



INSTALLATION MANUAL

Mounting & Sealing of Housing & Electrical Details

Bi-Ocular Box: "BOB"

Customizable POD SURVEILLANCE CABINET

Including

COOLDOME™ Equipped Active Air Conditioning Models



PRODUCT INSTALLATION PRECAUTIONS – WARNINGS – ADDITIONAL INFORMATION (RETAIN THIS DOCUMENT)

IMPORTANT SAFEGUARDS

- 1 **Read Instructions** - All the safety and operating instructions should be read before the unit is operated.
- 2 **Retain Instructions** -The safety and operating instructions should be retained for future reference.
3. **Heed Warnings** - All warnings on the unit and in the operating instructions should be adhered to.
4. **Follow Instructions** -All operating & user instructions should be followed.
5. **Electrical Connections** - Only a qualified electrician should make electrical connections.
6. **Attachments** - Do not use attachments not recommended by the product manufacturer as they may cause hazards
7. **Cable Runs** - All cable runs must be within permissible distance
8. **Mounting** -This unit must be properly and securely mounted to a supporting structure capable of sustaining the weight of the unit. Accordingly:
 - a. Installation should be made by a qualified installer.
 - b. Installation should be in compliance with local codes
 - c. Care should be exercised to select suitable hardware to install the unit, taking into account both the composition of the mounting surface and the weight of the unit. Be sure to periodically examine the unit and the supporting structure to make sure that the integrity of the installation is intact. Failure to comply with the foregoing could result in the unit separating from the support structure and falling, with resultant damages or injury to anyone or anything struck by the falling unit,

CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT EXPOSE COMPONENTS TO WATER OR MOISTURE	
	The lightning flash with an arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of non-insulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons
	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance

SERVICE

If the unit ever needs repair service, customer should contact Dotworkz Systems +1 (619) 224-LIVE (5483) for return authorization & shipping instructions

UNPACKING

Unpack carefully. Electronic components can be damaged if improperly handled or dropped. If an item appears to have been damaged in shipment, replace it properly in its carton and notify the shipper. **Be sure to save**

1. The shipping carton and packaging material. They are the safest material in which to make future shipments of the equipment.
2. These Installation and Operating Instructions.

- ✓ For technical questions or product returns – call Dotworkz Customer Service (866-575-4689) 7:30 AM to 4:30 PM (PST). The proper technician will contact you as soon as possible.
- The External Nut on All electrical wire feed Glands must be tightened to create a weather tight seal prior to putting D2 in service. Failure to create this seal may result in water incursion into enclosure. This may lead to electrical shock, product failure and damage to electrical systems installed within enclosure, including but not limited to damage to camera, heater and blower circuitry, cooling circuitry and other systems installed in unit.
- All screws on hinged lower must be tightened to create seal on enclosure. Failure to create this seal may result in water incursion into enclosure. This may lead to electrical shock, failure and damage to electrical systems installed within enclosure, including but not limited to damage to camera, heater and blower circuitry, cooling circuitry and other systems installed in unit.
- Do not over tighten any Screws, Stand Offs, or other fasteners on this unit. Failure to heed this warning will cause damage or failure of the D2 enclosure.
- Be sure to take extra care to Protect Lens of unit prior to and during installation, and during service. Suspension packaging box is a handy platform to protect lens and enclosure, while installing camera and accessory electronics before installation. Failure to protect lens will adversely affect product perform



Silica Gel Canister kits are vital part of the integrated COOLDOME Air Conditioning System, and must be used when Cabinet is placed into service & powered up.

Dotworkz provides a 750 gram Silica Gel Dehumidifier **canisters that must be removed from its plastic envelope & installed into the BOB POD Cabinet prior to use.** Keep canister away from any wiring & out of way of electronics so as not to cause issues with wiring shorts, or other mechanical interference issues.

Active Cooler / Solid State Air Conditioner within COOLDOME model lowers the internal air temperature to at-or-near dew point with electronics cabinet, so trapped air must be dried out to eliminate condensation issues.

The sealed air inside of cabinet is efficiently dried out via the Silica Gel Desiccant Dehumidifier canisters, which each canister has a color coded saturation state window in center to quickly evaluate its saturation state. These canisters can be placed anywhere in housing, but is optimally placed near locations of cooler air flow, and be sure perforated faces are kept exposed to air movement as possible.

Place them in middle areas so they can be exposed to internal air currents & absorb air humidity inside sealed cabinet.

Silica Gel shall be left in the perforated metal canister with the clear status window up on top of canister.

Gel will absorb humidity within cabinet to remove trapped air borne humidity within sealed box to dry out air, protecting electronics & reducing possibility of condensation within the enclosure.

In the new & dry state, the Silica Gel will show “ORANGE” thru the view window.

When Silica is saturated, it will become “GREEN”, thus indicating need to be re-charged.

Canisters can be reactivated indefinitely via recharge maintenance.

If on occasional maintenance check, the canisters need to be recharged; (Silica Gel is no longer tinted Orange / Gel is “GREEN” indicating a saturated state) please follow following recharge procedure.

REACTIVATION INSTRUCTIONS:

SILICA GEL CAN
750 GRAMS

Remove can from outer box and sealed bag before use.

Silica beads are a light orange color when fully charged. Beads turn to a darker green color as they absorb moisture.

Generally, the silica will protect 57 cubic feet for 3–6 months, in normal conditions, before recharging is required.

RECHARGING INSTRUCTIONS:
(KEEP FOR FUTURE USE)

1. REMOVE THE LID FROM THE CAN. REMOVE INDICATOR CARD.
2. **DO NOT** PREHEAT OVEN.
3. PLACE CAN IN CENTER RACK OF THE OVEN. *For faster recharge, spread silica beads loose on cookie sheet.*
4. SET OVEN TO 225°F—250°F.
5. HEAT FOR 3—5 HOURS.
6. LET COOL FOR 1 HOUR BEFORE RETURNING TO SAFE.

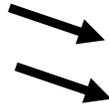
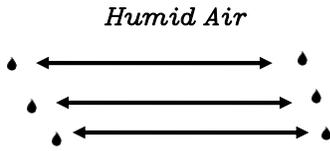
FULLY CHARGED (light orange beads) | NEEDS RECHARGING (darker green beads)

FORCES AT WORK IN ANY UNSEALED, CONDUIT WIRE FEED ENCLOSURE SYSTEM

WARM/MOIST IN UNSEALED CONDUIT MOVES THRU CONDUIT FEEDS EXPAND & CONTRACT WHEN CONDUIT HEATS & COOLS WITH OUTSIDE TEMPERATURES



EXPANDING HEATED AIR IS PUSHED INTO ENCLOSURE THEN COOLS & CONDENSES, HUMID AIR CONDENSES ON SURFACES INSIDE ENCLOSURE



Condensing to Water



SHOCK HAZARD! Failure to fully seal enclosure wire and cabling entry ports **may lead to shock hazard**, **unsatisfactory product performance**, a possibility of damage to electronics in the Dotworkz enclosure product, including camera damage, and damage to integrated electronics due to air driven moisture traveling thru the conduit, condensing and collecting in the enclosure creating a short circuit hazard.

Proper Cable Management to Enclosure

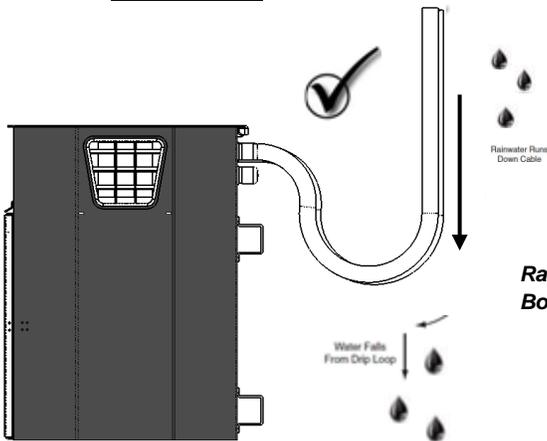
Avoid common Installation Mistakes



Only Use Qualified Installation or Service Technician for Installing & Servicing Dotworkz Enclosures. Power Must be disconnected and kept off while installing or Servicing Enclosure. Follow All Local and Applicable Electrical Codes and Standards for Installation of Electrical components.

All Cable Ports, wire feeds, or Conduit **must be fully sealed** to eliminate moisture within Enclosure. All Dotworkz Enclosures are required to be fully sealed before placing into service, to protect integrated products, to eliminate any moisture driven shock hazard, to perform optimally as designed.

DRIP LOOPS

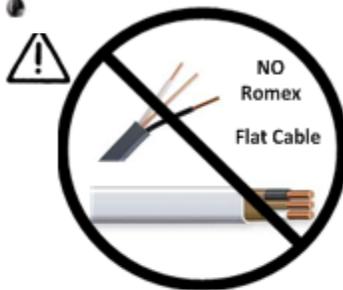


Always Create a Drip Loop for all Cables or Conduit Entering Housing from Level or Above Cable Entries to Avoid Gravity Driven Moisture Entry Into Enclosure.

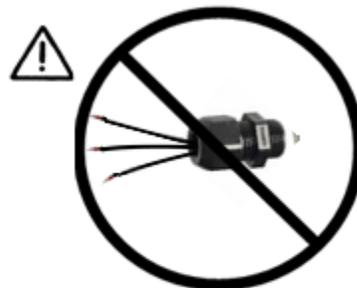
Rainwater or Condensate Runs Down Cable or Conduit and then Falls from Bottom of Drip Loop before Encountering Enclosure Cable Entry Ports



- * SJOOW
- * Cat5/ Cat6
- * Coaxial



Use Round Cable Only with provide Cable Gland Port Seal



Dotworkz Standard Cable Gland Port Seals are designed for **ONE** single round cable only per port

CABLE GLAND STRAIN RELIEF PORT SEALS MUST BE TIGHTENED OR BLOCKED

TO PROPERLY SEAL, ONLY ROUND CABLE SHOULD BE USED WITH PROVIDED M20 SEAL PORTS



An UNSEALED Cable Gland has Rubber Seal below the top / outer face of the Compression Nut, & a GAP between the bottom of Compression Nut and the wrenching nut Body of the Cable Gland

The Cable Gland to Left has 3 holes in the Rubber Insert Seal; but it has a skinned over top on that seal to act as an Air Tight / Water Tight IP68 / NEMA 4X seal rating in case the cable port is kept unused.

To use as a cable port, the "skin" over the holes must be first punctured to allow 1 - 3 small diameter round cables to be fed thru this port.

If any of these skinned holes are left unused and un-punctured, this gland can act as an air & water tight plug, but will only be an effective sealed plug if the Compression Nut IS FULLY TIGHTENED to compress claws around the integrated Rubber Insert Seal



A SEALED Cable Gland has Rubber Seal is near flush or protruding from the top / outer face of the Compression Nut, & Claws around Rubber Insert Seal are visible around the inner edges of cable gland Rubber Seal face with deformity of the Rubber Seal face.

And Little-to-No GAP between the bottom of Compression Nut and the wrenching nut Body of the Cable Gland.

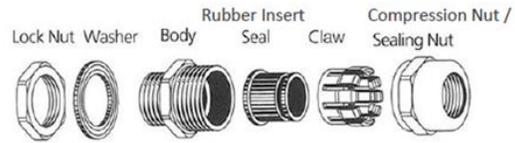
Alternately, M20 Hex Seal Blank-Out Plugs are provided in Pod kit hardware pack that could be used in place of any unused Cable Gland ports, such that Cable Gland Ports. It has an integrated seal washer for bulkhead face sealing.

Tighten all Glands to UNDER 3 mm GAP from bottom of compression nut, to body of molded hex nut

2 stacked Dimes are approx. 0.1" or 2.5 mm thick

Alternately, a Quarter is approx. 0.07" or 1.8 mm thick

Components of a Cable Gland Sealed Wire Feed Ports

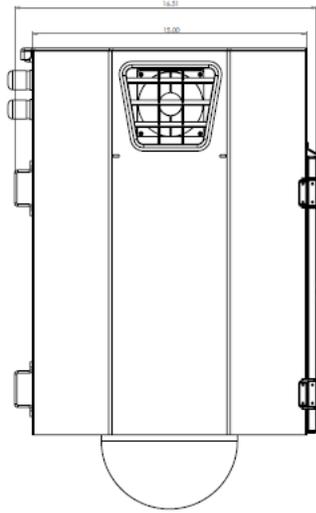
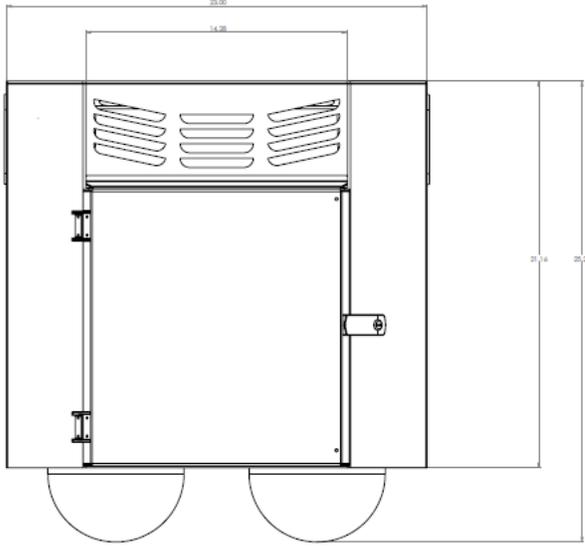


Disassembled example of M20 Cable Gland
(Note this example has a Rubber insert Seal with a single large hole, & "claw" features on our glands are integrated into Cable Gland body)
Next page refers to glands with "skinned-over" Rubber Seal insert

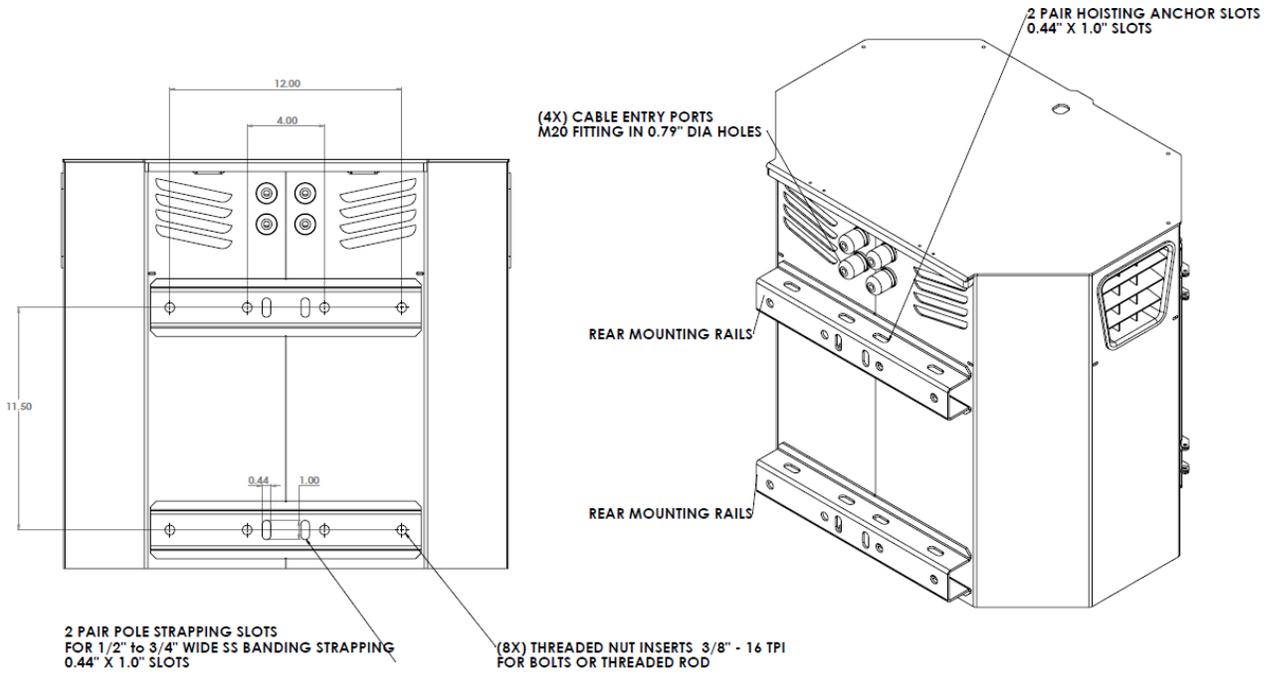
Fully Assembled example of M20 Cable Gland

BOB POD CABINET
(SHOWN Below with Optional DUAL DOME'S INTEGRATED)

**ALL BOB CABINET MODELS DESIGNED FOR VERTICAL MOUNT ONLY,
USING REAR RAILS TO SUPPORT CABINET**



REAR VIEW DETAILS



Tools Recommended for Enclosure & Camera Mounting

Hand Tools



Drill & Bits



Pole Strapping Tools



- #1 & #2 Phillips head screw driver
- #1 Flat Blade screw driver or smaller
- 3/8 Socket wrench, nut driver, or adjustable wrench
- 5/16 Socket wrench, nut driver, or adjustable wrench
- 7/16 Socket wrench, nut driver, or adjustable wrench
- 7/32 Socket wrench, nut driver, or adjustable wrench
- 11/32 Socket wrench, nut driver, or adjustable wrench
- Wire stripping tool
- Caulk Gun & Silicone Sealant



For Wall Mounting

- Drill and Bits for user supplied fasteners for wall mounting enclosure

For Pole Mounting

- Strapping / Banding Tools for user supplied Stainless Steel Pole Straps

For other needed Mounting Styles:

**See Dotworkz for Available Optional Mounting Brackets for a wide selection of Enclosure Mounting Styles @ www.dotworkz.com, or ask your favorite distributor or Sales Associate, or call Dotworkz Support (866) 575-4689



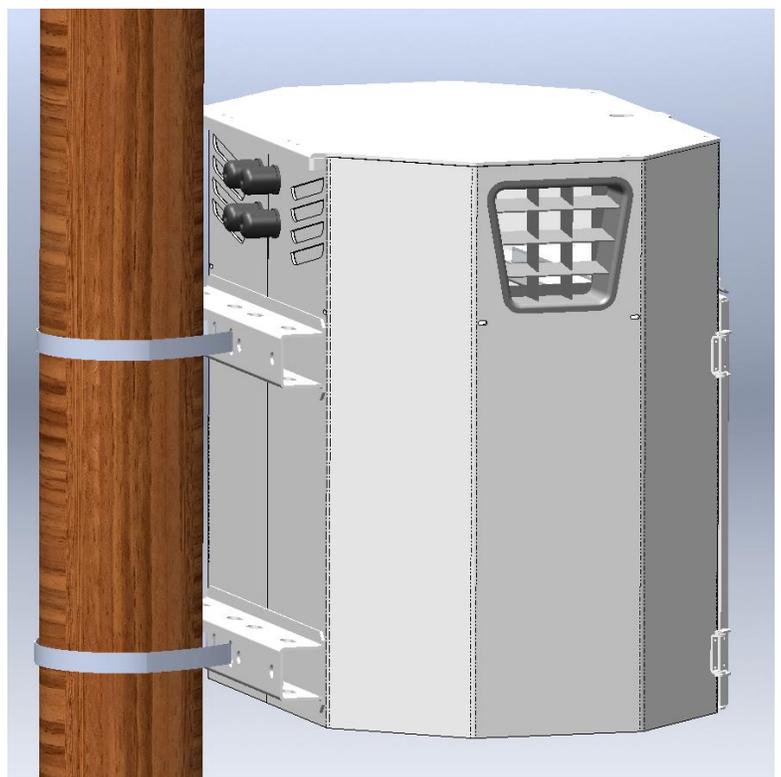
Suggested Stainless Steel Banding & Strapping Tools & Strapping Materials for POLE MOUNTING of BOB POD CABINET

BOB POD Rear Mounting Rails have integrated strapping slots ready to be directly secured with Stainless Steel Structural grade strapping product up to ¾" wide.

Banding & Strapping products are customer supplied mounting options available from many professional supply sources.

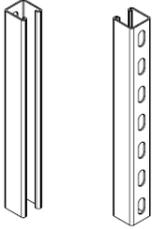
Alternately, vertically mounted UNISTRUT mounted to back rails of BOB POD Cabinet can be used in conjunction with Stainless Steel Banding to allow many passes of strapping to secure Cabinet around a pole.

BAND-IT Products are the Industry leader in Stainless Steel Banding & Strapping Materials & Tools for Traffic & Industrial Application. They have lines of DOT Approved Stainless Steel Banding products made to safely and reliably secure loads to power, utility, lighting, & traffic poles. BAND-IT products are widely available to the North American market thru various Security, Utility, and professional hardware warehouses.



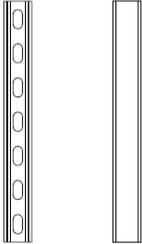
Suggested Optional Installation Materials

UNISTRUT P1000 or Equivalent
1 5/8" H Framing Channel for Structural Support
HDG 12GG STEEL



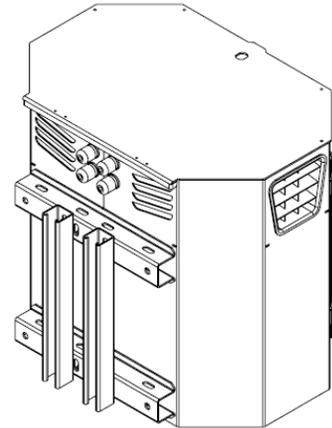
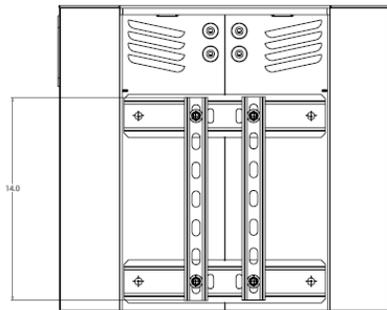
BOB POD Rear Mounting Rails have 3/8"-16 TPI threaded inserts that are designed to align with fastener slots on UNISTRUT Channel Metal.

UNISTRUT can be positioned both VERTICALLY, or HORIZONTALLY on integrated rear mounting rails for BOB POD CABINET.

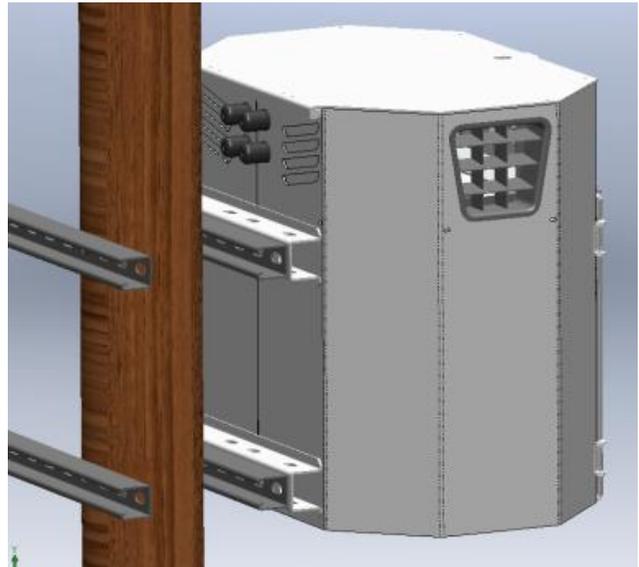
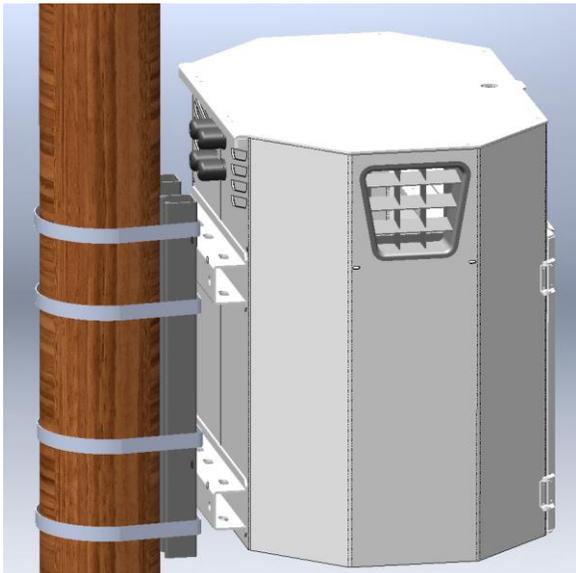


UNISTRUT & UNISTRUT or equivalents are customer supplied products that are a common structural grade mounting standard for electrical contractors, and are widely available to North American market.

REAR VIEW DETAILS



Using Two 14" to 18" lengths of UNISTRUT bolted to two inner sets of threaded inserts on BOB POD rear rails, as well as several loops of 3/4" wide Stainless Steel Band Strapping to Pole Mount Cabinet



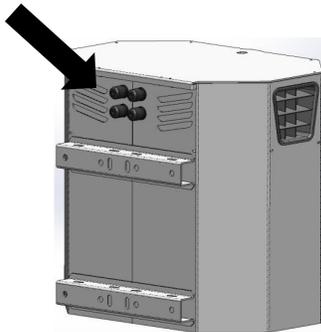
WIRING for BOB POD HOUSING

ALL WIRING FOR POWER & DATA ENTERS HOUSING THRU PRE-INSTALLED STRAIN RELIEF PORTS ON REAR OF BOB POD, AS SHOWN BY BLACK ARROW

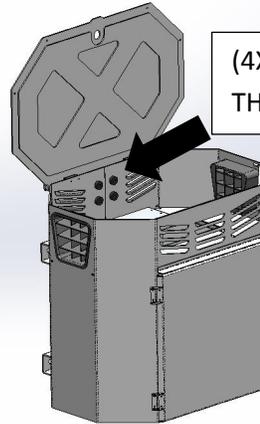
OPEN HINGED TOP LID OF BOB POD AS SHOWN TO EXPOSE WIRING & COOLER LOFT, & CABLE ENTRY PORTS.

SEE OPENING DETAILING FOR LID ON FOLLOWING PAGES

(4X) CABLE ENTRY PORTS



(4X) CABLE ENTRY PORTS
THREAD INTO WIRING LOFT



INNER WIRING & COOLER LOFT WILL LOOK LIKE BELOW

POWER JUNCTION BOX



NOTE:



DATA CABLES CAN PASS DIRECTLY INTO BOB POD SEALED AREA VIA PORTS PRE-INSTALLED ON COOLER BOX AS SHOW.

BE SURE TO TIGHTEN CABLE PORT SEAL NUTS AROUND ALL CABLES INTO BOB POD PROPERLY SEAL POD.

FAILURE TO SEAL ALL CABLE MANAGEMENT INTO SEALED AREA OF POD WILL LEAD TO CONDENSATION & WATER INGRESS ISSUES IN MAIN BOB POD CABINET AREA.

POWER JUNCTION BOX



This Small Gray Electrical Junction Box is DIN Rail mounted via quick release DIN Rail Clips on back of it.

Simply PRY the top rear of the J-box with a flat head screw driver to UN-CLIP this box and move it into a position to Open (2X) face screws to open lid & Access wiring terminal blocks to hook up 110 / 220 VAC (Single Phase) Wiring.

To replace box into location: Hook bottom of DIN Rail Clips first, and press in top of box to re-engage clips & remount J-box to this rear wall of BoB POD wiring loft.

A/C SINGLE PHASE WIRING: 115 VAC, 60HZ

High Voltage A/C Typical Conventions, single phase (wiring convention)

<i>Color</i>	<i>Symbol</i>	<i>Description</i>
Black (Brown)	L	Line Conductor, AC/L, aka: "Hot" wire
White (Blue)	N	Neutral Conductor, AC/N
Green (Green/Yellow)	G, FG⊕	Ground Wire, Chassis Ground



NOTICE!

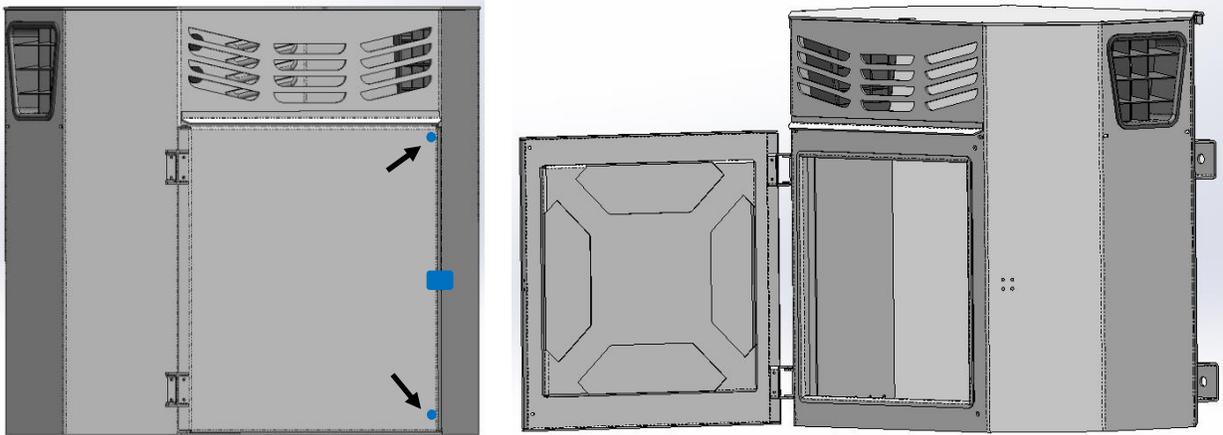
BOB POD POWER SUPPLIES CAN RUN OFF OF SINGLE PHASE 115 VAC, or SINGLE PHASE 230 VAC (50 / 60 Hz).

HOWEVER, CAUTION:

IF POWERED BY 230 VAC, THEN INTERNAL POWER DUPLEX OUTLET, INSIDE OF BOB POD WILL ALSO BE SUPPLIED 230 VAC, AND **ANY USER INSTALLED PRODUCTS PLUGGED INTO DUPLEX OUTLET MUST ALSO BE COMPATIBLE WITH 230 VAC POWERING**

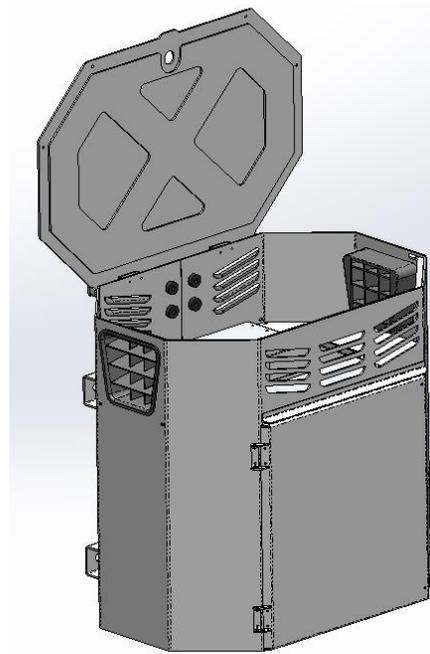
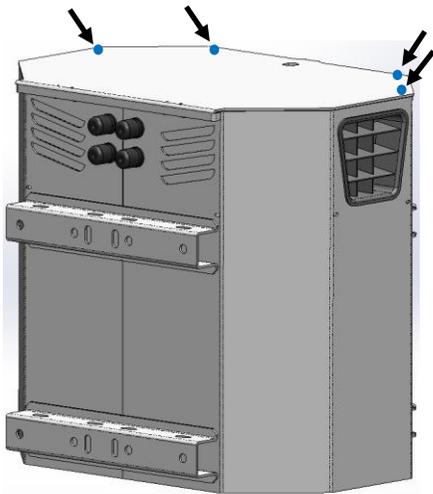


GENERAL OPENING & ACCESS OF TWO AREAS OF BOB POD HOUSING



FRONT DOOR OF POD CAN BE OPENED VIA LOCKABLE DOOR LATCH, & TWO CORNER DOOR FASTENERS, SHOWN IN BLUE.
(2X) CORNER DOOR FASTENERS MUST BE TIGHTENED FOR PROPER DOOR SEALING! (#2 PHILLIPS DRIVE SCREWS)

SIMILARLY, THERE ARE FOUR CAPTIVE (#2 PHILLIPS HEAD DRIVE) SCREWS THAT SECURE HINGED LID TO ACCESS WIRING LOFT



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