



# **Installation Manual**

## **NOTE:**

The printed Installation Manual that is included with your booth is a general assembly guide for all Colmet booths, and is not specific to A-Frame booths. This Manual is more specific to A-Frame booths and will prove more helpful. The isometric drawings and inventory list that are included with your shipment are SPECIFIC to your booth, and you will use them throughout the installation. If at any time during your installation you need help, please do not hesitate to call us!

**877-338-3006**

If your booth is arriving via a freight company, you will need a forklift or flat bed wrecker to unload the shipping container. Most of the time your booth will be delivered in a truck with a lift gate, note this is not always the case.

## **CHECK FOR VISIBLE DAMAGE:**

If there is shipping damage be sure to note on the delivery invoice and have the delivery driver sign noted damage. If the damage is extreme refuse delivery. Also take pictures of the damage while the driver is present. Once the driver has departed it is very hard to claim shipment damage.

**All DAMAGES MUST be reported within 24 hours of receipt and a freight claim filed with the carrier.**

## **PRELIMINARY:**

A-Frame booths are manufactured in accordance with NFPA 33, UFC 45 and NEC 516. However, local codes and regulations may apply to the

installation and use of this product. It is recommended that all permits and approvals be obtained prior to installation and use of the spray booth. A-Frame does not supply permits, but our website has the documentation generally required.

A fire suppression system is not included with the booth (unless ordered.) By code, such systems must be installed by a licensed local installer.

Under no circumstances shall this booth be considered a load bearing structure... DO NOT walk on, stand on or use the spray booth as a support structure before, during, or after installation.

**Please use extra caution when handling metal panels as the edges may be sharp.**

Please take the time to inventory all of the components of your booth prior to beginning assembly. In the unlikely event that you are missing a piece, we would like to get it to you as soon as possible so you can proceed with the installation.

### **TOOLS / MATERIALS NEEDED:**

\*Gloves.

\*Knee Pads.

\*Tape Measure, Chalk Line and Plumb Bob.

\*Pry Bar.

\*Claw Hammer.

\*8" to 10" tapered punch or similar tool (for use when aligning holes.)

\*Tool belt or pocket apron (for holding nuts and bolts.)

\*Assorted Wrenches (pneumatic or electric tools will be more efficient.)

\*Drill with 3/8" metal bit and assorted drivers.

- \*Hammer Drill (for fastening booth to concrete floor.)
- \*Concrete floor anchors and concrete bit of the corresponding size (3/8" x 2-1/2".)
- \*Assorted Screw Drivers.
- \*A caulking gun to apply to sealant and a putty knife to wipe seams.
- \*2" x 4" Studs (or other suitable support method) for supporting walls and gables during installation.
- \*2 Ladders (8' – 10'.) **Hint: A Drywall Lift (Panel Hoist) can be rented inexpensively and will save time.**
- \*Cutting tools, roof sealant and roofing screws (for making roof penetration and sealing the roof flange. The required tools and hardware will vary depending on roof and field conditions.)

## **PLANNING AHEAD**

In order to inventory the components of your booth, you will need to locate the cardboard box which contains all the small parts. In that box will be an envelope with a diagram of your booth and a 'Purchased Items' list. The parts list has a number of each part, the quantity of each part and a description and size of all parts. You will refer to list often to help locate parts by size or shape.

Uncrate and inventory all spray booth components to ensure all of the parts are accounted for. Each component is numbered on the exploded view and on the part itself. Stack all common panels together for easy location. **Hint: If possible, stack half of the wall / light panels on one side of your shop, and the other half on the other side.**

The floor surface of the booth must be non-combustible material of such character as to facilitate the safe cleaning and removal of residues. The floor surface of the booth must be flat and level to avoid problems with erection and alignment of panels.

While planning the exact location of your new paint booth, keep the following specifications in mind, as they are Your Responsibility:

Clearances between other work areas and combustible storage areas must be held as follows:

- 1) 3 ft. minimum clearance at all sides and sealed entry ways (i.e., doorways).
- 2) 5 ft. minimum clearance at all non-sealed entry ways (i.e., the open face of the IB booth or a silhouette opening).
- 3) A minimum of a 10 ft. clearance must be held between the exhaust stack of the booth and the intake of another apparatus. NFPA 33 dictates a minimum discharge clearance of 5' from the nearest combustible material; however, stack height requirements vary with individual states and can be up to 1 ½ times the building's roof height from grade.
- 4) A minimum of a 10 ft. clearance must be held between the Intake of this booth and the exhaust of any other apparatus.

### **BOOTH LAYOUT:**

Using a chalk line or magic marker, mark the dimensional outline of the booth on the floor using the provided dimensional drawings. At this time, be sure that the area above the booth where the exhaust stack will be routed is clear of any obstructions (building structure, beams, or trusses etc.) Be sure to account for clearance of the product and personnel doors.

It is generally advised to begin the installation by erecting the exhaust plenum. On Dust Devil and Squall models, the plenum is in the rear of the booth. On Tornado, Cyclone and Typhoon models, the plenum is in the front of the booth. Once the plenum has been erected and is in the desired location, use a plumb bob to ensure that the exhaust stack will be clear of any obstructions. Should the assembled plenum need to be moved to clear any obstructions, it should be done at this time. An assembled exhaust plenum can

generally be moved on the floor, but moving the entire assembled booth will be problematic.

### **BOOTH ASSEMBLY:**

When assembling the booth, you should leave the bolts **FINGER TIGHT ONLY** until each section is assembled. All flanges should face outward. Be aware that some connection points will include 3 pieces, not just two. Consult the Isometric drawing carefully before each connection. The nut end of the bolt should protrude outward (bolt heads inside the booth). Use a drift pin to align panel holes when two or more panels are difficult to align by hand.

Following your chalk line, lay out all floor channels for the exhaust chamber (plenum) and all the walls. As you attach the wall panels together, they will also bolt to the floor channel.

Starting with the exhaust chamber at either rear corner, bolt one corner panel and one rear wall corner panel together. Bolt opposite rear sidewall panel to rear wall panel. Bolt all rear wall panels in place. Once you have assembled the rear and side walls of the chamber, bolt the tie channel along the top edge of these panels.

Place exhaust fan panel above the side and rear wall panels and bolt in place. Bolt (sandwich) filter filler panels between the sidewall and roof panels and the exhaust chamber. **HINT: On the reverse flow models (141026; 141230; or 161635) it is much easier to erect the exhaust filter frames first, then connect the bridge plenum or top afterwards.**

**IMPORTANT: Once the exhaust plenum has been completed, and before continuing assembly of the rest of the booth, be sure that the exhaust stack routing will be clear of any obstructions. This is also a good time to verify the length layout measurements.**

Following the exploded view drawings, continue alternately assembling wall panels and roof panels to each other until you reach the front end of the booth. While assembling the work area of the booth, if an I-Beam is encountered, make sure the booth has been assembled

accurately before anchoring. Be sure to keep the booth square and aligned as you continue adding panels.

Roof and gabled ends should be installed so the rest of the booth can support them. Use a 2x4 as a support leg to hold wall panels in place if they sag during installation.

After all wall and roof panels have been installed and you've reached the front of the booth (or rear, depending on model,) all remaining bolts that are not tight should be tightened at this time. Be sure the walls are plumb and true to your chalk-line before tightening. Assemble the door header and jambs, being sure to level and plumb these parts. ALL bolts should be double checked to ensure that the main structure is tightly assembled.

### **PRODUCT DOOR ASSEMBLY:**

Placing the product doors (main double doors) on a work bench or set of sawhorses will make assembly easier. Attach door sweeps (rubber strips,) and hinges to the product doors at this time, then lift into place and attach the hinges to the door jamb using provided tek screws. Install Brixon latches, and door pulls at this time (on both the product and personnel doors.) **HINT: When installing the main product door handles on the inside, we have found in most cases it is better to rotate the handles 90 to avoid scraping your hand when opening or closing the doors from the inside.**

### **LIGHT FIXTURE INSTALLATION:**

A-Frame booths are supplied with open-type light fixtures that mount from the outside of the booth. From the outside of the booth, apply foam gasket material (3/4" open cell foam) around all window frame openings. Place glass against the gasket, then place the light fixture over the glass and use the provided springs to secure the fixture. (It is best to have assistance with this procedure). The bulbs required for the fixtures are T-8 (32watts) and are not included with the booth (they are readily available at Home Depot or Wal Mart.) Do not install the lamps into the fixtures until they have been wired, as the fixtures

must be removed to install the lamps. It is recommended that you have a licensed electrician wire the lights when the booth assembly is complete.

### **FAN AND MOTOR INSTALLATION:**

The fan and motor assembly will bolt to the exhaust roof panel. It is usually easier to assemble the fan and motor on the ground, and hoist them as one unit to the top of the plenum, but this is not required. Begin by bolting the white connection ring to the top of the fan housing. Stand the fan assembly on end with the motor mounting plate facing up and bolt the motor to the fan housing. Install the motor shiv and woodruff key, then install the belt(s) and tension appropriately. Use extreme caution when hoisting the fan and motor assembly onto the top of the booth as **they are very heavy**. Once in place, bolt the fan housing to the roof of the plenum via the pre-punched holes. Check installation of exhaust fan for proper airflow direction (an airflow direction arrow appears on the fan housing.) It is recommended that you have a licensed electrician wire the fan motor when the booth assembly is complete.

### **EXHAUST DUCT INSTALLATION:**

If you purchased the optional exhaust ductwork, we suggest you have the roof flange professionally installed as this entails cutting a hole in the roof of your building. To assemble the ductwork, first screw the pipe with the clean-out door to the white connection ring on the exhaust fan. The rest of the ductwork is crimped on one end to interlock with the next section as it passes through the roof flange. Your ARV (Automatic Damper) will be mounted on top. The storm collar will attach to the duct above the roof flange to make it weather proof. Where more than 25' of piping is required, the static pressure (resistance) is increased and the air flow may be hindered when using the standard exhaust duct kit. Where a piping arrangement of an unusual nature is employed or where two or more elbows are used, a similar condition may exist. Therefore, if either of these situations arise, please contact A-Frame for recommendations.

## **SEALING THE BOOTH:**

Use the provided 3/4" open cell foam tape to seal around the perimeter of the product doors as well as the flange in the middle where the doors meet. Also apply foam tape to the perimeter of the personnel door. Use the thinner foam tape where required to ensure that doors close completely.

Use the provided latex caulking to seal the rest of the booth. Run a bead of caulk everywhere one panel meets another, including the plenum. Be sure to seal around the perimeter of the booth where the panels meet the ground. Use a putty knife if desired to clean-up the beads and remove excess sealant.

## **FINAL DETAILS:**

It is recommended that floor anchors be installed every 12" across the base of the booth. Install anchors at the corners of the product and personnel doors.

Exhaust filter installation: Install one wire grid in each filter cell with the prongs facing into the booth. The exhaust filters will attach to the prongs with the 'corrugated' cardboard facing out by simply pushing them onto the prongs.

Intake filter installation: These filters have an internal wire frame and install simply by pushing them into the filter grid. Depending on the airflow configuration of your booth, this filter grid will either be on the product doors, or at the rear of the booth. It is important to install these filters with the 'tacky' or 'sticky' side INSIDE the booth. Dust and other particulates will collect on the filter if the tacky side is facing outward.

The manometer is installed near the exhaust chamber. One side of the manometer tubing installs in the interior of the booth and the other tube installs in the exhaust chamber. Mount the unit on the outside of exhaust chamber approximately 5' above floor level. To calibrate,

carefully read follow the installation instructions that come with the Manometer.

**CHECK THE FOLLOWING ITEMS PRIOR TO START-UP:**

- 1.) Motors wired for proper voltage. Lights wired properly.
- 2.) All fans and motors turn freely.
- 3.) Check installation of exhaust fan for proper airflow direction. Check for proper fan rotation direction.
- 4.) Listen for excessive or unusual noise when booth is operating.
- 5.) If an air solenoid valve and limit switch is installed, with booth operating, open any door for 30 seconds and see if paint air gun will shut down. This will verify proper safety operation of the booth.

**PLEASE CALL US ANY TIME WITH QUESTIONS OR CONCERNS!**

**877-338-3006**

