

COMMERCIAL DOME INSTALLATION INSTRUCTIONS



PLEASE READ THIS ENTIRELY BEFORE BEGINNING THE INSTALL

Most commercial domes are installed by a Swim Team, a Facility Maintenance Crew, the YMCA members, etc. and in rare instances a contractor is used.

It's not a difficult job. It's a lot more physical labor than it is mental work.

Crew requirements are based on the size of the dome.

Domes up to 3000 Sq. Ft. will require a minimum of 3 people to complete the install in 6 hours or less. Add 1 additional installer for each additional 750 Sq. Ft. of dome.

Example: An 8000 Sq. Ft. dome will need the original 3 + ...
(8000 - 3000 = 5000) 5000 Sq. Ft. divided by 750 = 6.6 people (round up to 7)
7+3= 10 Installers.

CAUTION: Commercial Ameri-Domes are very heavy. The largest ones can weigh as much as 1750 pounds. The dome should be moved via a forklift to the area where it is to be uncrated. PLACE TARPS ON THE POOL DECK **PRIOR** to positioning it for the install or the removal. Due to the weight of the dome, without the tarps in place, there is a good chance you may rub a hole or tear the dome if it is dragged on the bare deck. The tarps will prevent this from happening.

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Ameri-Brand Products Inc

Dome Anchorage at Deck

1.



RM38 or RL38 Multi-Set Drop in Expansion Anchor. 1/2" OD. 3/8-16 Internal Threads with Minimum 1-5/8" Min Embedment. Zinc plated steel.

2.



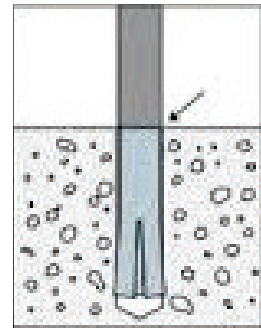
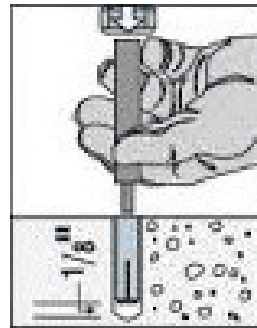
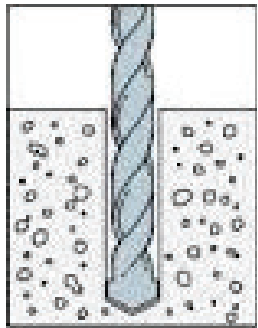
1" Shank x 3/8"-16 Threaded Eye Bolt. 5/16" Diameter Zinc plated steel. Apply Corrosion Resistant Grease on threads during installation.

3.



Anchor Setting Tool. (provided)

4.



Drill holes with 1/2" Masonry bit using Hammer-Drill / Roto-Hammer to a Min. Depth of 1-5/8". Measure anchors provided to establish exact hole depth required. When installed, Anchors to be Flush with Pool Deck. Set Anchors.

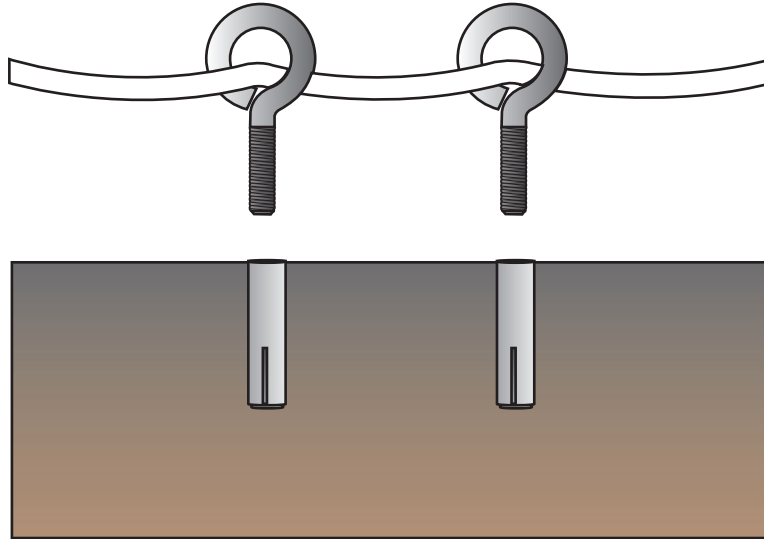
5.



Plastic Coated Corrosion Resistant Aircraft Cable Embedded into 4 layer Reinforced Hem on the Dome.

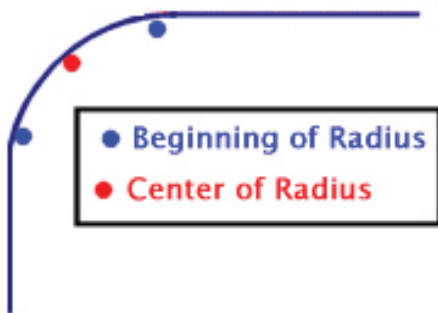


6.



Cable in base hem of dome is Exposed in the Field at Specified Locations via Vertical Incisions approx. 2" High. Cable Attaches into Installed Eye Bolts. Compress Eye Bolts to Secure Cable.

ANCHOR SPACING + LAYOUT



Typical anchor spacing on most commercial domes is 1' apart. Please ask if you're not sure. There are engineering sheets available for each size of dome and proper anchor spacing is **IMPORTANT**.

There are times when the measurements don't play out exactly as specified. IE, the spacing does not work out exactly at 1 FT. increments. It's OK to place additional anchors where needed to assure we are meeting the minimum spacing requirement. Ultimately, we're looking for an even distribution of the stress on the walls and cable system.

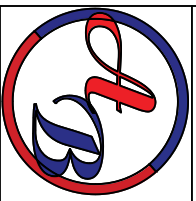
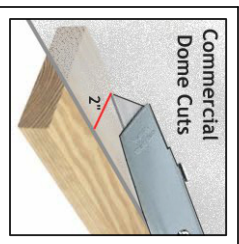
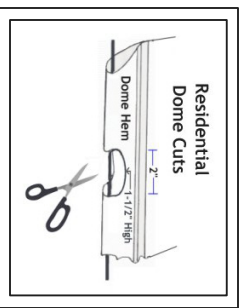
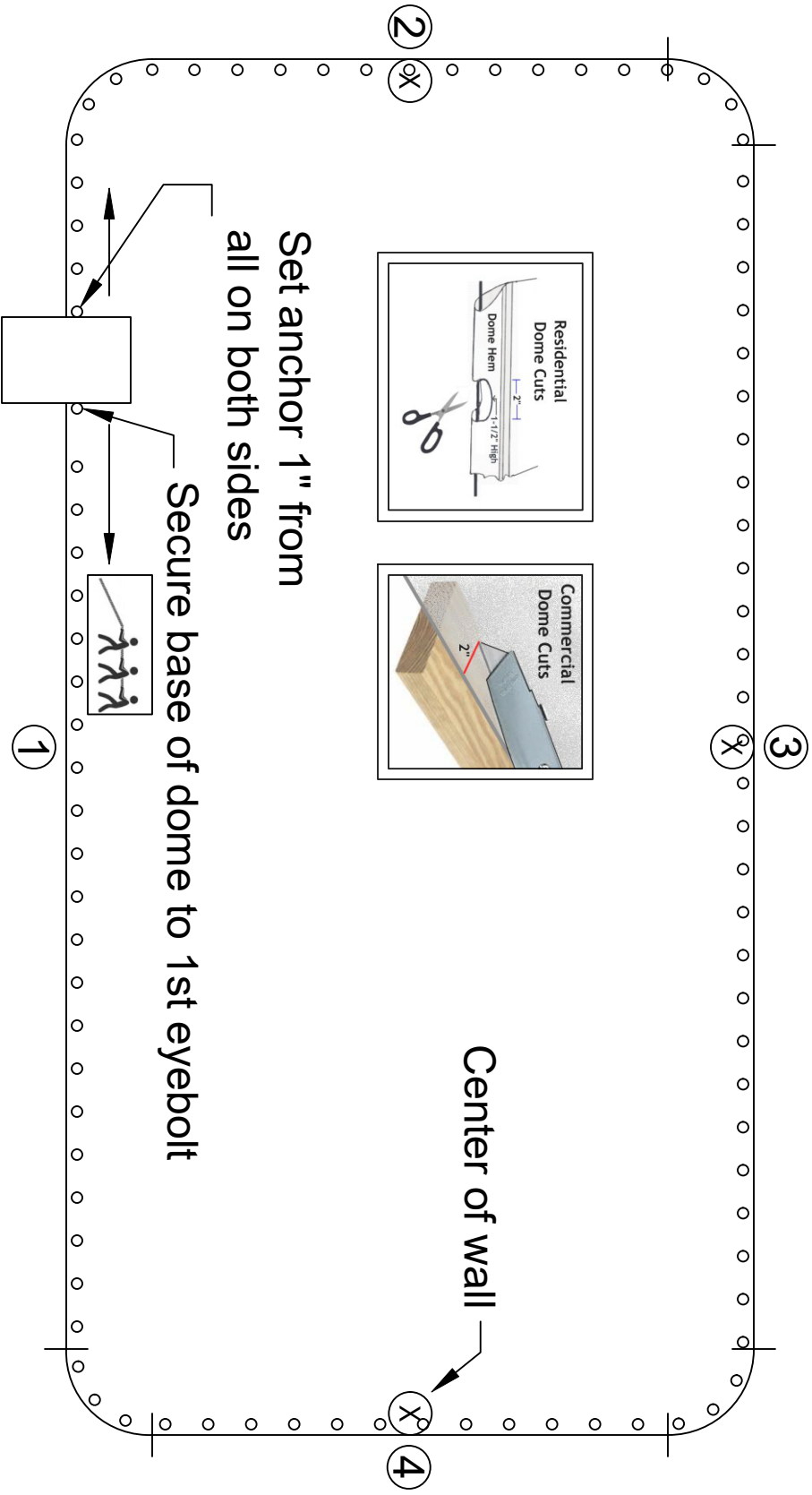
For reference, the corners of the dome are marked with Dots that are about the size of a dime. BLUE dots where the radius of a corner begins and also where it ends. The center of the radius is marked with a RED dot. These dots are located where the wall meets the roof at the corner locations.

It's important that **NONE** of the corner anchors are set into the deck until the dome is **FULLY** in place and all the anchors/eye-bolts on the straight runs are attached to the dome **AND** the airlocks are fully installed and anchored down. (This procedure provides much forgiveness if your measuring is off a bit.)

Dome Anchoring Installation Tips

RX Anchor Setback

- 2' = 4'
- 3' = 5'
- 4' = 6'
- 5' = 7'
- 6' = 8'



Ameri-Brand Products Inc.
 4619 Olive Highway
 Oroville, CA 95965
 1-800-982-6966
 info@go-ab.com

Notes:

Date: 01/29/2021

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Size	Order No.	Drawn By:	Philip Muzzall
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PROPER EYE-BOLT GAPPING

Large Screwdriver



It is very important that the GAP in the eye-bolt where the cable slips thru is the correct size. This sizing is determined after the eye-bolt is in place and the cable is fitted into it. The ideal gap is one where the plastic covering on the cable takes a considerable amount of downward thumb pressure for the cable to be forced out of the eye. The proper gapping prevents the cable from dropping down and out of position when the power is turned off either on purpose or otherwise. **DO NOT** pound the eye-bolts fully closed. A large screwdriver or a pry bar can help to increase the gap if needed.

NOTE: IF YOU HAVE A COMMERCIAL DOME, YOUR EYE BOLTS SHOULD ALREADY BE GAPPED

BEGINNING THE INSTALL

1. Position the crate at the appropriate location on the pool deck. There will be markings on the crate showing where it needs to be located in order to fold out properly. Open the Dome Crate.
2. Locate the marks that were placed on the deck when the dome was originally measured. Snap a Chalk-Line to "connect the dots" around the pool. This layout will match the Layout Drawing you received with your dome. This is a good time to measure down the line and place chalk "cross hatch marks" on the perimeter chalk line to specify the location of the anchors. (usually one foot apart on Large Domes)



3. If there is an Airlock on the wall being installed, begin setting the anchors directly alongside (within 1 inch) of the Airlock FIRST. Then, work your way down the wall towards either another Airlock, or a Corner Radius.

4. If there is NO Airlock on the wall being installed, begin setting the anchors at the END of a Corner Radius and continue down the wall until you've reached the END of the Corner Radius at the other end of the wall.

NOTE: Airlocks are 48" wide so there will be NO anchors installed in that 48" area. Instead, install the anchors adjacent to the Airlock about an inch away from Since we're e area of the Airlock.

**NOTE: AIRLOCK INSTALLATION INSTRUCTIONS ARE On PAGE #
They can be installed after the walls are attached to the deck.**

5. Drill your first hole. Use a "Hammer-Drill" or "Roto-Hammer" and drill a 1/2" Diameter hole approx. 2" deep with a Masonry Bit.



TIP: A good way to gauge the proper depth is to wrap some black electrical tape in the shaft of a screwdriver at the 2" mark.



6. Place the screwdriver in the holes as you drill each hole to verify the proper depth. **Do Not** place tape on the drill bit to use as a gauge. The tape will begin to slide up the shaft each time it comes in contact with the concrete and before you know it the holes are much too deep. Ideally, the top lip of the anchor will be flush with the pool deck.

TIP: Should you drill the hole too deep, fill the hole in partially with some of the concrete dust that came out of the hole(s) to elevate it until the anchor is flush with the surface of the deck. Before setting an anchor, tap the top of it with a hammer until it bottoms out and is flush with the deck surface. Should you need to remove an anchor to drill deeper or elevate it, screwing an eye-bolt partially into the anchor provides a good "handle" that will enable you to pull the anchor back out. The use of a piece of 2 x 4 and a large screwdriver can provide added leverage if needed.

7. Set your anchors with the anchor setting tool(s) provided. Be sure to set them **FIRMLY** with a decent size hammer. **AN ANCHOR INSPECTION** should be completed by a **DIFFERENT** person than the one setting them. To speed things up, you can create a couple of 2 or 3 man teams to work on opposite sides of the pool.



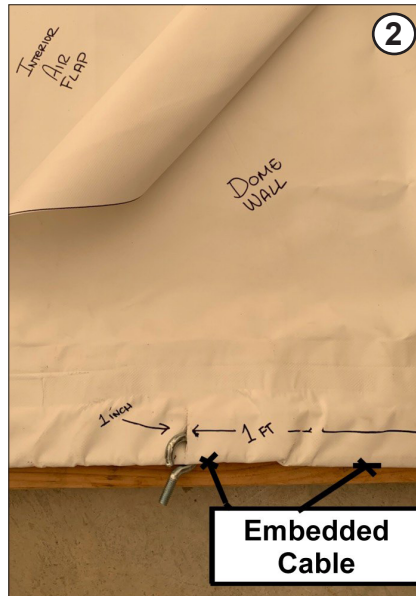
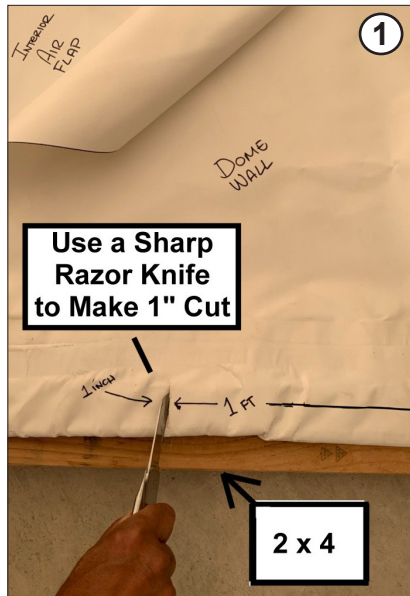
8. After the anchors are set, use a broom and a dust pan to remove excess concrete dust from the deck. If water hoses are available wash the fine dust away. All pool decks slant away from the pool, so washing the deck down will remove the dust from the area where the dome will be installed.

9. Now screw in the eye-bolts so they are firmly embedded into the anchor and positioned so that the open portion of the eye is facing **AWAY** from the pool.

Proper Cable Preparation for Ameri-Domes

***Caution: If you don't follow these instructions, substantial damage to your dome is likely to occur. Repair costs can range between hundreds to tens of thousands of dollars. See examples of "What Not to Do".**

How To Properly Cut Eyebolt Incisions



What Not to Do



Please follow the instructions (below)

Step By Step

- 1) Start anchoring the hem of the dome 1" on either side of an Airlock or Crash Door. Lock the cable end in place Using the Stainless Steel chain and the Quick-Links provided. If beginning the process at a location other than directly alongside an entry, use a pair of Vise Grips to temporarily lock the Hem & Cable to an eyebolt.
- 2) Pull **TIGHTLY** on the Hem & Cable in the direction away from the Vise Grips (2 people pulling works best while the 3rd makes the incision).
- 3) While the Hem & Cable is pulled **TIGHTLY**, Use a **SHARP** Razor Knife to make a 1" **VERTICAL** incision directly centered over the next Eye-Bolt. To ensure an easier cut and to keep from dulling the Razor Knife, this process needs to be completed on top of a piece of 2 x 4. The 2 x 4 is used similar to a cutting board. The Razor Knife will not harm the cable so feel free to cut downward **TOWARDS** the cable, using it as a "stop" for the blade.
- 4) Repeat the same process for each anchor incision. It is **CRITICAL** that the Hem & Cable are pulled **VERY TIGHTLY** at **EACH** anchor in order for the dome to fit properly and for the walls to be secured safely.

ATTACHING THE DOME CABLE TO THE EYE-BOLTS

REMEMBER: It's important that **NONE** of the corner anchors are set into the deck until the dome is **FULLY** in place and all the anchors/eye-bolts on the straight runs are attached to the dome **AND** the airlocks are fully installed and anchored down.

To attach anchors to the dome, a "Cut-In" needs to be made at the location of each of the anchors. These "Cut-Ins" need to be completed as follows:

If the wall has an Air-Lock-Door or Crash Door, you will have placed Anchors on both sides of the door within 1 inch of it.

Tie Off the Base Cable to the Anchor directly beside the door. This is done by slipping the cable thru the eye of the Eye-Bolt and pulling it tightly until the base of the wall is right up against the Eye-Bolt. Thread the cable thru the Eye-Bolt **TWICE** and secure with the cable clamps provided. (This will give you 2 wraps of the cable thru the bolt)



This next part will require 2-3 people. Pull **TIGHTLY** on the dome wall in the direction **AWAY** from the Door. As the wall is being tensioned, use a Razor Knife to cut a 2 to 2-1/2 inch slice in the base of the dome directly at the 1st anchor which is located 1' away from the anchor directly beside the door. This slice should be made in a **DOWNWARD** motion. If the Razor Knife hits the cable, it will not bother anything.

TIP: Place a small piece of 2 x 4 on the pool deck to support the hem of the dome and use it like a cutting board. Cut towards the cable.



Next, Press down firmly on the dome hem in order to get the Eye Bolt to pop thru.



Pull sharply Upward on the Hem of the dome in order to get the cable to pop into the Eye of the Eye Bolt.

Gently Tap the Eye-Bolt so that the gap is PARTIALLY closed. **SEE PROPER EYE-BOLT GAP-PING described on page 2 .**

Continue the process on each subsequent anchor (pulling tightly before each "Cut-In" is made) until you reach either another Door or the beginning of a Corner Radius or other wall direction change.

If there is NO Door on a given wall, locate where a **Corner Radius** begins (blue dot at the top of the wall) and begin the "Cut-In" sequence there. 1st make your "Cut-In" at the end of the Radius and attach the Dome to the cable. Now, using a Pair of **WISE-GRIPS**, lock the CABLE to that Eye-Bolt and then Pull **TIGHTLY** on the dome wall in the direction **AWAY** from the "Cut-In" that was just completed. As the wall is being tensioned, use the Razor Knife to make the next "Cut-In". Continue down the wall until all the "Cut-Ins" have been made and the Dome has been attached to the Cable.

ANCHORING DOWN THE CORNERS

After your dome is **FULLY** in place and **ALL** the anchors/eye-bolts on the **STRAIGHT** runs have been attached to the dome **AND** the airlocks are fully installed and anchored down, it's then time to set the corners.

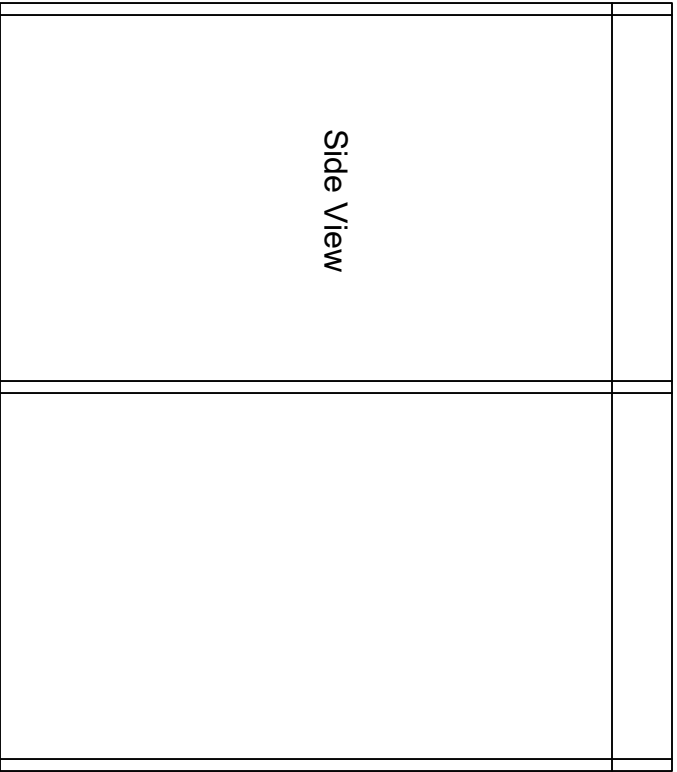
Pull tightly outward on a corner to see where the center of the corner lands on the deck. This should align with the **RED** dot located at the top of the wall where the wall meets the roof. Mark the center of the radius on the pool deck with chalk and set a concrete anchor at that location. Then, set one anchor on either side of the center anchor. The proper location is determined by visually splitting the distance between the center anchor (**RED** dot) and the end each of the radius (**BLUE** dots) . Screw in the eye-bolts. Pull tight and slit the anchor hem vertically directly at the anchor(s) location to enable the cable in the hem of the dome to engage the eye-bolts. Attach the cable to the eyebolts. There will be 3 anchors per corner on a commercial dome.

Critical: Do not attempt to inflate the dome until ALL anchors are in place and the Airlocks are installed.

Ameri-Brand Airlock Entry (AL)

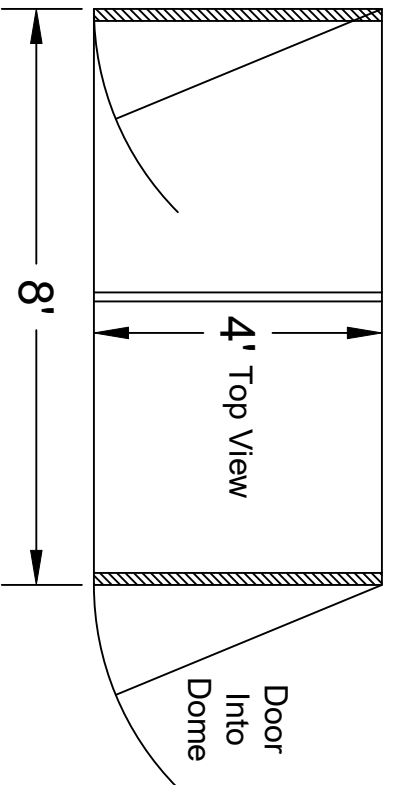
Unit & Door Frames: 1" Square Aluminum Tube .062
Thresholds: 5" x 48" x 3/16" Thick Formed Aluminum
Covers: 20 mil FR Clear Vinyl & 18.5 oz FR White Reinforced Vinyl
Exterior Latch: Keyed Entry / Operates From Both Sides

8'



Side View

Door
Into
Airlock



4' Top View

Door
Into
Dome

8'

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4619 Olive Highway
Oroville, CA 95965
1-800-982-6966
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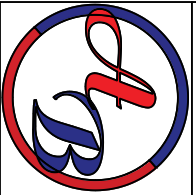
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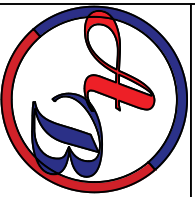
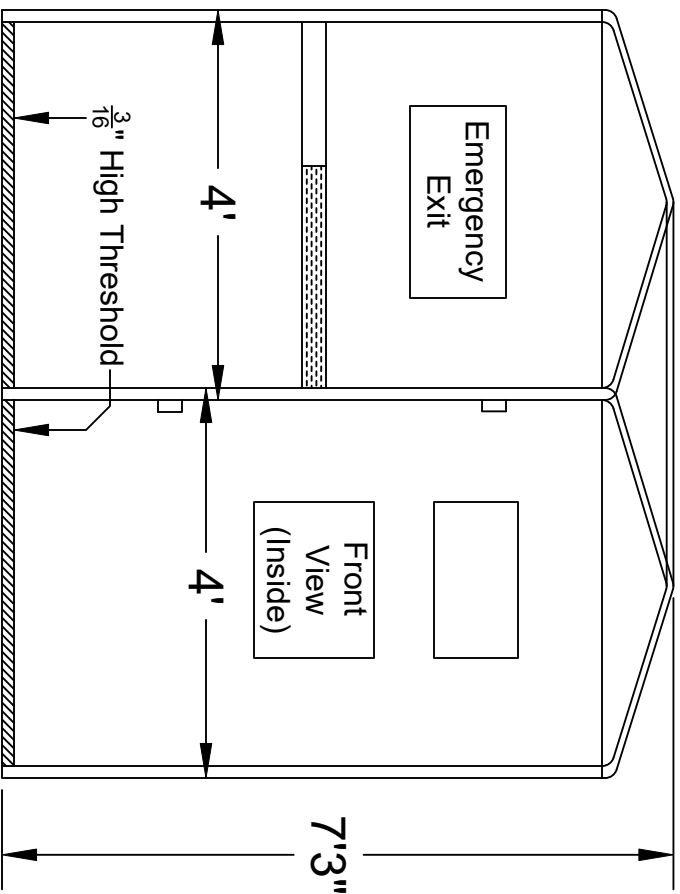
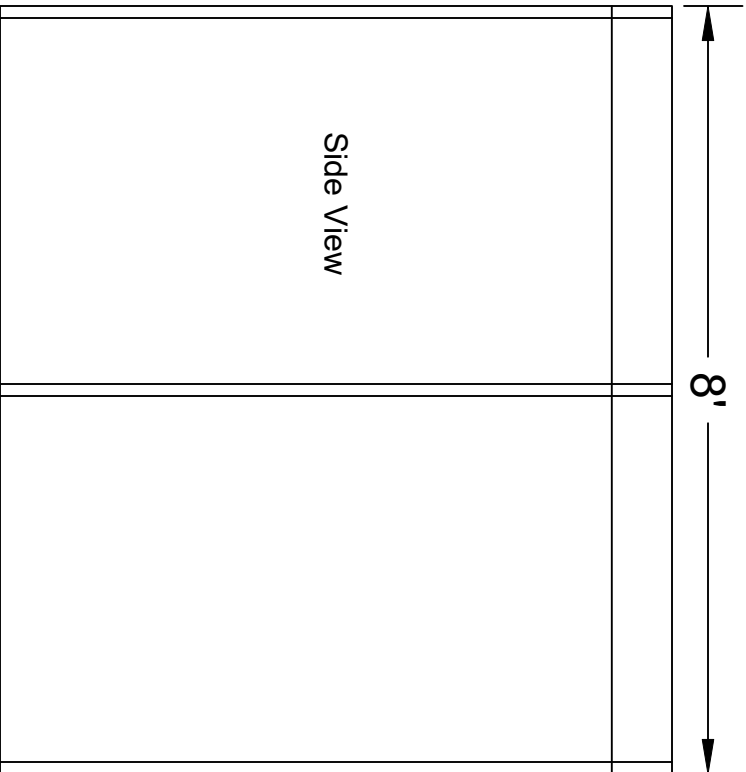
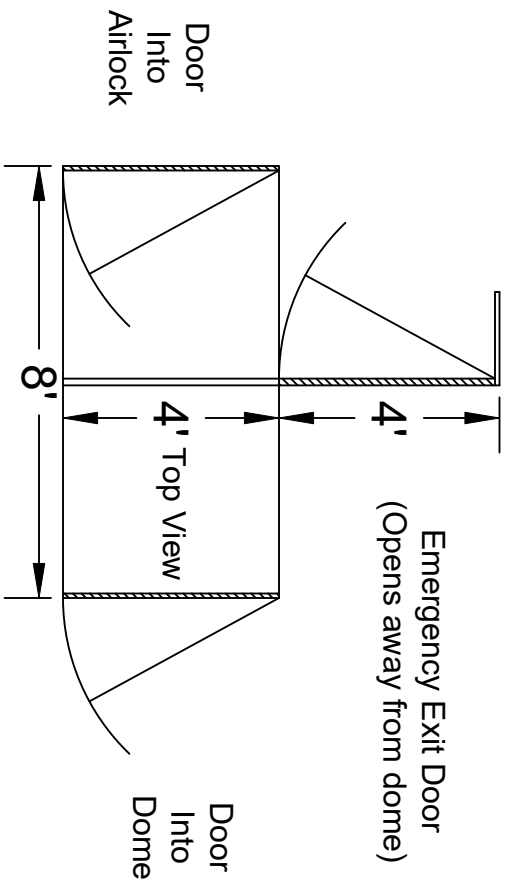
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Filename: SPEC_AD_076.pdf

Date: 02/11/2021



Ameri-Brand Airlock Entry with Crash Door (ALCD)

Unit & Door Frames: 1" Square Aluminum Tube .062
Thresholds: 5" x 48" x 3/16" Thick Formed Aluminum
Covers: 20 mil FR Clear Vinyl & 18.5 oz FR White Reinforced Vinyl
Exterior Latch: Keyed Entry / Operates From Both Sides
Emergency Egress: Panic Bar Hardware



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4619 Olive Highway
Oroville, CA 95965
1-800-982-6966
info@go-ab.com

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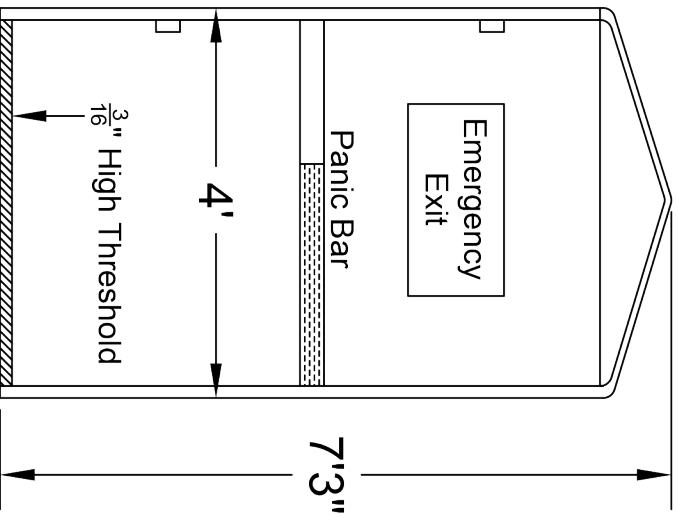
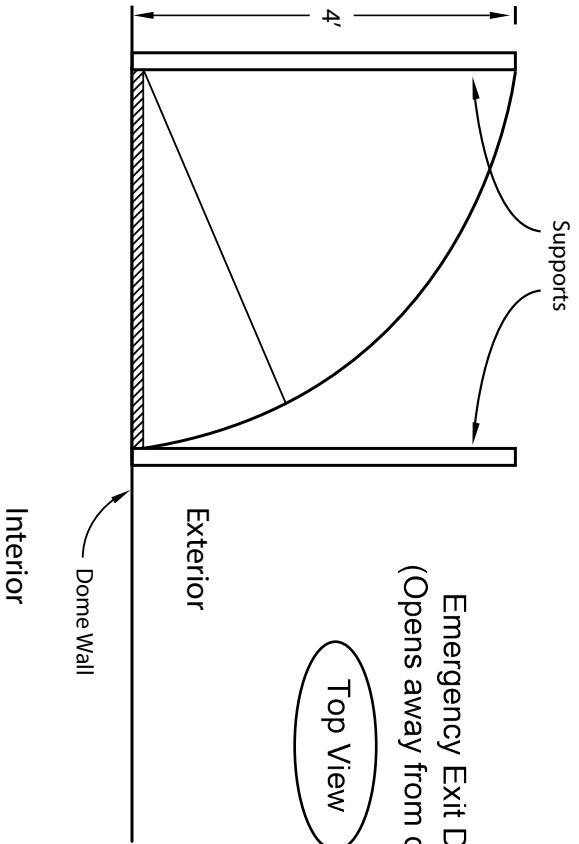
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Ameri-Brand Crash Door (CD)

Emergency Egress: Panic Bar Hardware

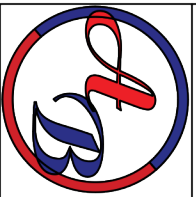
Emergency Exit Door
(Opens away from dome)

Top View



2

4



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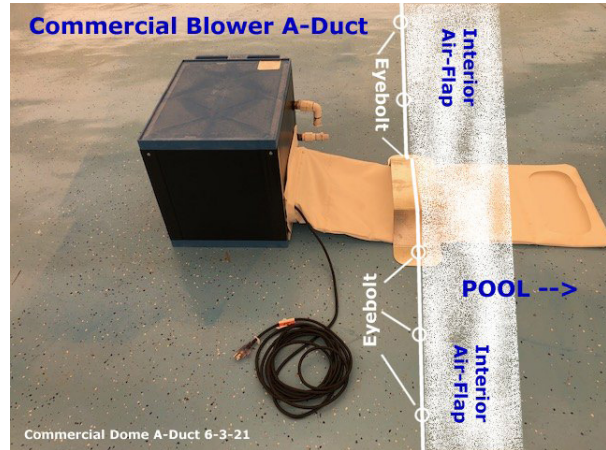
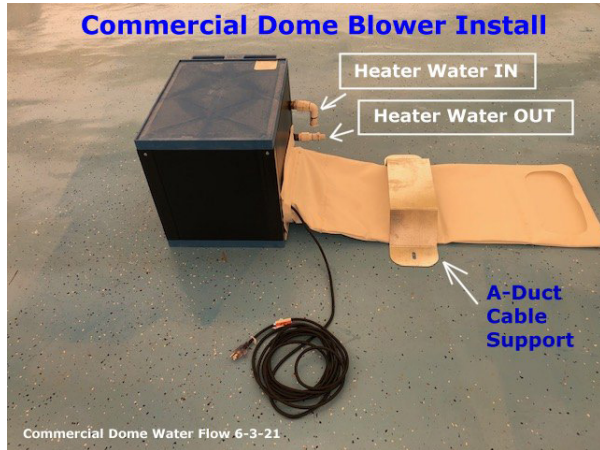
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DOMES BLOWERS



The location where the blowers are installed is determined in the field. The air supply is channeled into the dome through a vinyl snorkel tube. This tube passes under the cable of the dome. The cable (and the air supply snorkel tube) is supported by the metal A-Duct. The A-Duct is secured to the pool deck via two of the eye-bolts. The blowers can be placed anywhere on the dome where there is room and they **DO NOT** need to be spread out around the perimeter of the dome. They can be installed side by side as long as there is at least 18" between each one to prevent blockage of the air flow. If you are using the dome Heater/De-Humidifiers, it's a good idea to keep them near the location where the water supply for them will be coming from.

A question we receive quite often regarding our commercial domes is this: "How do I / We know if the dome is properly inflated?" The dome pressure is important. Keep in mind that the air pressure in the dome will be the same everywhere within the dome even though the outside walls will feel different at various locations around the perimeter. This is because most domes are designed as rectangles. As the air inflates the dome, the dome tries to become a beach ball shape. IE: The roof goes up and the walls go outward. As the walls are pressurized outward, the center of the walls will bow out more than the corners. This tends to pull the corners in a bit, making them softer. So, the very center of the walls are more firm than the softer corners.

A simple gauge to check the pressure is this: : The center of the longest wall(s) on your dome should be fairly firm as in **AS FIRM AS A DODGE BALL** or a **BEACH BALL**. They should not be too soft or too firm. The corners should be considerably softer than the centers of the walls. Say 75% to 80% as firm as the center of the walls. Each dome has its own specific feel to it and you will get to know your own dome.

Remember, the strength of the dome is based on having sufficient air pressure within. If a severe wind is predicted (over 45 mph) we recommend deflating the dome and not using it until the bad weather has passed. Typically, with proper proper air pressure inside, the domes can handle much more than that, but it can be unnerving if you're inside and the walls are being buffeted in a heavy wind.

NOTE: If you are placed in a position where a severe wind event is already in progress, DO NOT try and let the dome down during this time. A dome partially filled with air during windy conditions (even moderate winds) is subject to severe wind damage.

After installation is complete and the dome has been inflated, it's time to "tune up" your dome. *See the attached "Tune Up Sheet" guide (page 14).

If you have any questions, please feel free to give us a call at 800-982-6966. Please note that pictures can be EXTREMELY helpful when discussing your dome. If you can provide a few pictures of the subject matter, it's appreciated.



The Ameri-Dome Tune Up Sheet



Congratulations! You now have your Ameri-Dome Pool Enclosure installed and it's time for the "Tune Up" process to ensure your unit is operating at peak efficiency to help it last many years to come. Achieving and maintaining the proper air pressure in the dome is essential to its safety performance and longevity.

Once the dome has been up for at least 2-3 days, the vinyl air flap on the pool deck will have had a chance to conform to the shape of the pool deck and the sealing process will have begun. As the sun heats the interior of the dome, the vinyl will lay out more evenly and the sealing effect will increase.

The "dragster" effect:

When a dragster driver gets the "Green Light" they punch the throttle and the race is on. The hot rod's tires sit there and spin until there is enough traction between the tires and the track to make the car move forward. Once the appropriate amount of traction is achieved, the vehicle lurches forward and it shoots down the track.

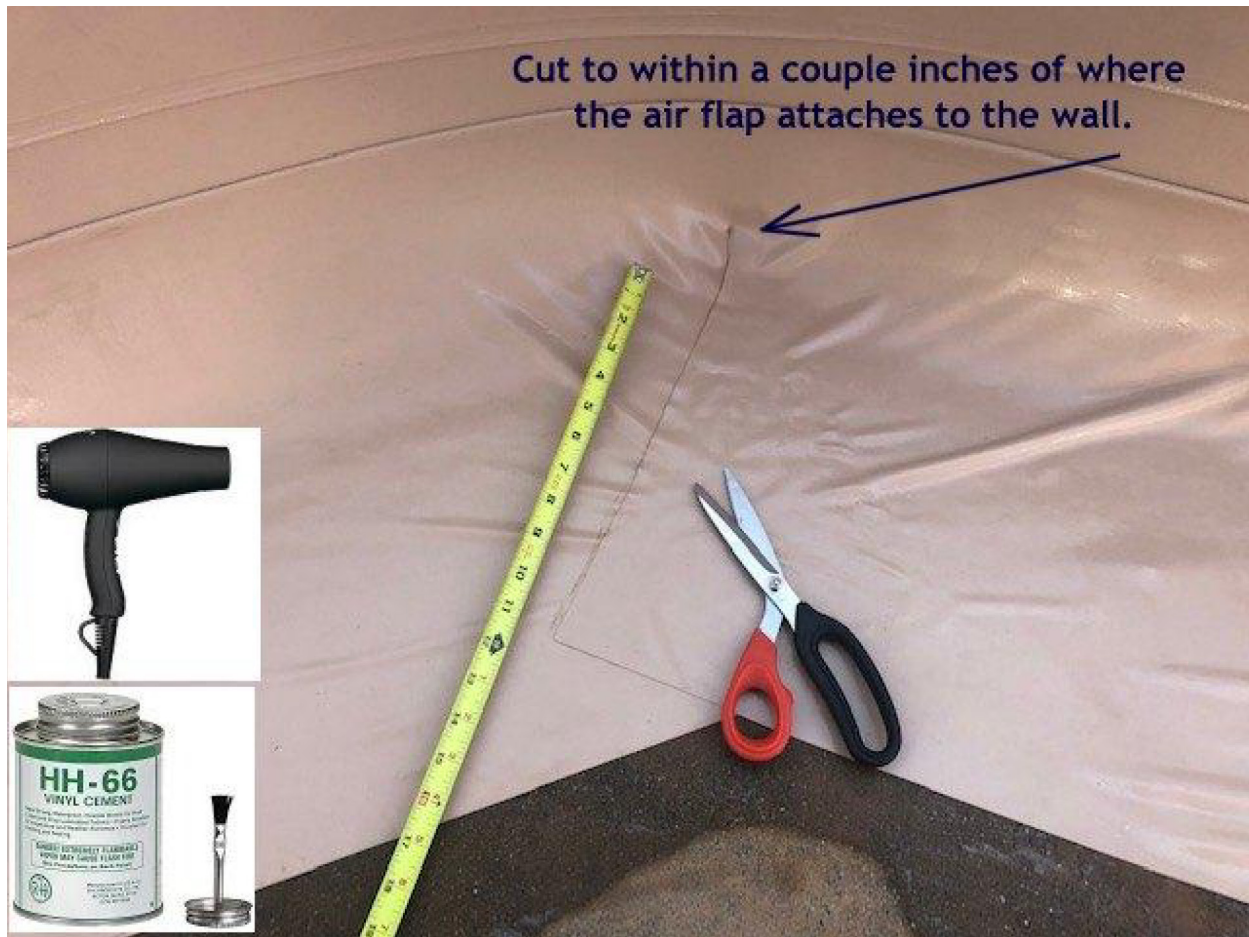
We achieve optimum "Traction" on a pool dome seal when the vinyl has sufficiently flattened out, excessive air leakage has been controlled, and the air that does escape between the flap and the pool deck contains enough humidity (from the heating of the pool water) to help seal the dome to the deck. This "Traction" does not occur right away. It starts slowly and builds. As the pressure builds in the dome the flap is compressed tighter onto the deck. This allows more pressure to build which in turn presses the flap even harder onto the deck allowing even more pressure to build ... (you get the picture).

NOTE: If you have a residential dome with a blower pressure switch, it will prevent the dome from over inflating. The # of times the blower turns on and off does not matter. Some days it will cycle on and off more or less frequently than other days. If it is turning on and off, we know it's doing its job as intended.

Commercial domes will not over-inflate and do not require pressure switches.

Tune-Up Tips:

Be sure your cable at the base of the dome is fully tightened before the dome is inflated. There should be no "loops" of the cable at the anchor locations. The Air-Flap seal attached to the base of the dome should be pulled towards the water to help get any wrinkles out of it. The areas where the seal is overlapping (at a corner or on a curve) should be trimmed and then sealed with the HH-66 adhesive that was shipped with your dome. Be sure to clean and dry the area that is to be glued. If the area is too wet, you can use a hair dryer to remove the excess moisture prior to glueing.



Common areas where there air leaks can occur:

If you have an excess # of large expansion joints in your deck where air is leaking out of the dome, these can be filled with a small ridge of wet sand. Pull up on the flap at the expansion joint location and place a liberal amount of sand into the crack allowing it to “heap” up above the deck level slightly. Put some pool water in a cup and sprinkle it onto the sand. Replace the flap and press it down into its normal position. This creates a very good seal. The sand will usually stay there all winter long and not get into the pool because all pool decks are sloped away from the water. When removing the dome at the end of the season, pull a garden hose into the dome (under the cable) and lift the flap while spraying the sand away from the pool.

Be sure to complete the “Tune-Up” of the dome in order to allow it to achieve and maintain the correct pressure. Most of the “Tune-Up” procedures will only need to be completed during the initial dome install of the first season as on subsequent installs the dome will be placed in the exact position. Completing the “Tune-Up” will allow your dome to stand up straight and will prevent the walls from sagging. The corners of the dome will take the correct shape and the Air-Lock shroud(s) (if applicable) will expand properly to the point where they are fully inflated and supported by the air pressure within the dome.

When looking at the inside of a freshly installed dome you will notice that the dome Air-Flap Seal will show a wrinkle here and there, a crease or 2 in another area, many folds in the corners of the dome etc.. Individually, each of these “vents” are not a problem. However, start adding the aggregate air loss from all of them together and the total air loss will most likely prevent your dome from properly inflating unless you perform the “Tune-Up”.

Tips on Solving Excessive Air Loss

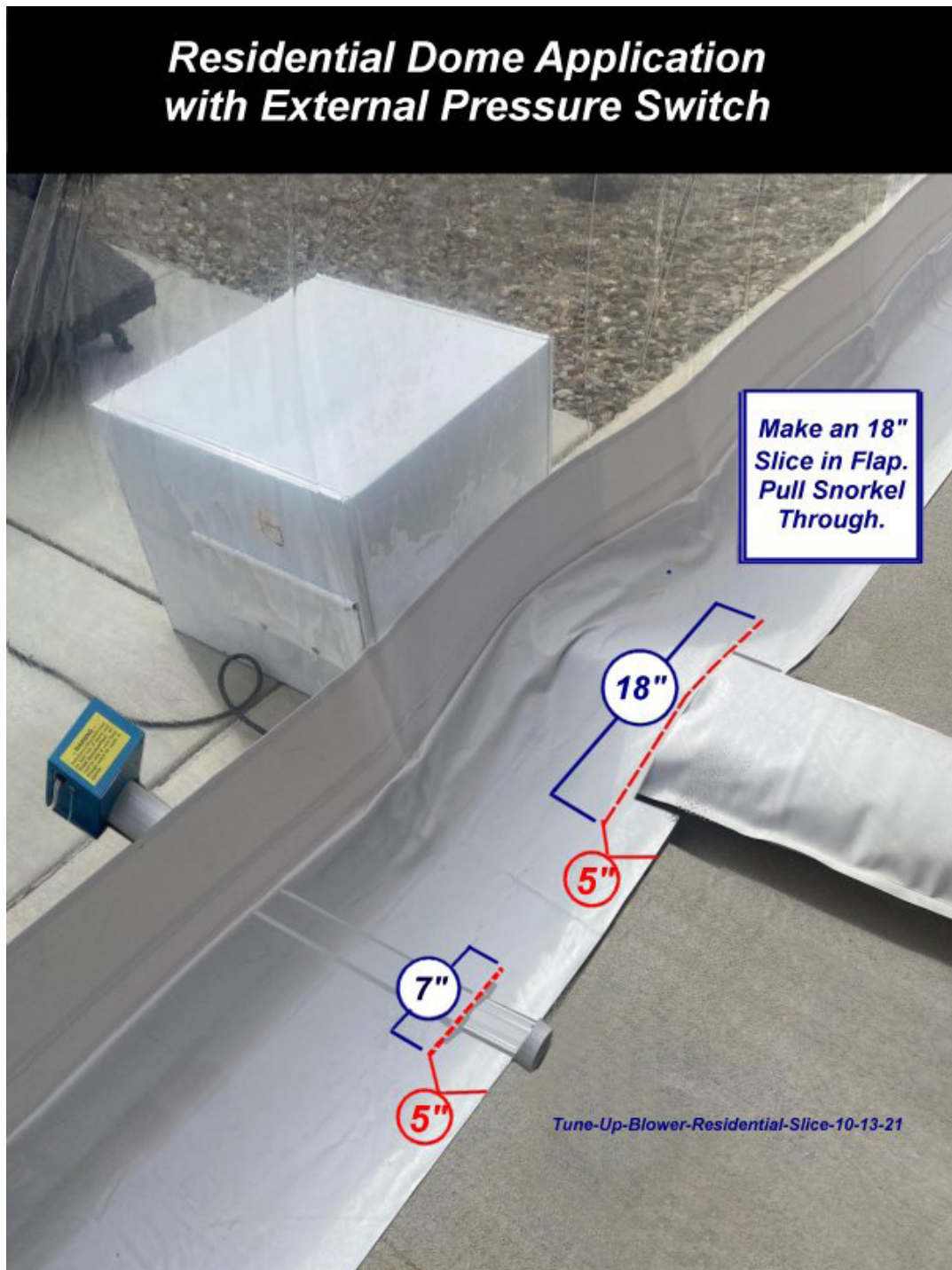
Commercial Domes: **SEE Picture Right** ▶

The area around the blower(s) are another common place of excessive air leakage. For commercial dome applications, cut an incision into the air flap and pull the snorkel tube through as shown in the pictures (right and on page 4). Also be sure that the snorkel tube is aligned straight towards and into the dome so that **ALL** the air is allowed to enter directly from the blower without any obstruction whatsoever.



Residential Domes: SEE Picture Below

The areas around the blower(s) and the pressure-switch tube(s) are another common place of excessive air leakage. For residential dome applications, cut an incision into the air flap and pull the snorkel tube through as shown in the picture below. Also be sure that the snorkel tube is aligned straight towards and into the dome so that ALL the air is allowed to enter directly from the blower without any obstruction whatsoever.



Another couple of places to look for excessive air leakage are the drains located in the pool deck. If they are within the dome, you can remove the grates over the drain and place a rag into the drain hole. This will still allow proper drainage of water as the rag will wick it through and the air pressure in the dome will force the water through the rag. Another method is to remove the grate and spread a plastic grocery bag over the hole. Replace the grate and secure in place. Trim off the excess bag. Take a screwdriver and pierce a hole in the center of the bag that's covering the hole. This will prevent excess air leakage and still allow for proper deck drainage.

If you have an automatic pool cover that has the reel system built into a subsurface "well", check it for a drain. If it has one, the drain hole can be plugged with a wet rag.

If you're having trouble fully inflating your dome, send us some pictures of the install (both inside and out) and pictures of the blower installations (both inside and out).

Send to: info@go-ab.com

Ameri-Brand Products Inc

4619 Olive Hwy.

Oroville, CA. 95966

800-982-6966

www.ameri-brand.com • info@go-ab.com

Commercial Dome Install Instructions

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