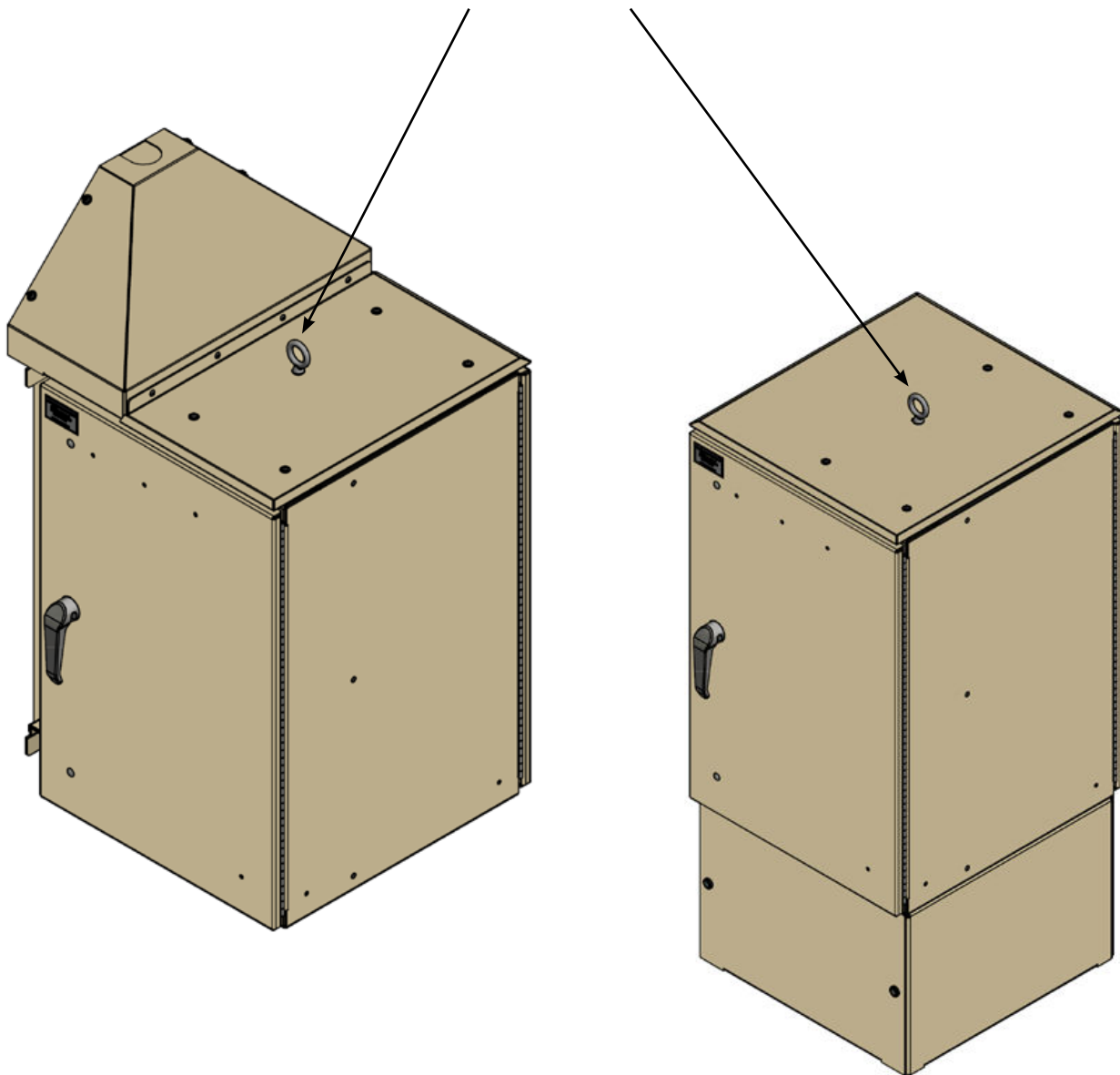


## Lifting Eyes

**NOTICE:** Due to the weight and size of the AP LIBERTY® Fiber Distribution Hub, moving and handling will require proper hoisting equipment.

Enclosures include a single lifting eye. Once installation is complete lifting eye can be removed & replaced with the provided plug.

(Figure 1 - Lifting Eye Location)

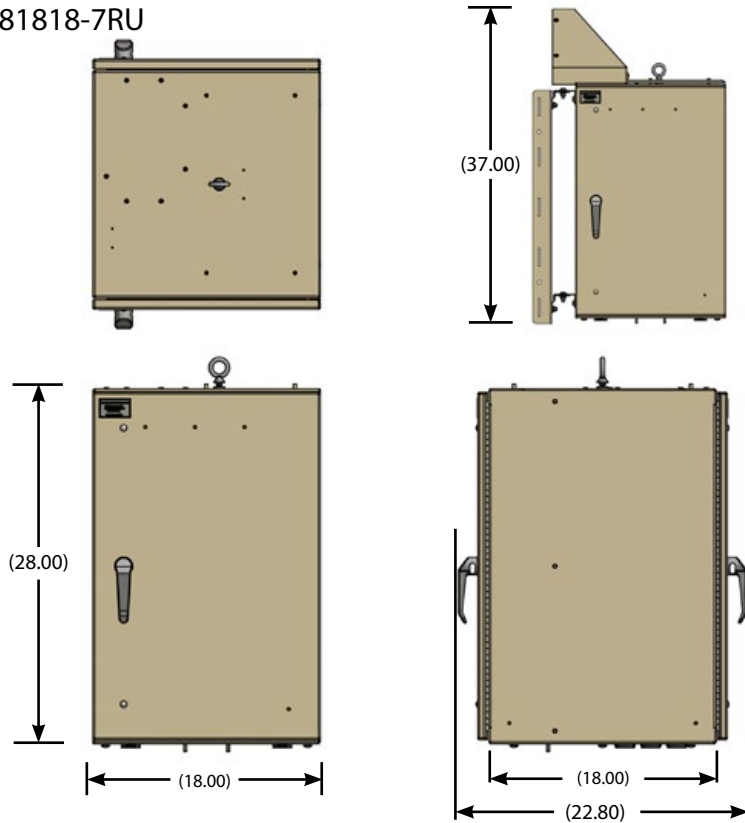


**Drawing for Reference only!**

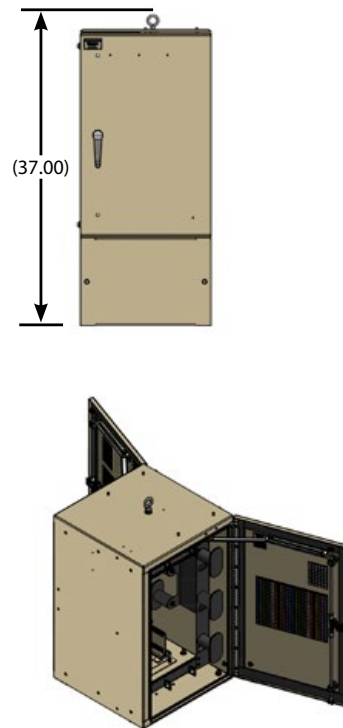


## Installation Drawings

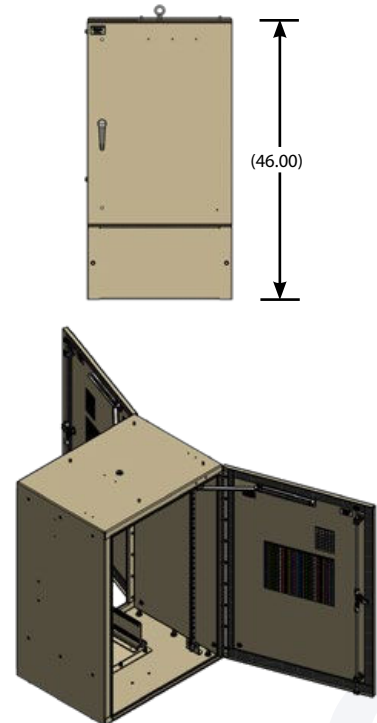
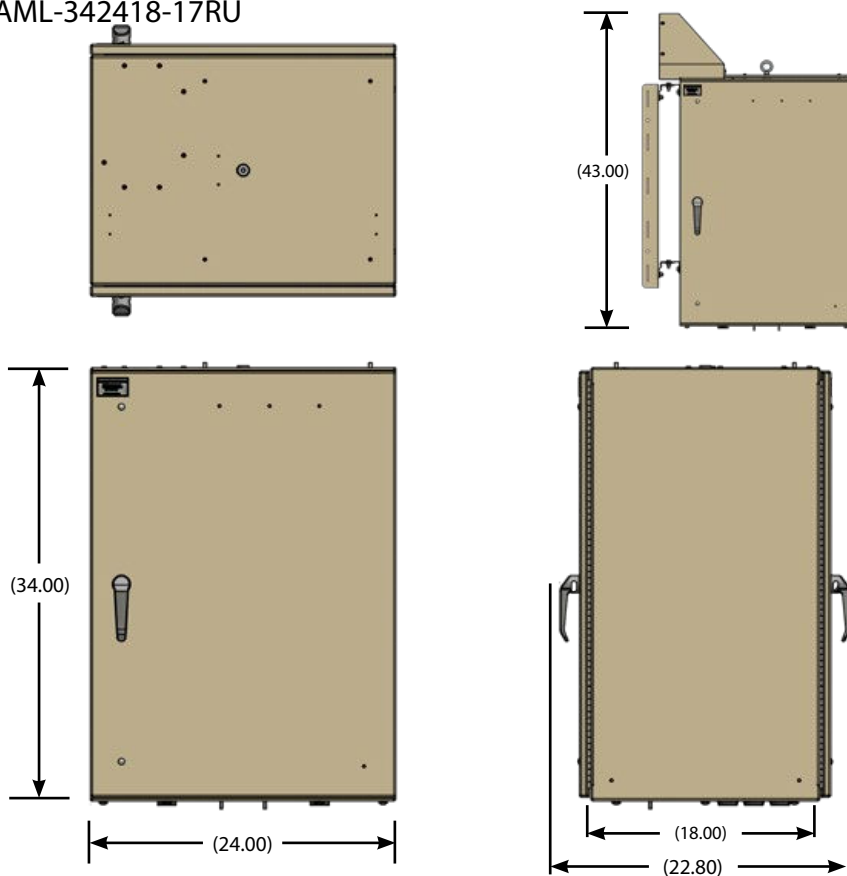
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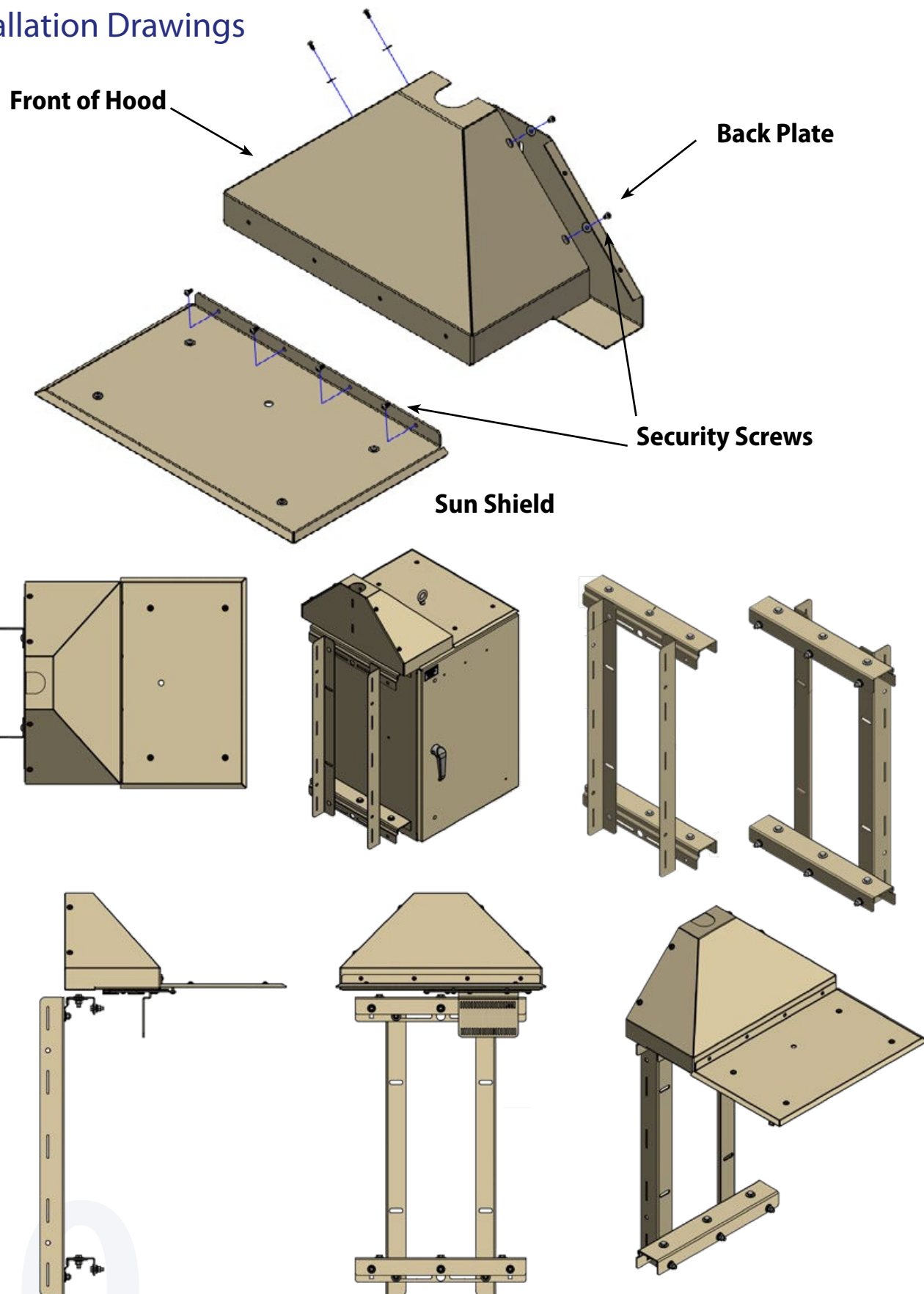
## Drawing for Reference only! (Figure 2 Cabinet Dimensions)



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## Installation Drawings



## Pole Mount Installation



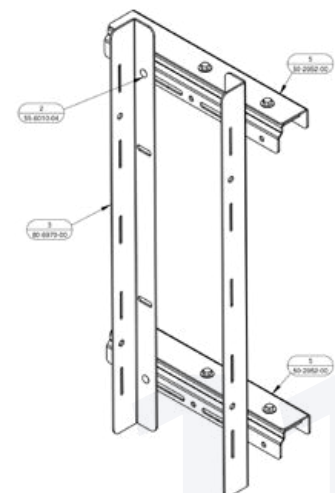
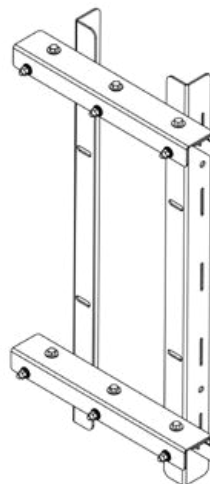
### WARNING

**Ensure that national – local electrical and building codes, OSHA and company safety work rules are observed and provisions made for street flags, barricades and cones. Secure permits as required by city and company.**

Use the procedure below to mount the cabinet on an existing pole.

Have the following equipment ready before beginning this procedure:

- Drill
  - Drill bit 1/4" for pilot hole to accept 3/4" lag bolt or drill through pole for optional bolts
  - 9/16" wrench
  - A pencil
1. Remove pole mount bracket from cabinet by removing the 6 vertical bolts from the top and bottom cabinet brackets (save the bolts, washers, lock washers and nuts to use later to mount the cabinet).
  2. Position the pole mounting bracket and use as template on the pole to the height and location to meet your company practice or local conditions and mark the location of the mounting holes.
  3. Move the pole mounting bracket out of the way.
  4. Drill pilot holes at the locations marked in step 2 with 1/4" drill bit to accept 3/4" lag bolts, or drill holes all the way through pole for optional bolts.
  5. Attach the pole mounting bracket to the pole in the drilled holes with your choice 3/4" lag bolts, through bolts, or all thread.
  6. Hang the cabinet to the pole mounting bracket and align to accept the vertical bolts. Attach bolts, washers, lock washers and nuts and securely tighten the cabinet to the pole mounting bracket.



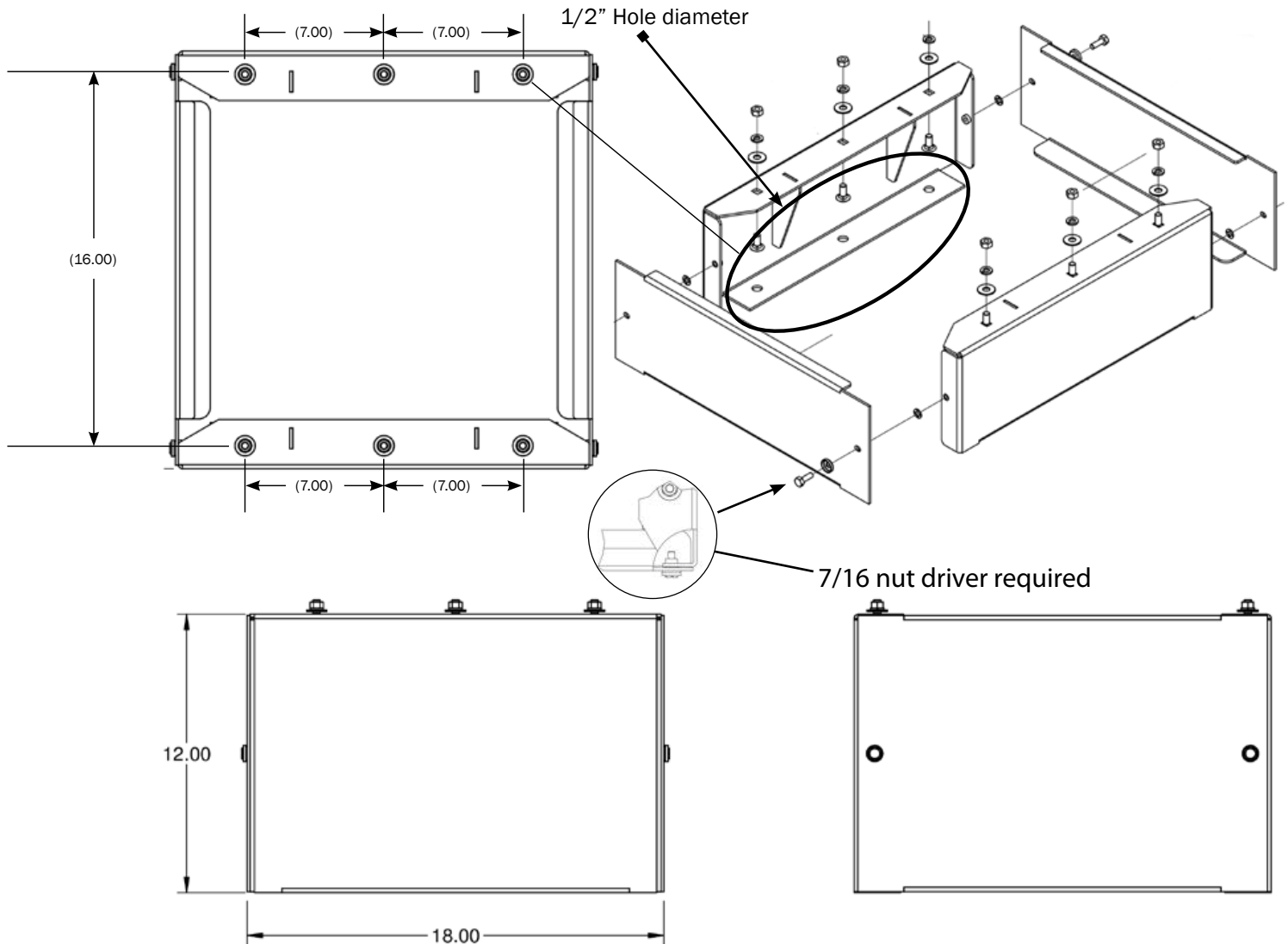
## Pole Mount Hood Installation

Use the procedure below to mount the cabinet on an existing pole.  
Have the following equipment ready before beginning this procedure:

- Security screw tip
  - Drill or screw driver with security bit holder
1. Once cabinet is secured on pole start by sliding the back plate between the cables and the pole.
  2. Position the front hood piece around the cables.
  3. Secure the front hood and back plate together with security screws.
  4. Position the hood so that the 4 holes in the front align with the sun shield.
  5. Secure the hood assembly to the sun shield with security screws.
  6. Once the hood is attached to the cabinet the pole mount may need to be adjusted.

## Installation Drawings - Plinth Mount

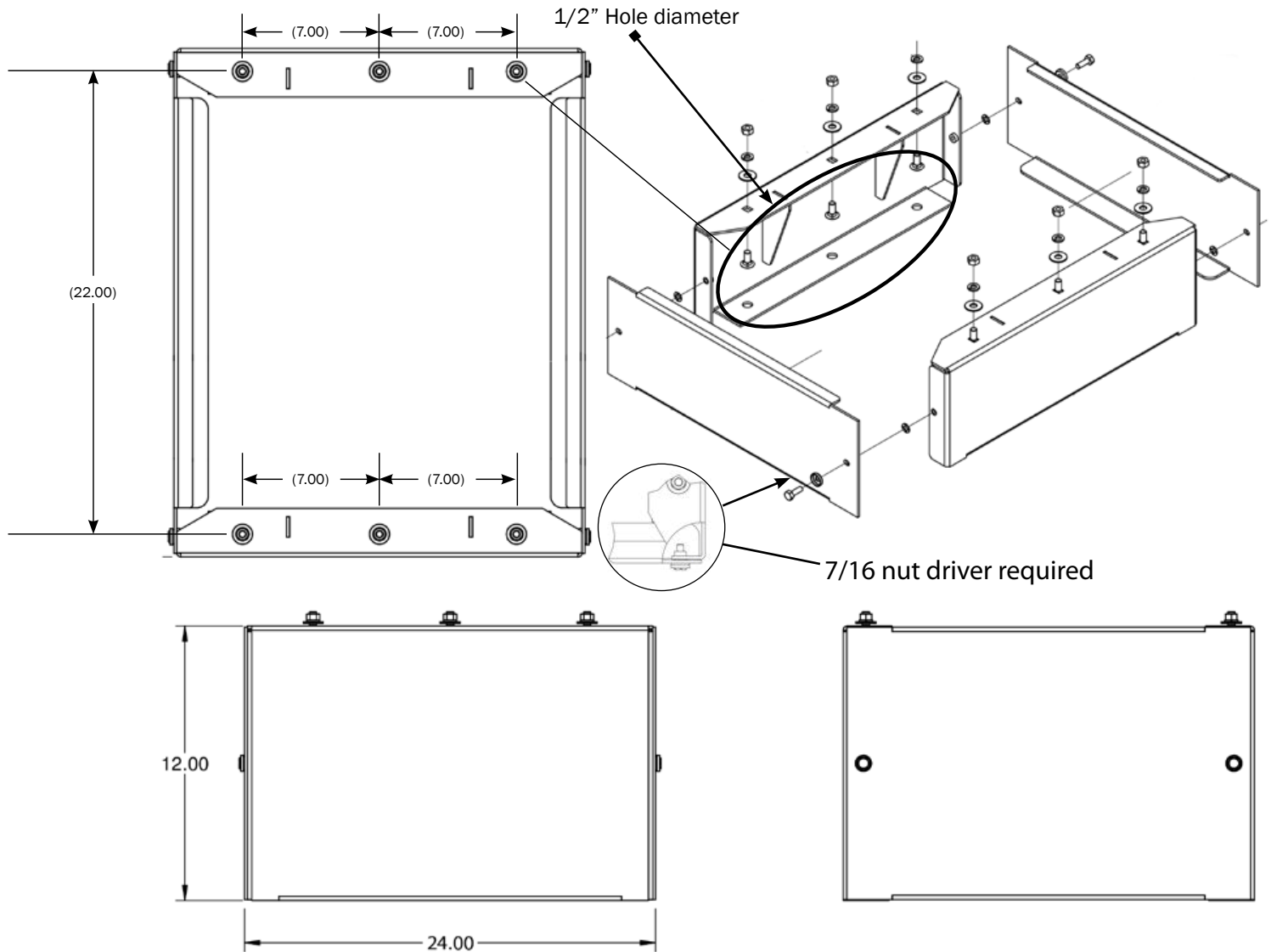
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**Drawing for Reference only!**

## Installation Drawings - Plinth Mount

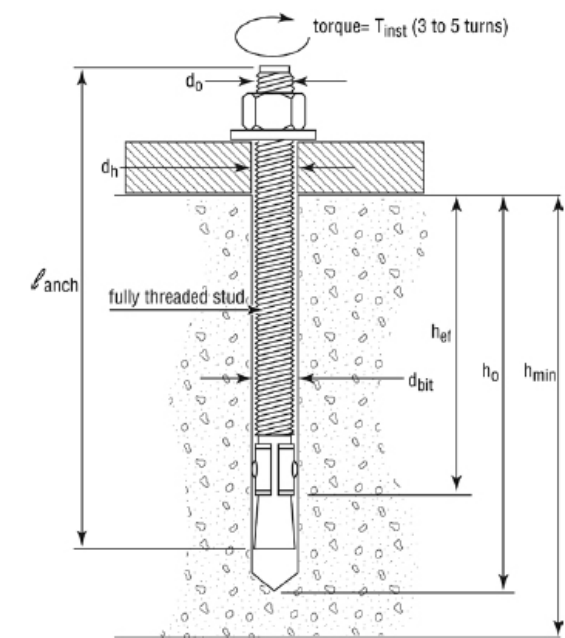
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**Drawing for Reference only!**

Mounting Hardware

When securing the American Products AP LIBERTY® enclosure to a concrete pad, we recommend utilizing a minimum of a 3/8" nominal diameter expansion anchor for maximum stability. Specifications below are for the Truebolt brand wedge type expansion anchor (or equivalent).



	Symbol	Units	Nominal Anchor Diameter (in)	
Anchor outer diameter	<b>d<sub>o</sub></b>	in	.375	
Nominal carbide bit diameter	<b>d<sub>bit</sub></b>	in	3/8	
Effective embedment depth	<b>h<sub>ef</sub></b>	in	1-3/4	2-5/8
Min hole depth	<b>h<sub>0</sub></b>	in	2-1/2	3-3/8
Min slab thickness	<b>h<sub>min</sub></b>	in	4	5
Installation torque	<b>T<sub>inst</sub></b>	ft-lb	25	
Min hole diameter in fixture	<b>d<sub>h</sub></b>	in	7/16	



## Installation Procedure

The AP LIBERTY® Fiber Distribution Hub should be mounted on a structural mounting surface. (Structural mounting surfaces include, but not limited too; Vault lids concrete or polymer, and concrete pads.)

- See figures 1-3 for lifting and mounting specs.
- Instructions for structural surface mounting are listed below.



### WARNING

**Ensure that national – local electrical and building codes, OSHA and company safety work rules are observed and provisions made for street flags, barricades and cones. Secure permits as required by city and company.**

Use the procedure below to mount the cabinet on an existing concrete pad. Have the following equipment ready before beginning this procedure:

- Masonry drill
  - 3/8" (9.525 mm) masonry drill bit
  - Four Masonry expansion anchors (Recommended 3/8" Diameter)(Plinth holes are 1/2" dia.)
  - Wrench
  - A pencil
  - Hammer
1. Ensure that the pad where the cabinet is to be mounted is level from side to side front to back, and diagonally between corners.
  2. Place the cabinet in its final mounting position on the pad to be used as a template.
  3. Remove the access cover from front and/or rear of cabinet.
  4. Mark the location of the mounting holes and move the cabinet aside
  5. Drill 3/8" (9.525 mm) diameter holes at the locations marked in Step 3.
  6. Insert the anchor bolts into the holes in the slab and tap them firmly into the holes with a hammer.
  7. Remove the nuts and washers from the expansion anchor studs.
  8. Place cabinet over the studs and reinstall nuts and washers.
  9. Secure the cabinet to the slab by securely tightening all anchor bolts to the recommended expansion anchor manufacturers specifications.

### NOTICE:

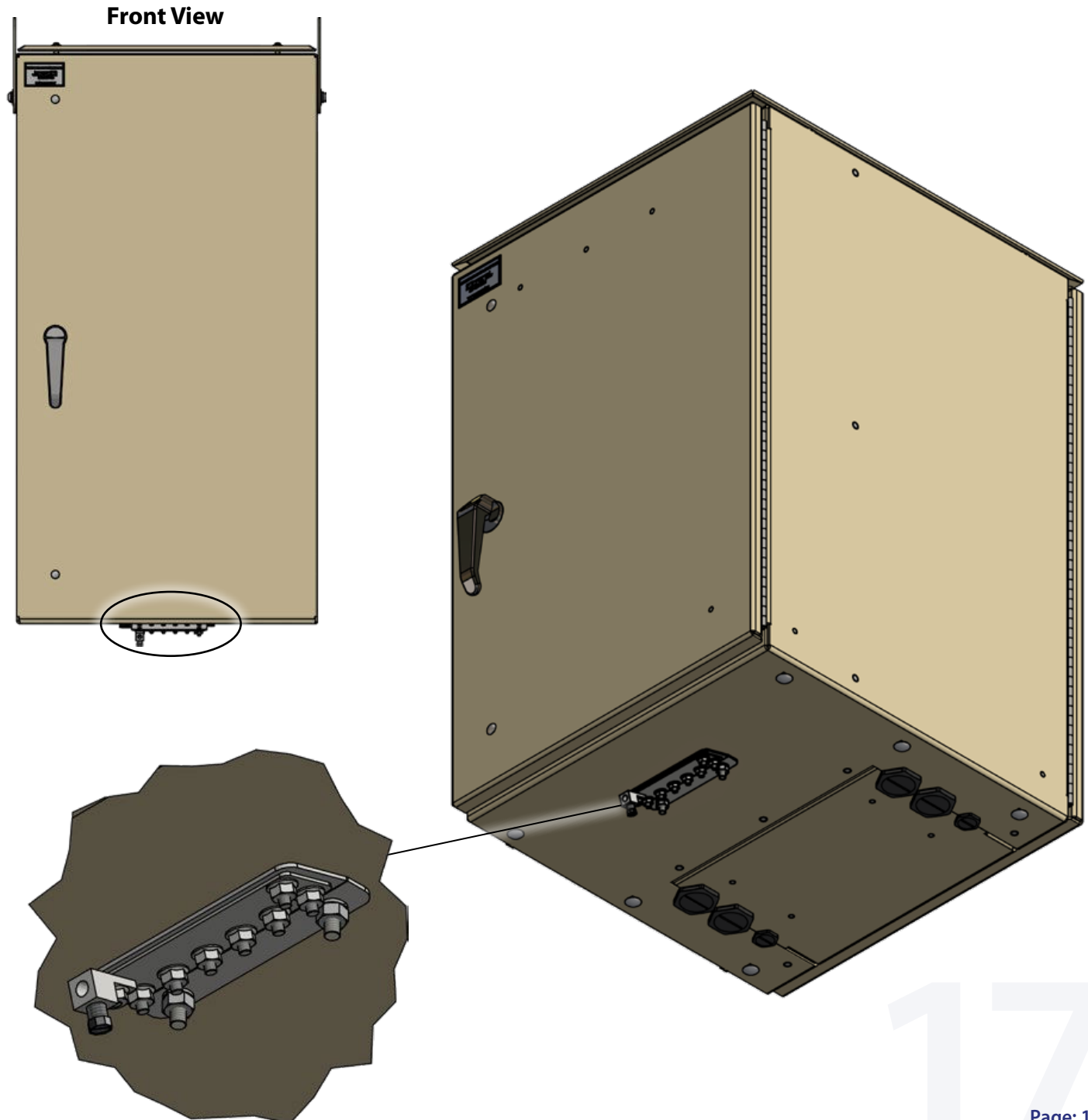
**Use the above procedure to mount the cabinet on a vault lid. Replace the 3/8" masonry expansion anchors with 1/2" hardened steel bolts, washers, and nuts**



## Bonding and Grounding

Connections are located under the front side of the cabinet. The plinth door is labeled "Locater Access"

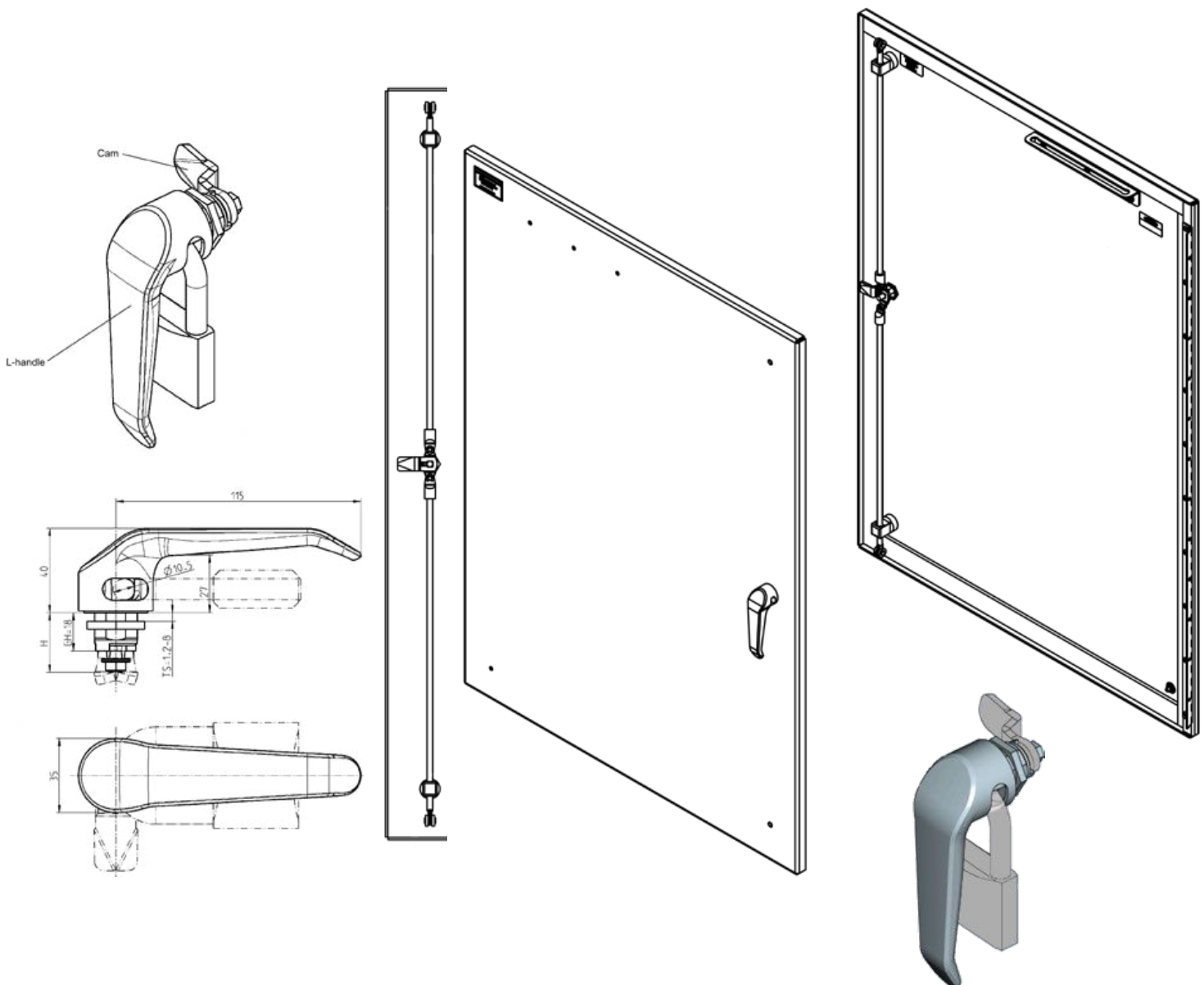
**NOTICE:** Bonding and grounding should be done in accordance with industry standard procedures and comply with local electrical codes.



## Quarter Turn 3-Point Locking Door Latches

The cabinet doors are equipped with quarter-turn 3-point padlock-able door latches. The latches are secured by turning the handle a quarter turn clockwise until the stop is reached.

Convenient security padlock hole to allow for a standard Master lock (or equivalent) to be installed. With a padlock on the latch, access door cannot be opened protecting the cabinet from undesired intrusion.

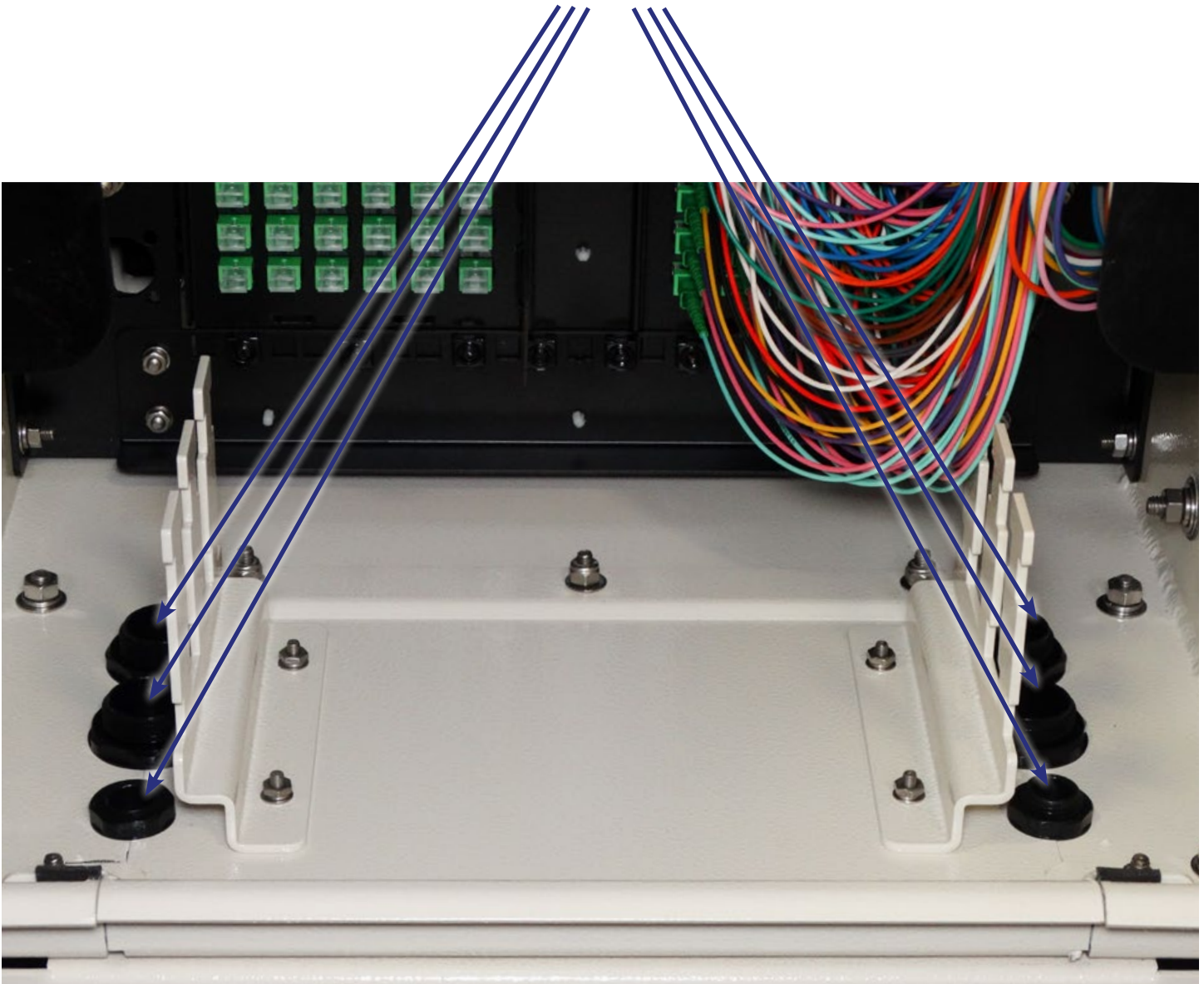


**Quarter Turn 3-point Padlock-able Door Latch**

## Cable Bushings (Armor Cable)

Bushings have been placed around the cables to protect them from the metal edge at the entry holes. (Liberty Pad Mount version shown below)

**BUSHINGS**



## Removable Rack Operation

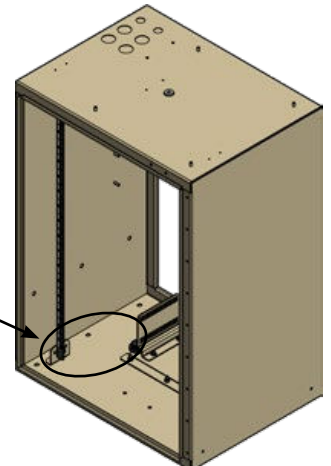
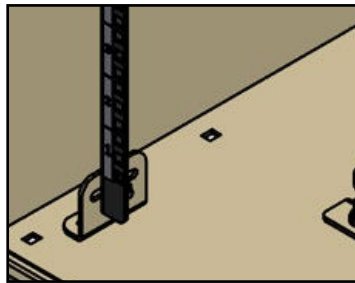
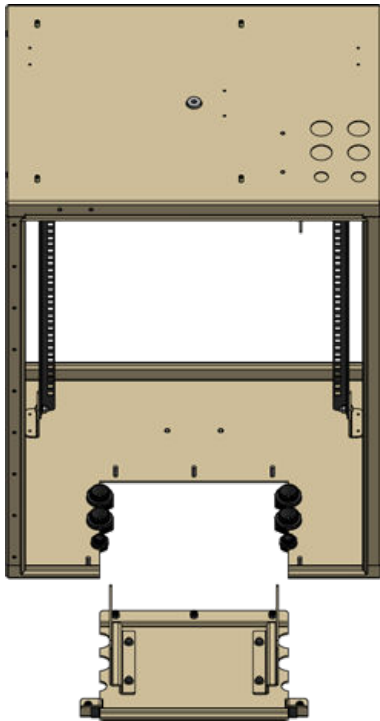
All AP LIBERTY® Fiber Cabinet models are equipped with our "Hot Slide" removable rack system. By removing the bottom plate and the four bolts that hold the rack in the cabinet, the rack and cables can be removed without interrupting service.



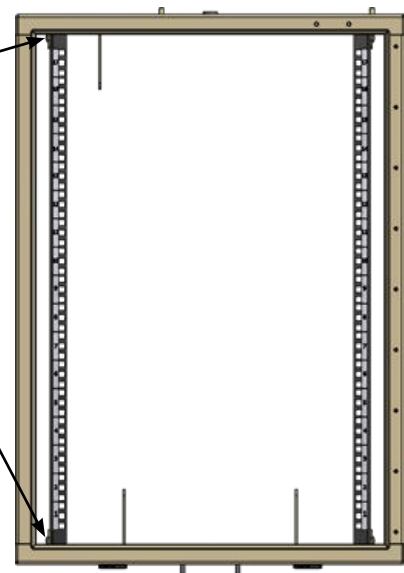
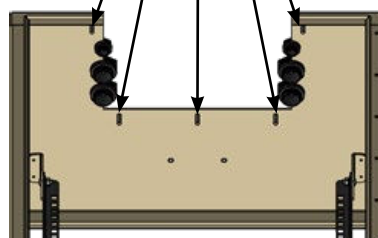
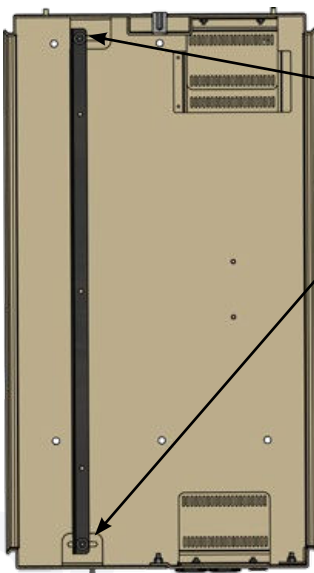
### CAUTION

**Ensure that at least two people perform this procedure. Attempting with one person could result in injury and damage to the equipment. Some heavy lifting is required.**

1. Open the plinth door on the back side of the cabinet.
2. Remove the lock nuts that secure the bottom plate.
3. Gently lift the bottom plate out of the cabinet.
4. Cut the cable ties off of the strain relief plates.
5. Loosen the four bolts that connect the rack to the cabinet and slide the rack to the rear of the brackets.
6. Remove the four rack bolts and carefully lift the rack out of the cabinet.



Bottom Plate Lock  
Nut and Rack bolt  
Locations



## **Warranty Policy**

Enclosures designed and manufactured by American Products shall be warranted to be free of defects in material or workmanship for a period of 5 years (U.S. & Canada) and 3 years for International deployments from the date of shipment. Should the product be proven to be defective, American Products will have the option to repair or replace the product. Items included with the enclosures, not manufactured by American Products, will carry the original manufacturer's warranty.

It is the responsibility of the buyer to communicate any special environmental concerns in which the enclosures will be utilized. Special materials may be required to allow for proper corrosion resistance for harsh environments. The warranty does not cover enclosures used in applications and environments for which they were not designed. Warranty does not cover abuse, modifications by others or reimbursement for unauthorized rework. At no time will American Products reimburse purchaser for unauthorized rework on any product.

Under no circumstances is American Products liable for any consequential damages, liquidated damages, loss in profits or revenues, costs of capital, downtime costs or damages related to our product performance.

## **Warranty Claims**

Enclosures found to be defective will be repaired or replaced with the same or comparable product. All warranty claims must be communicated to our customer service (855) 736-2135 department to obtain an RMA number. For warranty claims in the USA and Canada, freight will be managed and paid by American Products. For warranty claims outside of the USA and Canada, the customer will be responsible for managing the freight and freight expenses. Products being returned from other than US or Canada are to be returned to the factory in Strafford, MO to receive warranty resolution, once approved with an RMA.

Except for the express warranty stated above, American Products makes no other warranties with respect to the product, expressed or implied, including but not limited to merchantability or fitness for a particular purpose.



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