



A Division of **TUXEDO** Distributors, LLC.

## *Paint Spray Booths*

### **Cross Flow / Tilt Panel**

# **Installation & Maintenance Manual**

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# iDEAL Paint Spray Booth (PSB-AFCF23ASY)

## 1. INTRODUCTION

1.1 Introduction.....	4
1.2 Receiving, Unpacking, and Reporting Missing Items.....	4

## 2. SAFETY

2.1 Safety Alert Symbol and Signal Words .....	5
2.1.1 Assembly Hazards.....	5-6
2.1.2 Operational Hazards.....	6-7
2.1.3 Maintenance Hazards.....	7
2.1.4 Fire Hazard.....	8
2.2 NFPA 33 .....	8

## 3. COMPONENT DESCRIPTION

3.1 Compliance to Applicable Codes.....	8
3.2 Material Specifications.....	8
3.3 General Description .....	8
3.3.1 Paint Area.....	8
3.3.2 Exhaust Fan and Chambers.....	9
3.3.3 Product Doors.....	9
3.3.4 Door Latch.....	9
3.3.5 Door Limit Switch.....	9
3.3.6 Air Make Up Unit (Optional) .....	9
3.3.7 Intake Plenum / Canopy (Optional).....	9
3.4 Exhaust Filter Manometer .....	9
3.5 Air Solenoid Valve.....	9
3.6 Control Panel.....	9

## 4. INSTALLATION

4.1 General.....	10
4.2 Preliminary .....	10
4.3 Planning Ahead.....	10
4.4 Basic Booth Assembly.....	10-12
4.5 Light Fixtures.....	13
4.6 Manometer.....	14-16
4.7 Exhaust Filter Installation.....	17
4.8 Intake Filter Installation.....	17
4.9 Motor Installation.....	18
4.9.1 Mounting.....	18
4.9.2 Install Sheaves and Fan Belts.....	18
4.9.3 Electrical.....	19
4.10 Tube Axial Fan.....	20
4.11 (Optional) Exhaust Duct Kit & Installation.....	20
4.12 Product Doors.....	21-22
4.13 Side Access Door Limit Switch Installation.....	23
4.14 Side Access Door Latch Installation.....	23
4.15 Front Door Limit Switch & Latch Installation.....	24
4.16 Limit Switch Wiring.....	25-26
4.17 Air Solenoid Wiring.....	25-26
4.18 Checklist.....	27

**5. MAINTENANCE**

5.1 Maintenance Interval Cart ..... 28-29

5.2 Daily..... 28

    5.2.1 Inspect Filters ..... 28

    5.2.2 Filter Maintenance ..... 28

    5.2.3 Determine Filter Condition ..... 28

5.3 Every Two Months..... 29

    5.3.1 Lubricate Door Latches ..... 29

5.4 Every Six Months ..... 29

    5.4.1 Check Fan Belts ..... 29

5.5 Every Year..... 29

    5.5.1 Inspect Motor..... 29

    5.5.2 Inspect Fan Wheel..... 29

    5.5.3 Inspect And Clean Air Solenoid Valve..... 29

**6. WARRANTY**

6.1 Returning Items For Credit..... 30

6.2 Back Charges For Material And Labor ..... 30

**Please read and understand this manual before using your booth.**

***Thank you for your iDEAL Paint Spray Booth purchase!!***

# iDEAL Paint Spray Booth (PSB-AFCF23ASY)

## 1. INTRODUCTION

### 1.1 INTRODUCTION

This manual explains the basic assembly and routine maintenance of iDEAL Paint Spray Booths. It is essential to follow all of the safety instructions, along with keeping this manual with your Paint Spray Booth at all times.

The iDEAL Paint Spray Booths consist of four major components, depending on the model:

- Paint Booth
- Product Doors
- Exhaust Fan(s), Chambers and/or Chimney Stacks
- In some cases, an Air Make-Up Unit (AMU)

A brief description is provided for these and other related items.

The text contained in this manual is for current production models. Some instructions and maintenance procedures may not apply to your specific unit. Equipment modifications from original design and specifications are strictly prohibited. Modifications may compromise safe operation of the booth, subjecting users to serious injury or death and may void any remaining warranty. This Operator's Manual does not replace, nor does it release the operator from observing all safety operating limitations as well as any applicable federal, state, provincial or local regulations.

### 1.2 RECEIVING, UNPACKING, AND REPORTING MISSING ITEMS

Tuxedo Distributors (iDEAL) will do everything possible to ensure you receive your equipment on time, free from damage and with all required parts. Per company policy, two independent checks are performed to verify each item against the packing list. However, since we are shipping by common carrier, the following procedures must be followed:

When receiving and unloading equipment check for damage. Note on Bill of Lading "FREIGHT DAMAGE."  
Notify the Tuxedo Distributors customer service department immediately (on day of delivery) of any damage.

Unpack all items and verify against packing list within ten (10) days of receipt. Notify Tuxedo Distributors customer service department of missing items and discrepancies immediately (within 10 days at the latest).

If there are any missing items from your shipment, they will be shipped as follows:

Items that can be shipped UPS usually take from one to three days to receive, depending on distance. Items too large for UPS will ship via common freight. This shipping method typically takes from one to five days to reach the destination. Tuxedo Distributors will not pay for overnight freight on missing items. If overnight freight is necessary, the buyer shall be accountable for overnight freight costs.

If Tuxedo Distributors determines that the reported shortage was checked off in our records, replacement parts will be shipped AND invoiced accordingly.

During the warranty period, Tuxedo Distributors will have the option to repair or replace, free of charge, any parts that Tuxedo Distributors has verified to be defective in materials or workmanship. If inspection of the equipment does not disclose any defect in workmanship of material, repaired or replacement parts will be offered at a reasonable price, which will include the costs of labor, materials and transportation.

## 2. SAFETY

### 2.1 SAFETY ALERT SYMBOL AND SIGNAL WORDS

Before assembling, operating or servicing the spray booth, you must read, understand and follow the instructions and safety warnings in this manual. Your spray booth may not be equipped with some of the optional equipment described in this manual.

### NEVER ALLOW ANYONE TO OPERATE THIS EQUIPMENT WITHOUT PROPER TRAINING!

The safety information in this manual is denoted by the safety alert symbol:

The level of risk is indicated by the following information:

<b>⚠ DANGER</b>
<b>DANGER</b> - Indicates a hazardous situation, which, if not avoided, <b>WILL</b> result in death or serious injury.
<b>⚠ WARNING</b>
<b>WARNING</b> - Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.
<b>⚠ CAUTION</b>
<b>CAUTION</b> - Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.
<b>NOTICE</b>
<b>NOTICE</b> - Indicates a situation that could result in damage to the equipment or other property.

#### 2.1.1 Assembly Hazards

<b>⚠ WARNING</b>
Prevent serious injury or death.
Overriding a safety system may result in unsafe equipment, which may result in serious injury or death.
Do not override safety devices.
<b>⚠ WARNING</b>
Blade hazard. Keep hands clear of rotating parts.
Follow lockout procedure before servicing.

iDEAL Paint Spray Booth (PSB-AFCF23ASY)

**⚠ WARNING**

Prevent serious injury or death.

Use adequate lifting devices to raise, move and install booth components.

**⚠ WARNING**

Prevent serious injury or death.

Electrical installations must be performed by qualified electricians.

Installation must conform to all national, local, and provincial codes and standards.

2.1.2 Operational Hazards

**⚠ WARNING**

Prevent serious injury or death.

Do not operate machine with guards and/or covers open or removed.

**⚠ WARNING**

Prevent serious injury or death.

Only trained and qualified personnel may operate booth.

**⚠ WARNING**

Prevent serious injury or death.

Never operate spray booth while under the influence of drugs, alcohol or while feeling ill.

**⚠ WARNING**

Prevent serious injury or death.

Always wear personal protective equipment (PPE) appropriate for job.

Read Material Safety Data Sheet for products used in spray booth.

**⚠ WARNING**

**Shock hazard.**

**Only a qualified electrician may open electrical control cabinet.**

**Disconnect and lockout / tagout all power sources before adjusting, repairing, or cleaning booth.**

**2.1.3 Maintenance Hazards**

**⚠ WARNING**

**Prevent serious injury or death.**

**Disconnect and lockout / tagout all power sources before adjusting, repairing, or cleaning booth.**

**⚠ WARNING**

**Prevent serious injury or death.**

**Service, maintenance and adjustments must be performed by trained and qualified personnel.**

**⚠ WARNING**

**Burn hazard. Do not touch hot parts.**

**Allow to cool before servicing.**

**⚠ WARNING**

**Prevent serious injury or death.**

**Always wear personal protective equipment (PPE) appropriate for job.**

**Read Material Safety Data Sheet for products used in spray booth.**

## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

### 2.1.4 Fire Hazard

No smoking or open flame in or near spray booth. Local fire codes prohibit smoking in the vicinity of spray painting operations.



**DO NOT STORE FLAMMABLE LIQUIDS ADJACENT TO OR INSIDE SPRAY BOOTH. READ ALL PRODUCT LABELS AND INSTRUCTIONS. DO NOT USE ANY ELECTRIC POWERED AIRLESS SPRAY RIGS, PRESSURE WASHERS OR SIMILAR EQUIPMENT WHEN APPLYING A LOWFLASH POINT SOLVENT OR PEEL COATING. RUN SPRAY BOOTH EXHAUST FAN TO PURGE DANGEROUS VAPORS THAT COULD IGNITE OR EXPLODE WHILE CLEANING OR PERFORMING MAINTENANCE INSIDE SPRAY BOOTH.**

**AN APPROVED FIRE PROTECTION SYSTEM MUST BE INSTALLED ON YOUR SPRAY BOOTH TO COMPLY WITH NFPA 33, SECTION 9. PORTABLE FIRE EXTINGUISHERS MUST BE LOCATED IN OR AROUND YOUR PAINT MIX ROOM PER NFPA 10.**

### 2.2 NFPA 33-2011

The NFPA 33-2011, Standard for Spray Application Using Flammable or Combustible Materials, Copyright © 2010, National Fire Protection Association can be freely accessed & viewed on line at:

<http://www.nfpa.org/codes-and-standards/document-information-pages?mode=code&code=33>

## 3. COMPONENT DESCRIPTION

### 3.1 COMPLIANCE TO APPLICABLE CODES

This Spray Booth is designed to be in accordance with the National Fire Protection Association standard NFPA 33 "Spray Application Using Flammable Combustible Materials. The NFPA Standard Safety Code for the Design, Construction and Ventilation of Spray Finishing Operations." This spray booth meets or exceeds the requirements of the Occupational Safety and Health Administration (OSHA).

### 3.2 MATERIAL SPECIFICATIONS

The spray booth panels, filter racks and product doors are constructed of 18- gauge steel, conforming to ASTM A527 "Lock Forming Quality". All structural steel conforms to ASTM A36.

### 3.3 GENERAL DESCRIPTION

The spray booth consists of four major components: paint area, exhaust fan and chamber, product doors and, in some cases, an air make-up unit. A brief description is provided for these and other related items.

#### 3.3.1 Paint Area

The paint area is the actual "booth" part of the spray booth. Parts are placed in this area, through product doors, if so equipped, to be painted. Air flows from the intake filters of the booth to the exhaust filters. The booth is constructed of 18-gauge galvanized sheet metal panels which are bolted together. The booth exhaust is routed through the exhaust chamber at the side or end of the booth. The exhaust fan(s) then routes the exhaust out through the exhaust duct(s) and discharges it at a point above the roof height of the building.



## **iDEAL Paint Spray Booth (PSB-AFCF23ASY)**

### **3.3.2 Exhaust Fan And Chambers**

The booth exhaust chamber(s) is/are located as shown in the mechanical drawing package included with this manual. Exhaust gases are pumped through the exhaust duct by an electrically powered fan. The fan is made of spark resistant material and the motor is located out of the air stream. The exhaust chamber(s) operate(s) under a negative pressure to induce the required airflow through the exhaust filters.

### **3.3.3 Product Doors**

The product doors can be filtered or solid and may be either Tri-Fold or Bi-Fold Doors. Some industrial spray booths have an open front in lieu of product doors.

### **3.3.4 Door Latch**

Door latches secure doors in closed position and hold contact against rubber seal. Latches are pressure relief latches that allow doors to open in case of explosion. This feature also allows for ease of booth operator egress from spray booth by applying moderate pressure to the door from inside booth.

### **3.3.5 Door Limit Switch**

The micro switch to indicate when a door is open on the booth. If a door is in the open position, micro switch contact is opened which breaks the circuit for the paint air solenoid.

### **3.3.6 Air Make Up Unit (Optional)**

The air make up unit (AMU) supplies filtered, heated atmospheric air. This unit may be heated by natural gas, LP gas, steam coils or hot water coils. The temperature of the AMU discharge air is controlled by a thermostat. The airflow capacity of the fan and motor are matched to the airflow capacity of the spray booth exhaust fans. Some air makeup units also have the capability to provide a paint cure cycle. This cycle, employed after the paint spraying operations are complete, typically involves supplying air that is heated to the paint area of the booth to decrease paint cure times.

### **3.3.7 Intake Plenum / Canopy (Optional)**

The box-like structure through which (heated) air is brought into the spray booth and typically used in conjunction with the Air Make Up Unit. May be vertical and located at one end of the booth, or horizontal using part or all of the ceiling inside the booth.

## **3.4 EXHAUST FILTER MANOMETER**

Manometer is used to measure pressure drop across exhaust filters to indicate the condition of the filters.

## **3.5 AIR SOLENOID VALVE**

The function of this valve is to interrupt supply of compressed air to painting equipment under certain conditions. This is done to prevent painting from occurring when booth is not operating as designed or if any booth doors are open. Air solenoid valve is electrically interlocked with booth intake and exhaust fans. If limit switches are purchased or included, it is also interlocked with product doors and personnel doors. If a fan is not operating properly, or if a door is open for longer than a few seconds, air solenoid valve will shut off flow of pressurized air to spray gun. Unit should be installed downstream of any regulators and filters and upstream of painting equipment. It should be located near fitting to which painting equipment connects in order to insure rapid loss of supply pressure.

## **3.6 CONTROL PANEL**

Paint spray booth may be equipped with an optional electrical control panel. Please refer to electrical control drawings for electrical schematic located inside the Control Panel. Also shown on this drawing is the wiring required for installation. No spare parts are provided with Control Panel. The Control Panel and its associated wiring should be installed by a licensed electrician. The cabinet that houses controls is NEMA 1 and is not suitable for installation in a Class I, Division II area. Refer to Chapter 6 in the NFPA 33-2011 Standard and consult with the local authority having jurisdiction for definition of this area for paint spray booth.

## 4. INSTALLATION

### 4.1 GENERAL

This manual is a guide for installing a variety of different spray booths and configurations. The assembly drawings enclosed are specific for the booth you have purchased. The drawings include exploded isometric drawings showing the relationship of each panel or part to the next one. The BOM / Packing List of all components is provided and must be used in addition to the drawing to identify all components.

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

### 4.2 PRELIMINARY

iDEAL 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. All permits and approvals must be obtained prior to installation and use of the spray booth.

1. Uncrate and inventory all spray booth components to ensure all of the parts are accounted for. Each component is numbered on the exploded view.
2. The floor surface of the booth must be non-combustible material of such character as to facilitate the safecleaning and removal of residues. The floor surface must be flat and level.
3. Mark the dimensional outline of booth on floor.
4. Follow the step-by-step instructions provided.

### 4.3 PLANNING AHEAD

1. Clearances between other work areas and combustible storage areas must be held as follows:
  - 3 ft. minimum clearance at all sides and sealed entry ways (i.e., doorways).
  - 3 ft. minimum clearance at all non-sealed entry ways - (i.e. the open face of spray booth or a silhouette openings).
  - 10 ft. minimum clearance must be held between the exhaust stack of the booth and the intake of another apparatus. NFPA 33-2011 dictates a minimum discharge clearance of 3 ft. from the nearest combustible material; however, stack height requirements vary with individual states and can be up to 1½ times the building's roof height from grade.
  - 10 ft. minimum clearance must be held between the intake of this booth and the exhaust of any other apparatus.
2. Permits are not included. **It is the responsibility of the end user to acquire all permits to install a booth.**
3. A FIRE SUPPRESSION SYSTEM IS NOT INCLUDED WITH THE BOOTH BUT IT IS TYPICALLY REQUIRED. Generally this is supplied and installed by a licensed local installer.
4. Electrical installation should be performed by a licensed electrician familiar with national, local electrical codes and regulations in your location.

### 4.4 BASIC BOOTH ASSEMBLY

When assembling booth, leave bolts finger tight until each section is assembled. All panel flanges should face outward. Install bolts from inside, so nut is outside of booth. Use a drift pin to align panel holes when two or more panels are difficult to align by hand. Lay out booth footprint on floor using chalk lines to be sure booth will fit the area properly, so that exhaust duct(s) will penetrate roof where desired and any associated items will work and fit with the booth.

## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

### **⚠ WARNING**

**Prevent serious injury or death.**

**Most booth components weigh 50-500 lbs.**

**Use adequate lifting devices to raise, move and install booth components.**

### **NOTICE**

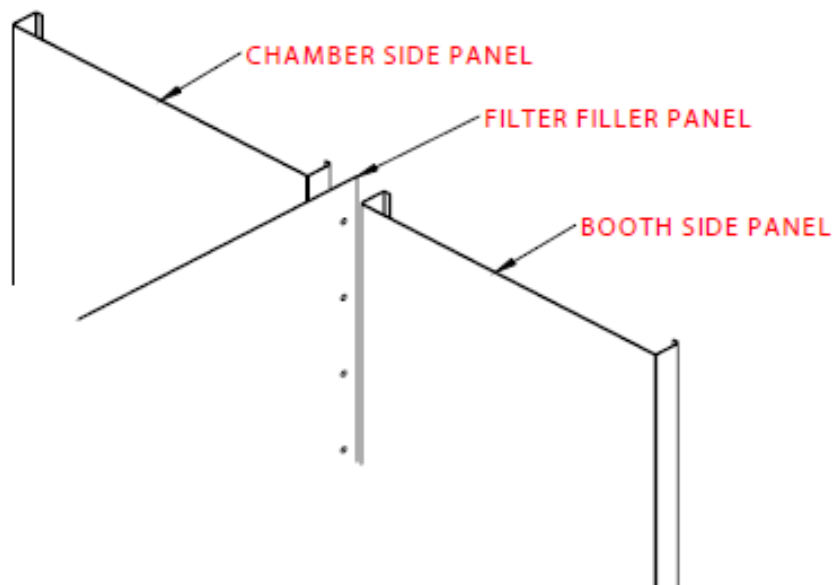
**Prevent equipment damage.**

**Spray booth roof will not support a person. Do not attempt to stand or walk on spray booth roof.**

**NOTE: Refer to exploded view drawings included with your spray booth for installation details.**

#### **Basic Installation - First Section:**

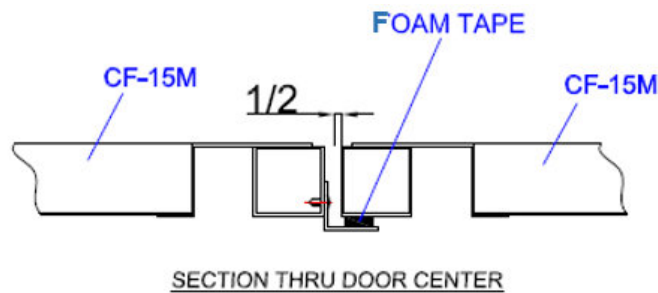
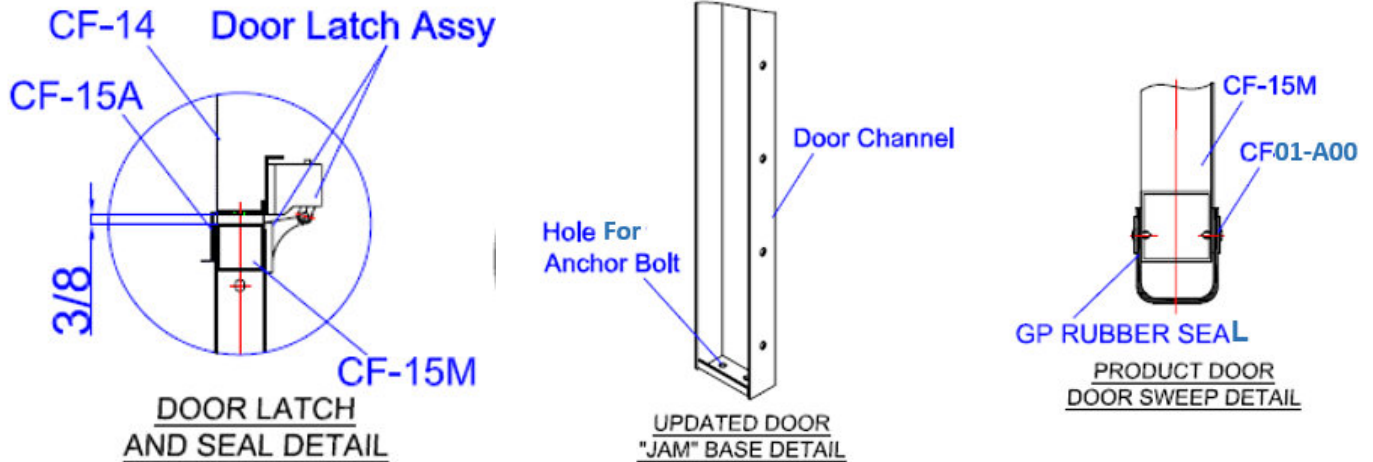
1. Determine where booth will be constructed (determine where exhaust stack will exit through the roof) and where Side Door will be placed.
2. Use chalk lines to place booth layout on the floor.
3. Layout all floor channels for exhaust chamber and walls. As you attach wall panels together, they will also bolt to the floor channel.
4. Starting with exhaust chamber at either rear corner, bolt one corner panel and one rear wall corner panel together.
5. Bolt opposite rear sidewall panel to rear wall panel.
6. Bolt all rear wall panels in place.
7. Bolt tie channel along top edge of rear wall panels.
8. Place exhaust fan panel above side and rear wall panels and bolt in place.
9. Insert filter filler panels between sidewall, roof panels and exhaust chamber. Bolt in place.



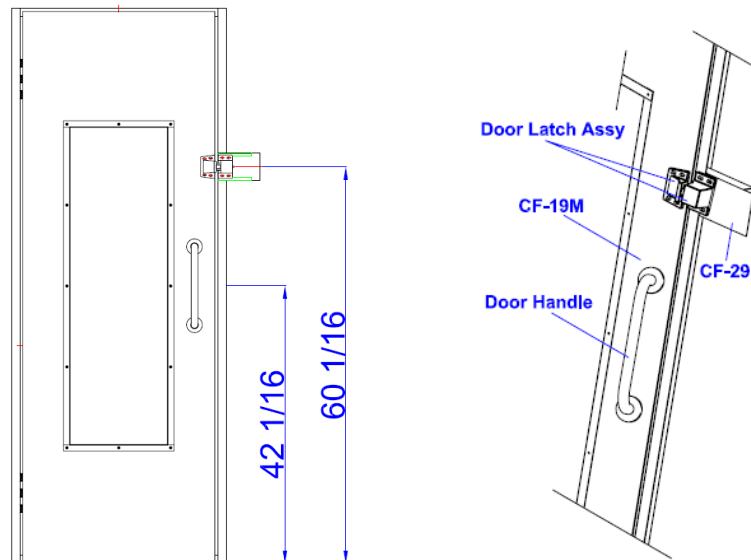
## IDEAL Paint Spray Booth (PSB-AFCF23ASY)

10. Following exploded view drawings, continue alternately assembling wall panels and roof panels to each other until you reach front end of booth.
11. Verify walls are plumb and booth is square and on floor layout marks. Tighten all mounting hardware.
12. Anchor floor channel to floor at a minimum of every 12 inches.
13. Caulk all panel joints inside the booth with the acrylic latex caulk provided. Do not use a silicone caulk.
14. Apply foam gasket to perimeter of all door openings.
  - Thick 5/8" foam gasket is to be applied for Front Doors
  - Thin 3/8" foam gasket is to be applied for Side Door
15. Attach Door hardware to Front & Side Doors. (Details noted in Drawings & sections 4.12 to 4.16)

### Front Doors



### Side Door

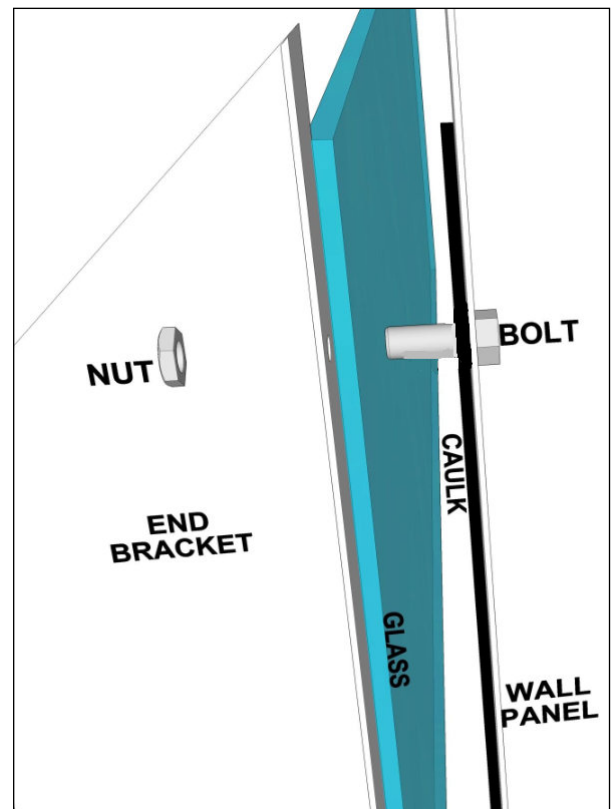
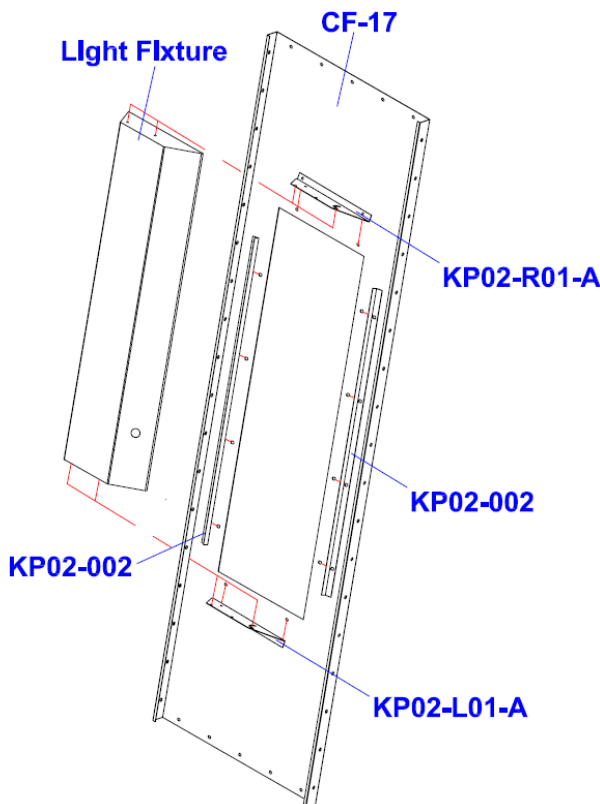


#### 4.5 LIGHT FIXTURES

<b>⚠ WARNING</b>
<p><b>Prevent serious injury or death.</b></p> <p><b>Electrical installations must be performed by qualified electricians.</b></p> <p><b>Installation must conform to all national, local, and provincial codes and standards.</b></p>

#### STANDARD LIGHTS

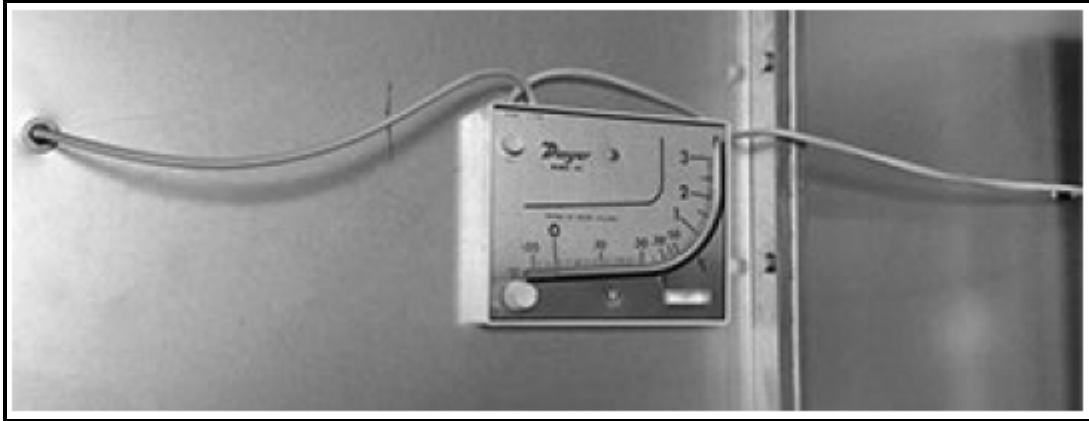
1. Install 'upper & lower' Std. Light Brackets (KP02L01-A & KP02-R01-A) above and below of panel hole, per diagram below. Insert 5/16" bolts through wall panel holes and secure with nuts.
2. Place a 1/4" to 1/2" bead of caulk around the edge of the light hole in the panel.
3. Install 'sides' Std. Light Brackets (KP02-002) to each side of panel hole, per diagram below. Insert 5/16" bolts through wall panel holes and secure with nut.
4. Carefully, place the tempered glass centered between the Std. Light Brackets pressing it into the bead of caulk forming a seal.
5. Carefully, place Light Fixture between the Light Brackets. Use #12 drill screws to secure Light Fixture to upper & lower Std. Light Brackets & Panel, using provided matching holes for Brackets & Light Fixture.
6. Use #14 drill screws for curved slotted hole for upper & lower Brackets. This will allow the Light Fixtures to have the ability to pivot, for easy access & installation to install and/or replace lamps, after upper & lower #12 drill screws are removed.



## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

### 4.6 MANOMETER

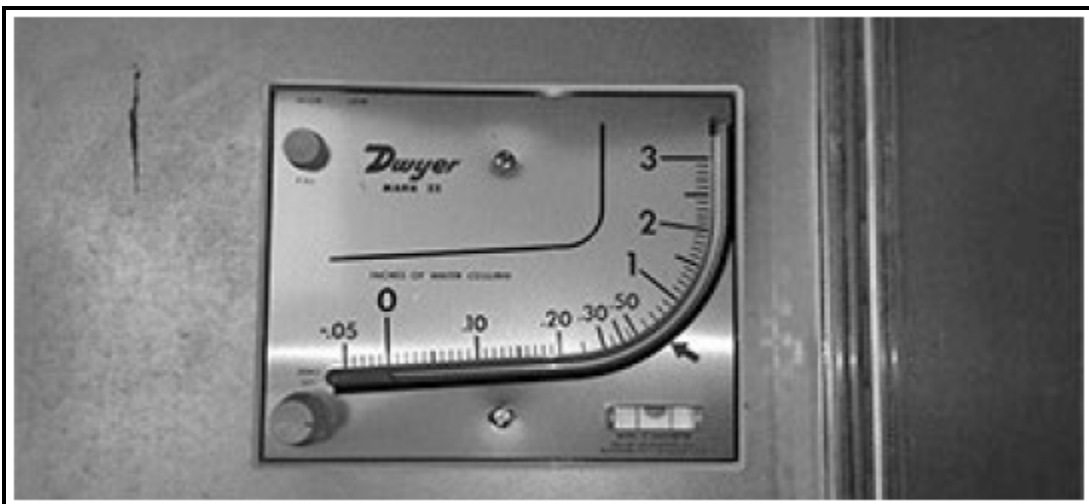
Located manometer on booth where it can be easily be read daily by the paint department. Install close to exhaust filter wall to keep tubing length to a minimum. Excess tubing length will reduce accuracy of the manometer. The high port will connect to work chamber, and the low port will connect to chamber on the suction side of the filter grid.



1. Drill a hole in booth wall just large enough for the plastic hose barb to fit through (approx. 13/32). Install washer and nut on back side. Do not over tighten.

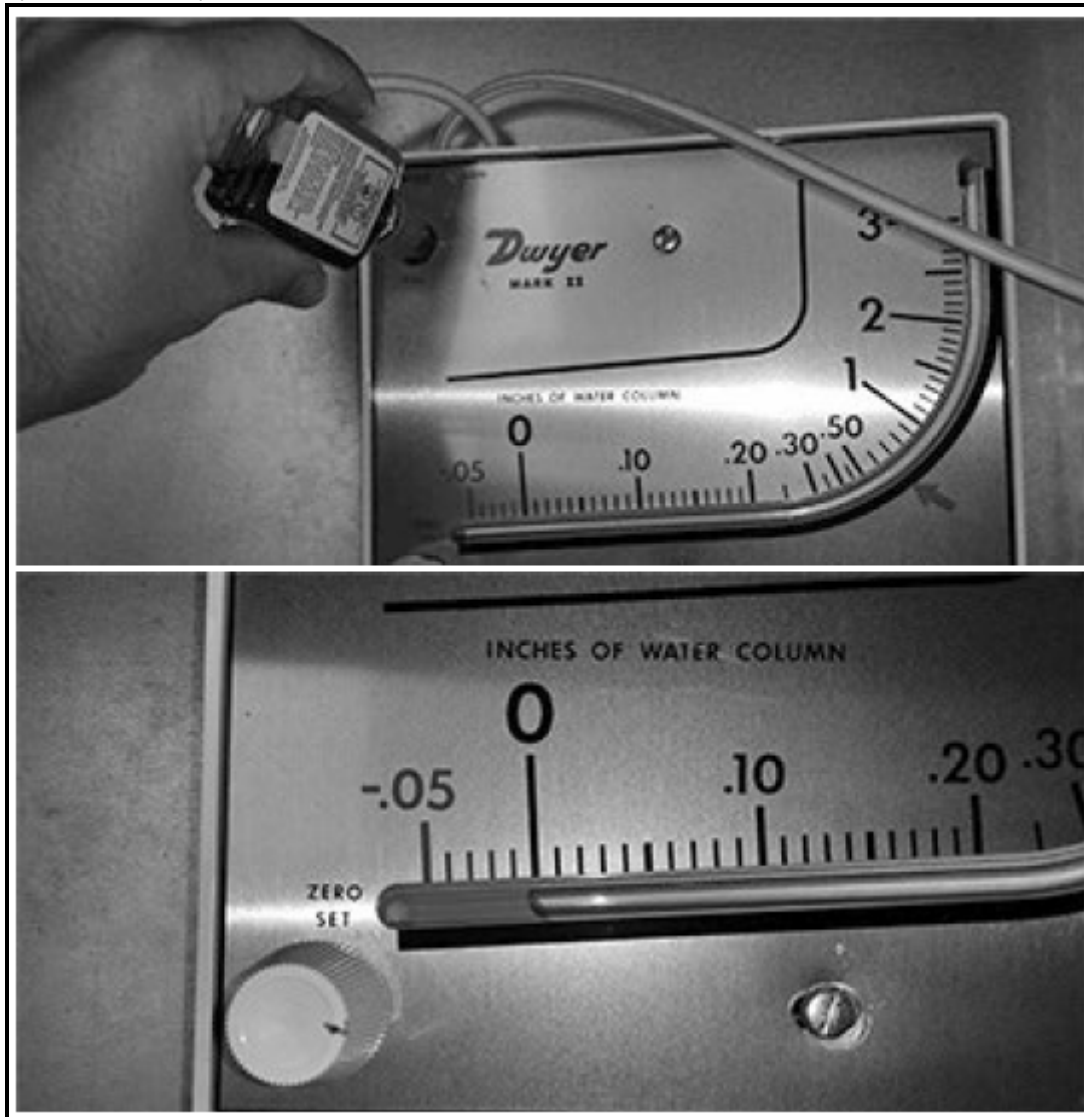


2. Mount manometer on booth wall and ensure it is level using bubble level on manometer. Manometer must be level or it will not be accurate.



## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

3. Turn "Zero Set" knob counter clockwise until it stops, then turn knob clockwise 3 full turns. This will place the adjustment knob in the middle of its travel range. Remove fill plug at top of manometer and slowly fill with red fluid. You will not need the entire bottle. Stop filling as soon as you can see the red fluid enter clear tube at bottom of the manometer. Turn "Zero Set" adjustment knob to set red fluid on 0 mark. If you overfill gauge, remove excess fluid by inserting a pipe cleaner through fill port to soak up excess oil. Once the red fluid is set on zero, replace the fill cap.



**Complete booth assembly and then perform steps 4-6 to set manometer**

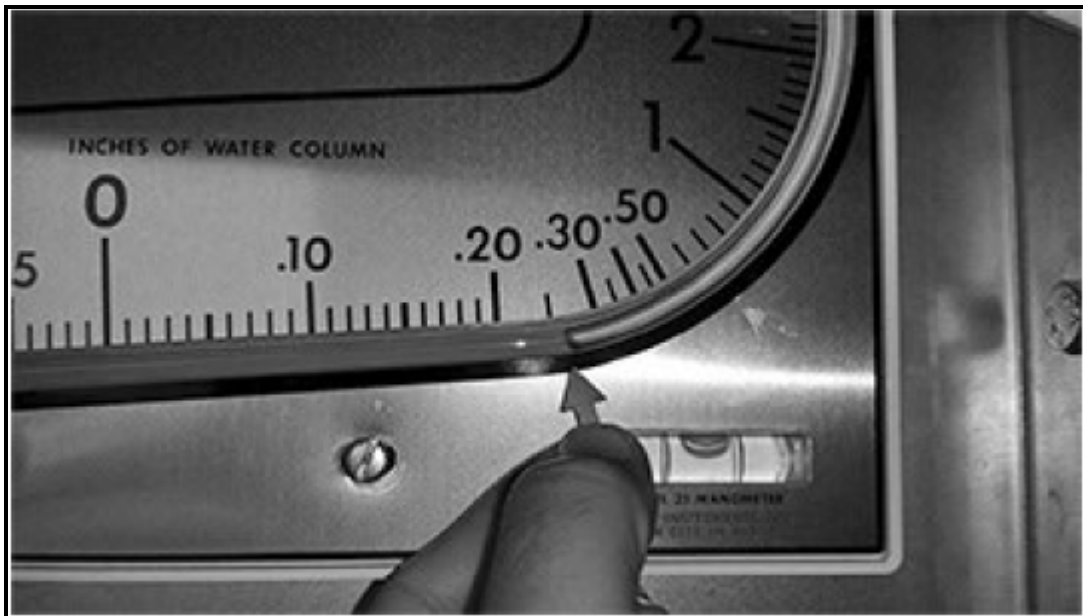
**IMPORTANT: All filters in the booth must be installed and new in order to get an accurate baseline.**

4. Turn on exhaust fan. If exhaust fan is connected to a VFD to control the speed of the fan, make sure it is set to run at full speed. You will notice the red fluid should move up the scale and then settle at a number. The number will be different from booth to booth, but that does not matter, this is just a baseline setting.

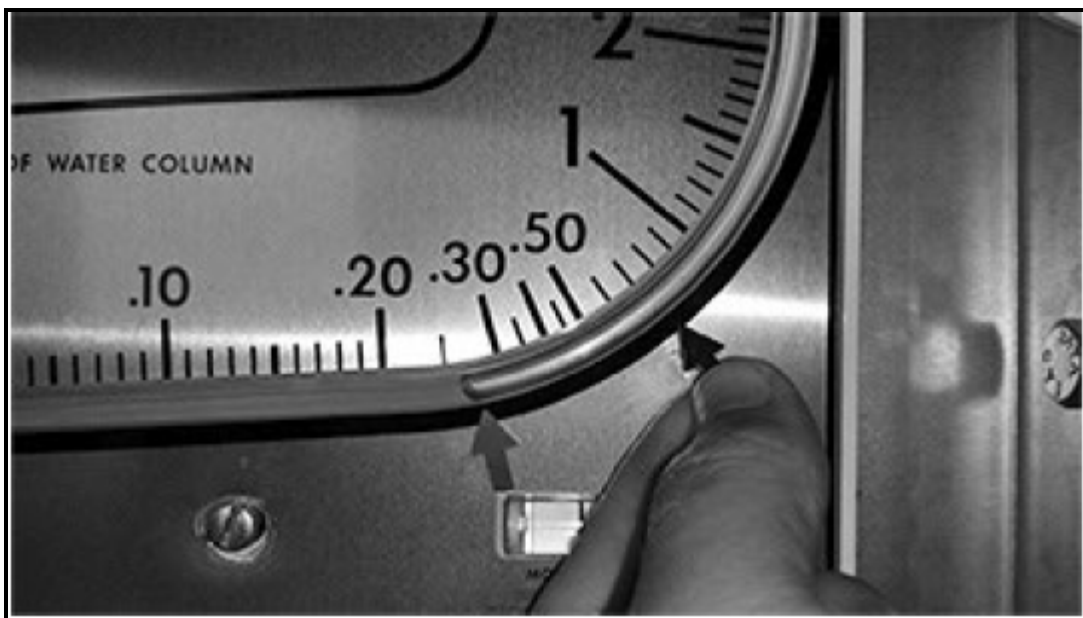
## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

5. Wherever the red fluid stops is where you will place the green arrow. In this example, the red fluid stopped at .25 inches of water column. So because we know our filters are rated for .5 inches of water column, and we know that with clean filters the fan is drawing .25 inches of water column, we simply add the two numbers together to tell us where the filters will pack out.

**Note: 25 inches of water + .5 inches of water = .75 inches of water total**



6. Now that baseline is set, measure up the scale .5 inches of water. That is where you will place the red arrow.



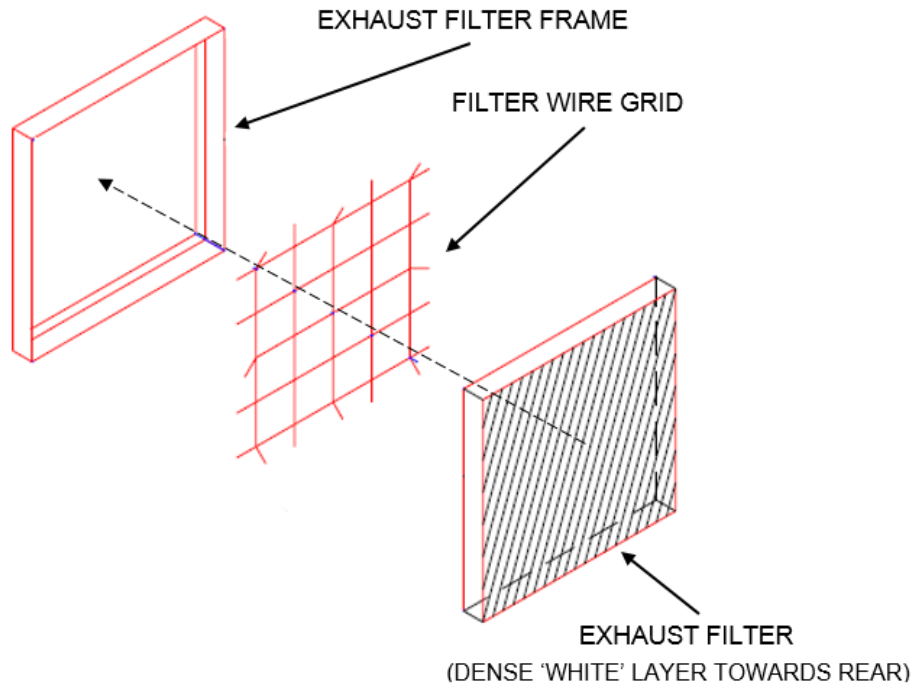
At this point, your manometer is set up and ready to use. You should never need to move the arrows once they are placed. Always check the manometer before turning the fan on to ensure the red fluid is sitting on the 0 mark. If the fluid is not on 0, turn "Zero Set" knob to adjust fluid to zero before starting fan.



## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

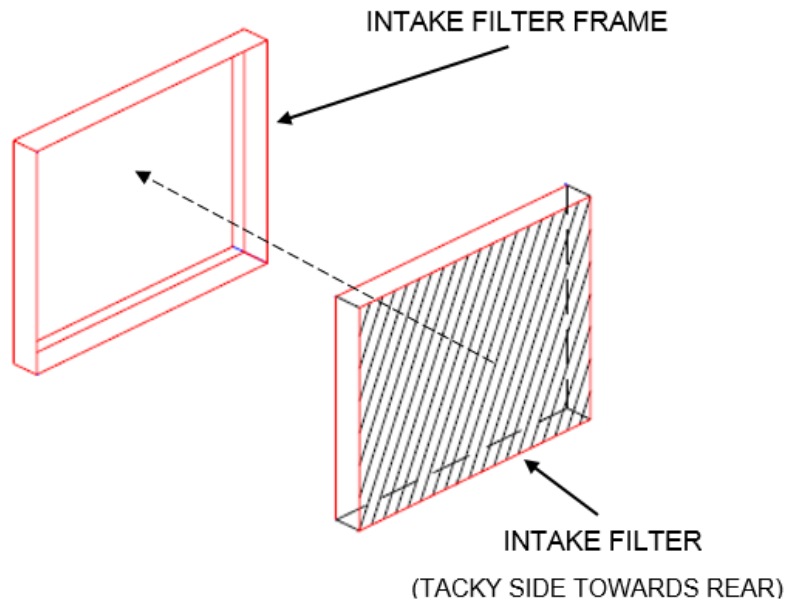
### 4.7 EXHAUST FILTER INSTALLATION

Install one wire grid in each filter cell with prongs facing towards inside of booth. Exhaust filters will be attached to prongs, as shown below.



### 4.8 INTAKE FILTER INSTALLATION

If booth has an intake plenum, insert intake filter into filter grid. The side marked "Air Leaving Side" on filter goes toward inside of booth.



**(NOTE: Install both Exhaust & Intake Filters with the green shaded color towards inside of Booth)**

## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

### 4.9 MOTOR INSTALLATION

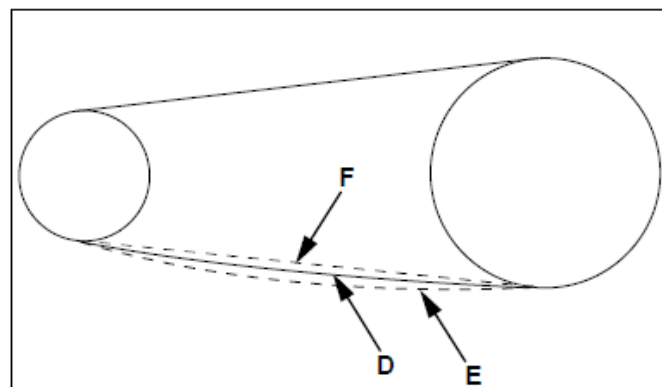
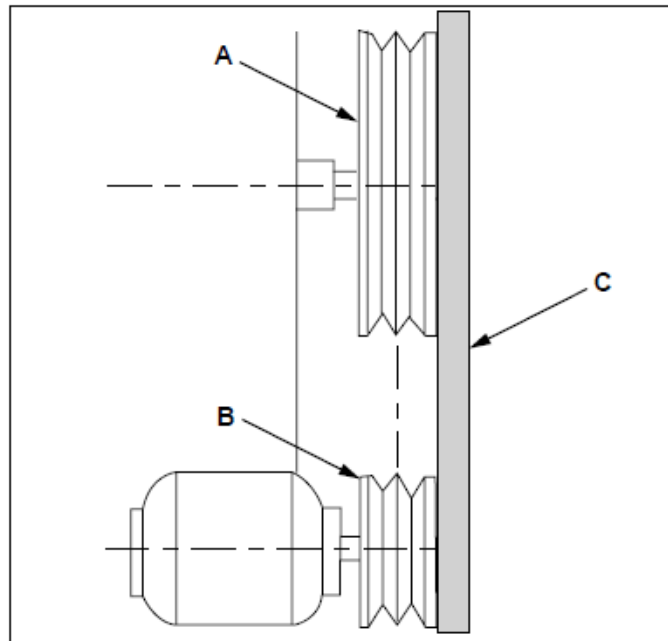
Couplings, drive belts, chains or other mounted devices must be in proper alignment, balanced and secure for safe motor operation.

#### 4.9.1 Mounting

This motor must be securely mounted. Sufficient ventilation must be provided to insure proper operation.

#### 4.9.2 Install Sheaves And Fan Belts

1. The fan sheave (A) and motor sheave (B) must be in axial alignment. Shafts must be parallel in both vertical and horizontal planes.
2. The sheaves must be in radial alignment. When sheaves are of equal width, align with a straightedge (C). When sheaves are of unequal width, align center of sheaves.
3. Check fan belts for proper tension and for signs of wear. Belt should have a slight sag at bottom of sheaves.  
NOTE: Belt (D) is properly adjusted. Belt (E) is too loose. Belt (F) is too tight.



IDEAL Paint Spray Booth (PSB-AFCF23ASY)

4.9.3 Electrical

**⚠ WARNING**

**Prevent serious injury or death.**

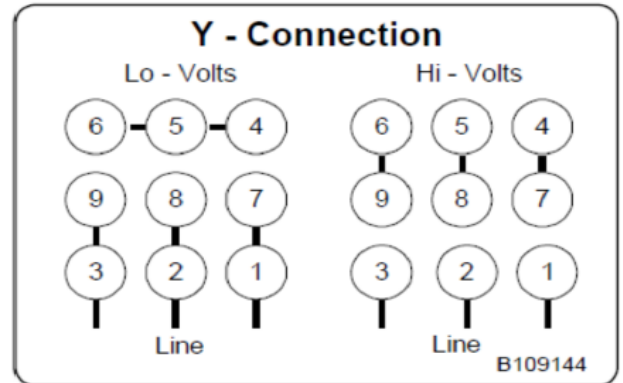
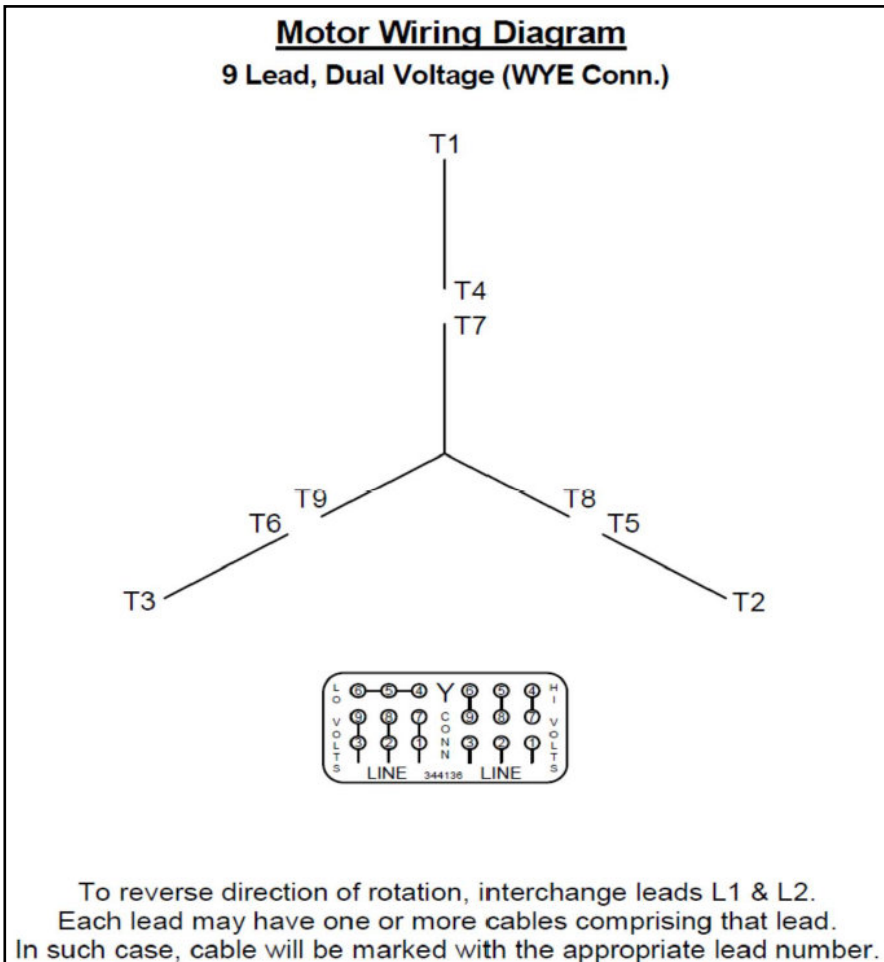
**Electrical installations must be performed by qualified electricians.**

**Installation must conform to all national, local, and provincial codes and standards.**

Complete booth assembly and then perform steps 1-4 below to connect electrical service to motor  
 (NOTE: IDEAL does not recommend using 120V single phase on motors above 1HP)

1. Determine voltage at your facility.
2. If a control panel was sent with this booth, confirm that the voltage and phase on the control panel matches the voltage and phase you intend to use.
3. Ensure the wiring diagram below matches your voltage, phase, and HP.
4. Locate the rotation arrow on the fan and verify belts are rotating in the direction of the arrow. If the belts are not rotating in the direction of the arrow, reverse the motor.

**Motor Wiring Diagram 208-230/460 Volt, 3-Phase, 2 HP**



<b>Dayton</b> Part No. 2NKY3A		<b>INDUSTRIAL MOTOR</b> CC 030A	<b>NEMA Premium</b>
SHAFT END BRG: 6205-2Z-J/C3	DPP END BRG: 6203-2Z-J/C3		
FR 143-5T/56HZ	TYPE UTE	ENCL TE	
PH 3    MAX AMB 40 °C    ID#			
INSUL CLASS F	DUTY CONT	WT 35 LB	BAL
HZ 60    HP 2.00    RPM 1750	HZ 50    HP 2.00    RPM 1435		
SF 1.25    DESIGN B    CODE M	SF 1.00    DESIGN B    CODE J		
GUARANTEED EFFICIENCY 84.0    MAX KVAR 1.2	GUARANTEED EFFICIENCY 81.5    MAX KVAR 1		
NEMA NOM EFFICIENCY 86.5    NOM PF 76.1	NEMA NOM EFFICIENCY 84.0    NOM PF 81.7		
VOLTS 208-230/460	VOLTS 190/380		
FL AMPS 5.9-5.7/2.8	FL AMPS 6.6/3.3		
SF AMPS 6.7/3.3	SF AMPS		
644771-002    MADE IN MEXICO OF IMPORTED AND DOMESTIC COMPONENTS			
Mfd. for Dayton Electric Mfg. Co. Lake Forest, IL 60045 USA			

4.10 TUBEAXIAL FAN

<b>⚠ WARNING</b>
<p>Fan assembly is heavy.</p> <p>Fan assembly weight is approximately 50 - 200 lbs., depending on model. Use and adequate lifting device to install fan assembly.</p>
<b>⚠ WARNING</b>
<p>Prevent serious injury or death.</p> <p>Electrical installations must be performed by qualified electricians.</p> <p>Installation must conform to all national, local, and provincial codes and standards.</p>

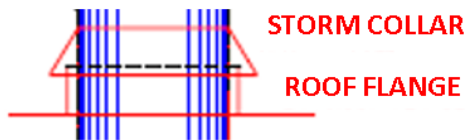
The fan and motor assembly bolts to the top of the Exhaust Chamber Roof Panel

4.11 OPTIONAL - EXHAUST DUCT KIT & INSTALLATION

If equipped with optional exhaust ductwork, it is recommended to save this professionally installed.  
(Storm Collar & Roof Flange sold separately)

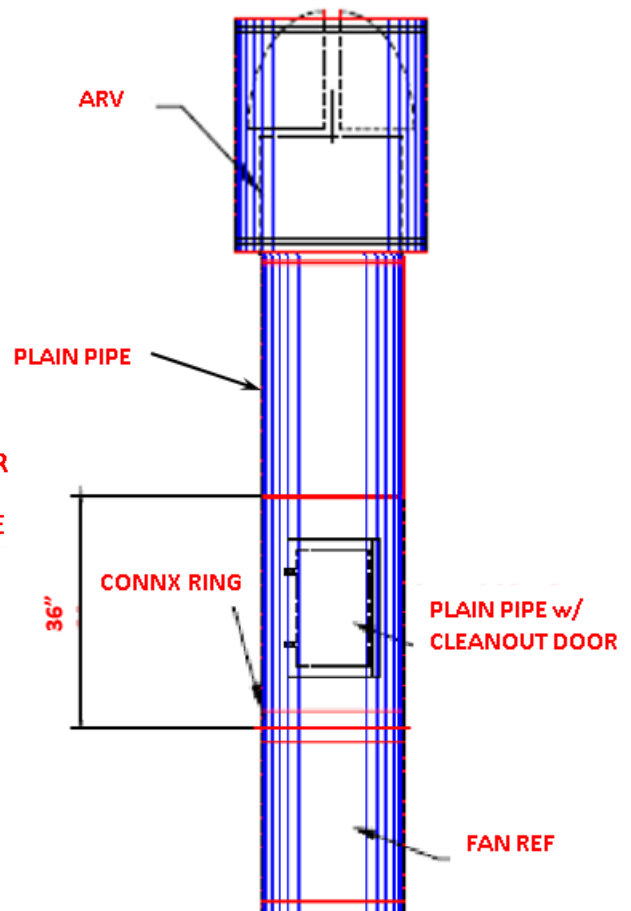
To assemble the ductwork:

1. Bolt pipe with connecting ring to the exhaust fan.
2. Remaining ductwork is crimped on one end to interlock with the next section.
3. Your ARV (automatic damper) will be mounted on top.
4. Storm collar will attach to duct above flashing to make it weather proof.



Special Note:

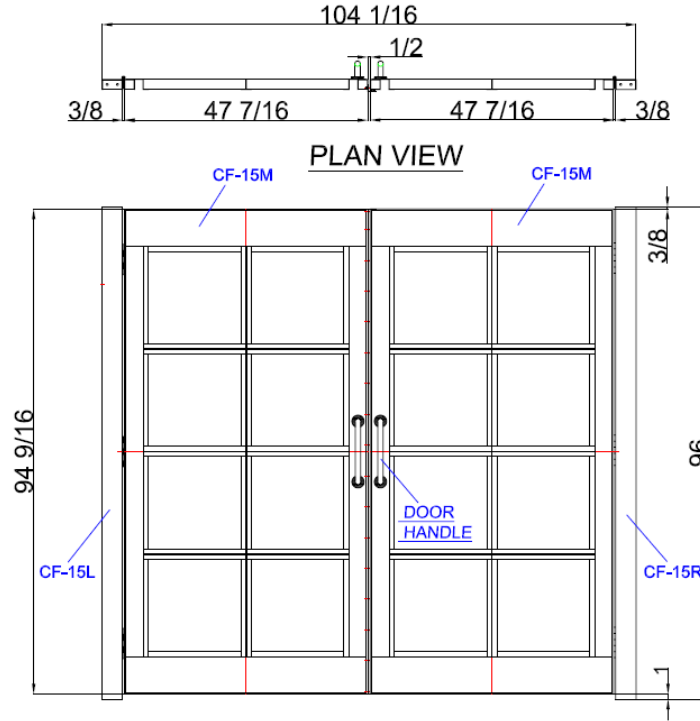
Where more than 25 ft. of piping is required, static pressure (resistance) is increased and the air flow may be hindered when using the standard exhaust unit recommended for use with the booth. Where a piping arrangement of an unusual nature is necessary or where two or more elbows are used, a similar condition may exist. Therefore, if either of these situations arises, contact the iDEAL for recommendations. Exhaust piping, including the canopy (if used), should extend a minimum of 6' ft. above the highest point of building. There should be an access door just above exhaust unit and another just below each elbow.



# iDEAL Paint Spray Booth (PSB-AFCF23ASY)

## 4.12 PRODUCT DOORS

Before installing door, verify both Door Jams 'channels' and top Door Stop are installed properly and squared. Verify dimension between channels and floor to door stop, as per door drawing.

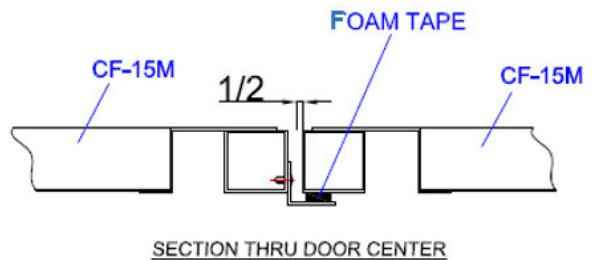
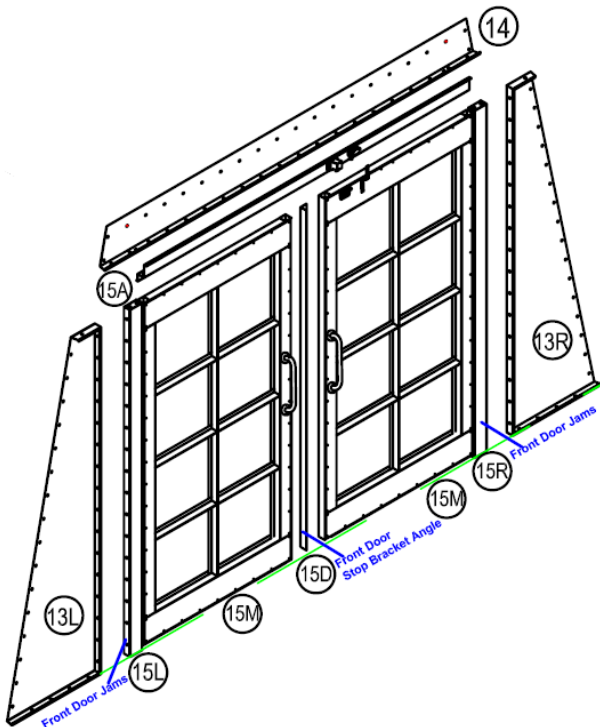


### Installation of Front Doors

1. Install Front Doors to Door Jams (CF-15L & CF-15R), ensuring the Door Jams are square & plumb, using the provided hinge pins. (Using temporary 1" spacers at the bottom will help with Door connection to hinges)

*Note: The Front Doors are manufactured with welded Hinges already attached, which are designed to have 1" clearance at bottom and 3/8" clearance on top.*

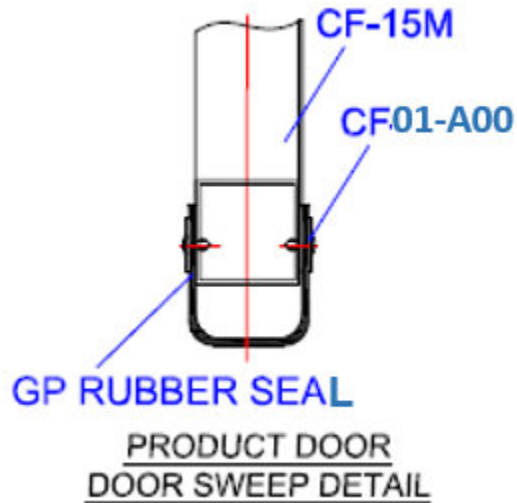
2. Install Door Stop Bracket, Angle (CF-15D) to Door, using #8 drill screws.



## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

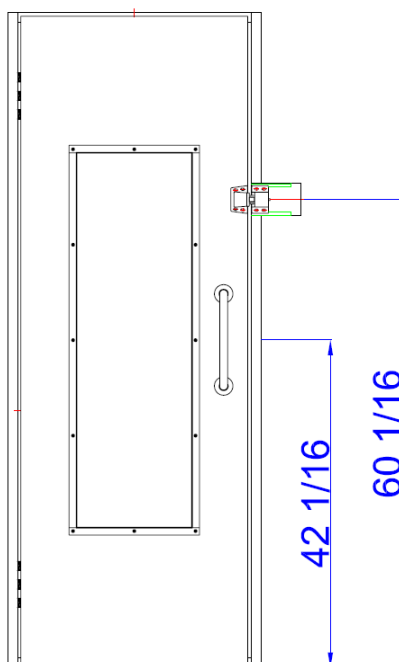
### Installation of Door Sweeps – (Front Doors only)

1. Cut a piece of rubber sweep material long enough to fit the bottom width of the product door.
2. Place cut piece of rubber on the floor centered under the bottom of the door.
3. Lift the outside edges of the cut rubber up on each side of door so it forms a loop that touches the floor.
4. Mark the position of the top edge of the cut rubber on each side of the door.
5. Hold one edge of the cut rubber on the mark on one side of the door and secure with Door Sweep Bracket Strips (CF01-A00) for each side to hold in place. Secure the Bracket Strips and rubber to the door using #12 drill screws.
6. Repeat above on the other door.



### Installation of Side Door

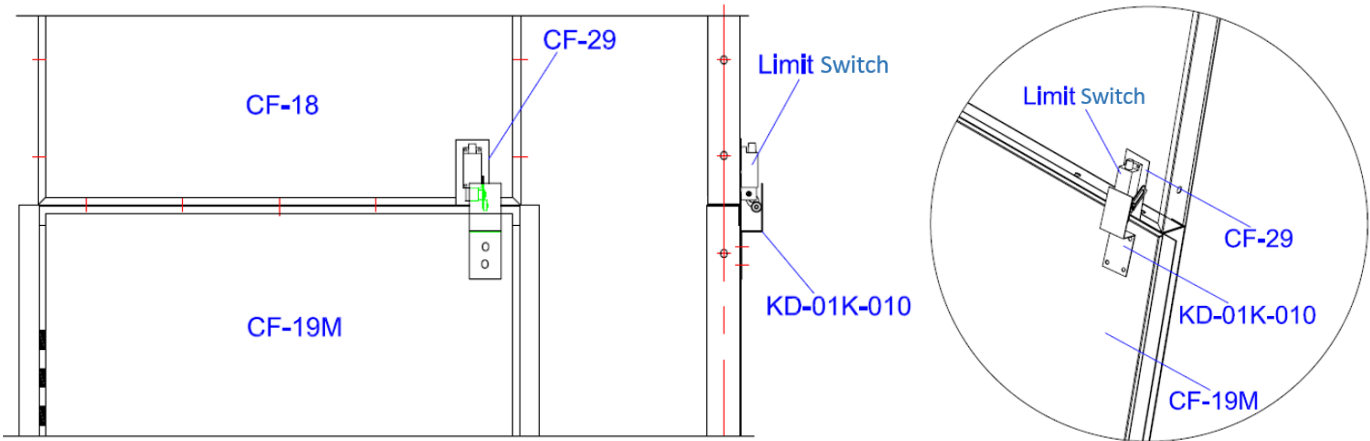
1. Ensure Side Door Frame (CF-19K) is installed properly, prior to installing Side Door.  
(NOTE: Side Door Frame can be installed with Door opening on either side by rotating Frame.)
2. Install Side Door (CF-19M) to Frame using the provided hinge pins.



## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

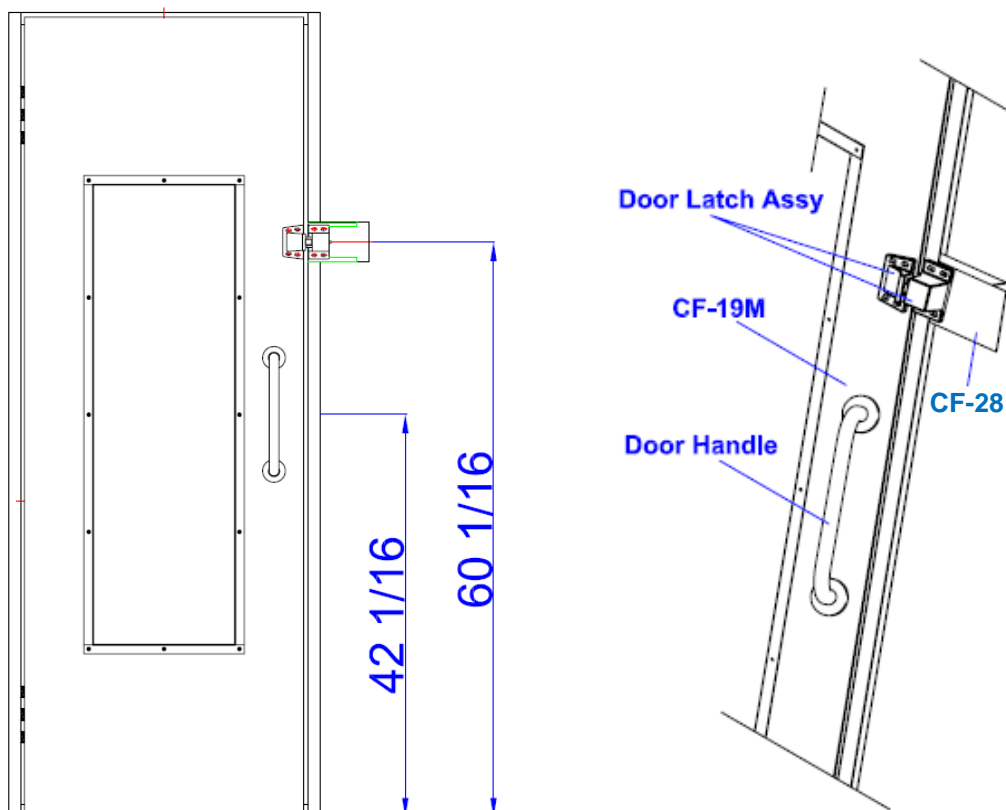
### 4.13 SIDE ACCESS DOOR LIMIT SWITCH INSTALLATION

1. Bolt Limit Switch to Limit Switch Mounting Bracket (CF-29) with 10-24 x 2" Screws & Nylon Nuts.  
(NOTE: 1/4" mounting holes must be drilled into Mount Bracket to connect Limit Switch)
2. Remove bolt in panel above access door on latch side and bolt the Limit Switch Mounting Bracket in place.
3. Adjust actuating Lever Arm so Striker Bracket will actuate switch.
4. Attach Striker Bracket (KD-01K-010) to Door with #12 drill screws in front of Limit Switch Lever Arm.
5. Make final adjustments to Lever Arm to assure proper operation, then tighten set screw on Limit Switch Lever Arm.



### 4.14 SIDE ACCESS DOOR LATCH INSTALLATION

1. Unbolt the two bolts that connect panel and door frame, approx. 42" from floor.
2. Insert Door Latch Bracket (CF-28) into panel flange & reinsert bolts & tighten.
3. Use #14 drill screws to connect Door Latches to Door & Latch Bracket, ensuring the alignment and spacing is correct.



## IDEAL Paint Spray Booth (PSB-AFCF23ASY)

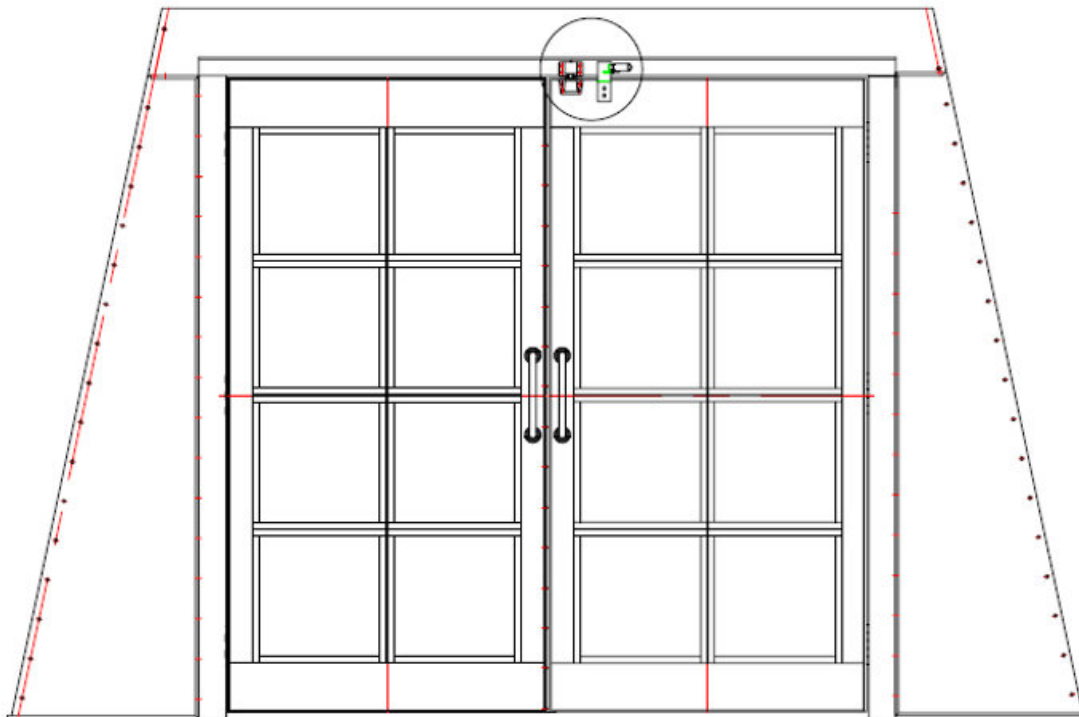
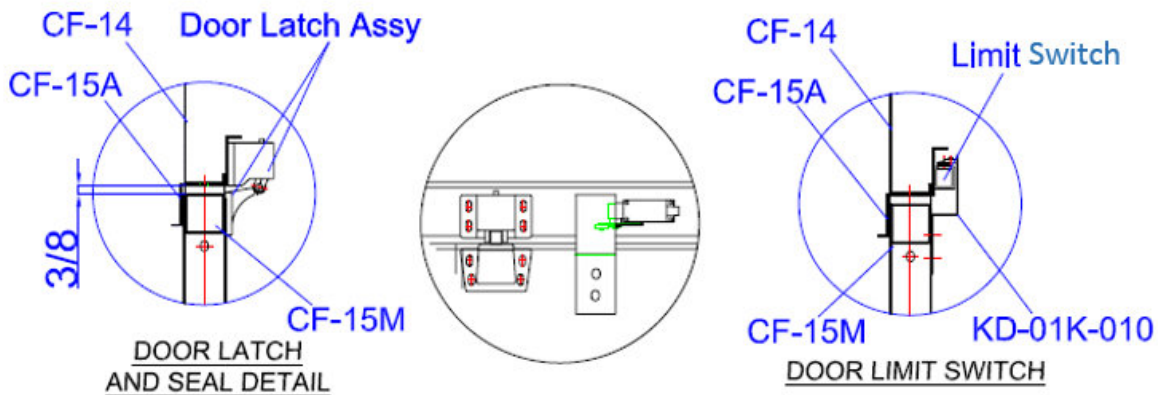
### 4.15 FRONT DOOR LIMIT SWITCH & LATCH INSTALLATION

#### Limit Switch Installation:

1. Bolt Limit Switch to Header Connection Panel (CF-15A) as per diagram below. Connect with 10-24 x 2" Screws & Nylon Nuts.  
(NOTE: 1/4" mounting holes must be drilled into Header Panel to connect Limit Switch)
2. Adjust actuating Lever Arm so Striker Bracket will actuate switch.
3. Attach Striker Bracket (KD-01K-010) to Door with #12 drill screws in front of Limit Switch Lever Arm.
4. Make final adjustments to Lever Arm to assure proper operation, then tighten set screw on Limit Switch Lever Arm.

#### Door Latch Installation:

1. Attach only the upper Latch to Header Connection Panel (CF-15A) using 1/4"-20 x 1.25" Hex Cap Screws & Serrated Flange Nuts. Use provided 3/8" Shim Plate behind upper Latch for proper flush alignment to Door.  
(NOTE: 1/4" mounting holes must be drilled into Header Panel to connect Limit Switch)
2. Use #14 drill screws to connect the lower Door Latch to Door, ensuring the alignment and spacing is correct.



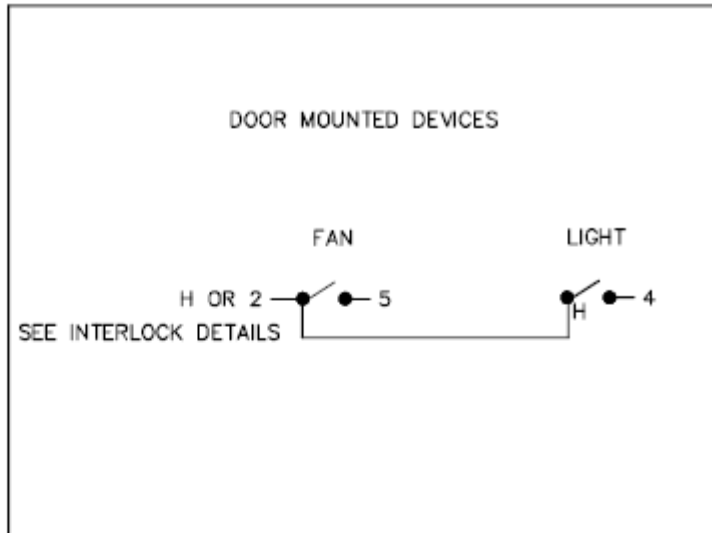
ELEVATION OF DOOR ASSEMBLY (FROM EXTERIOR)





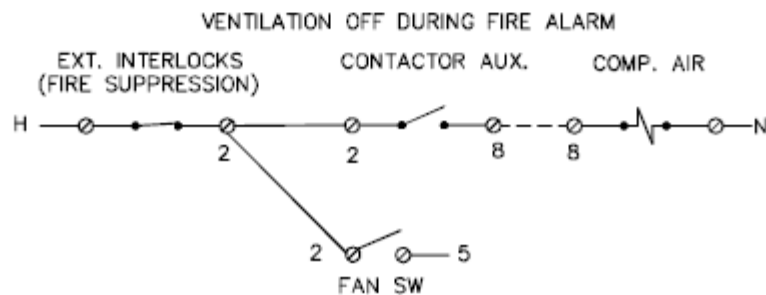
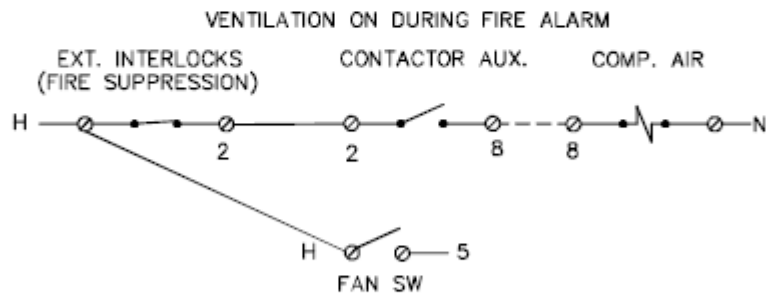
# iDEAL Paint Spray Booth (PSB-AFCF23ASY)

## CONTROL PANEL WIRING DIAGRAM – (CONTINUED)



CONSULT FIRE SUPPRESSION EQUIPMENT SUPPLIER BEFORE CONNECTING INTERLOCKS!  
DETERMINE IF VENTILATION NEEDS TO BE ON OR OFF IN CASE OF A FIRE ALARM.  
CHOOSE APPROPRIATE INTERLOCK CONFIGURATION.

## INTERLOCKS



#### 4.18 CHECKLIST

Check the following items prior to start up:

1. Motors wired for proper voltage.
2. All fans and motors turn freely.
3. Lubricate all bearings.
4. Check installation of exhaust fan for proper airflow direction. Generally, airflow is out of booth.
5. Listen for excessive or unusual noise when booth is operating.
6. With booth operating, open any door for 30 seconds and see if spray gun will shut down. This will verify proper safety operation of the booth.

#### 5. MAINTENANCE

<b>⚠ WARNING</b>
<b>Prevent serious injury or death.</b> <b>Disconnect and lockout / tagout all power sources before adjusting, repairing, or cleaning booth.</b>
<b>⚠ WARNING</b>
<b>Prevent serious injury or death.</b> <b>Service, maintenance and adjustments must be performed by trained and qualified personnel.</b>
<b>⚠ WARNING</b>
<b>Burn hazard. Do not touch hot parts.</b> <b>Allow to cool before servicing.</b>
<b>⚠ WARNING</b>
<b>Prevent serious injury or death.</b> <b>Always wear personal protective equipment (PPE) specific to the job.</b> <b>Read Material Safety Data Sheet for products used in spray booth.</b>

Review and follow all safety precautions before performing any maintenance.

## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

### 5.1 MAINTENANCE INTERVAL CART

Item	Maintenance Interval			
	Daily	Every Two Months	Every Six Months	Every Year
Visually Inspect Filters	•			
Lubricate Door Latches		•		
Check And Adjust Belt Tension*			•	
Inspect And Clean Motor				•
Inspect And Clean Air Solenoid Safety Valve				•

\* Adjust belt tension after first week of operation, then every six months thereafter.

### 5.2 DAILY

#### 5.2.1 Inspect Filters

Visually inspect all filters for damage and debris buildup. Replace damaged or clogged filters.

#### 5.2.2 Filter Maintenance

<b>⚠ WARNING</b>
<p><b>Prevent serious injury or death.</b></p> <p><b>Always wear personal protective equipment (PPE) specific to the job.</b></p>

Wear personal protective equipment to protect against dry paint and dust particles while handling filters. Check manometer gauge daily for condition of filters. Do not change filter based on its appearance. Filters are not necessarily changed at equal time intervals. The usable life of a filter is related to:

- Filter material weave.
- Paint sprayed.
- Distance from gun to filter.
- Paint gun type.
- Amount of thinner used.
- Spray pressure.

#### 5.2.3 Determine Filter Condition

1. The filter condition is acceptable when the manometer tube scale is between the two arrows.
2. When manometer scale exceeds red pointer flag, filters must be changed.
3. If a different filter media is to be used, manometer setup procedure must be done again.

## iDEAL Paint Spray Booth (PSB-AFCF23ASY)

### 5.3 EVERY TWO MONTHS

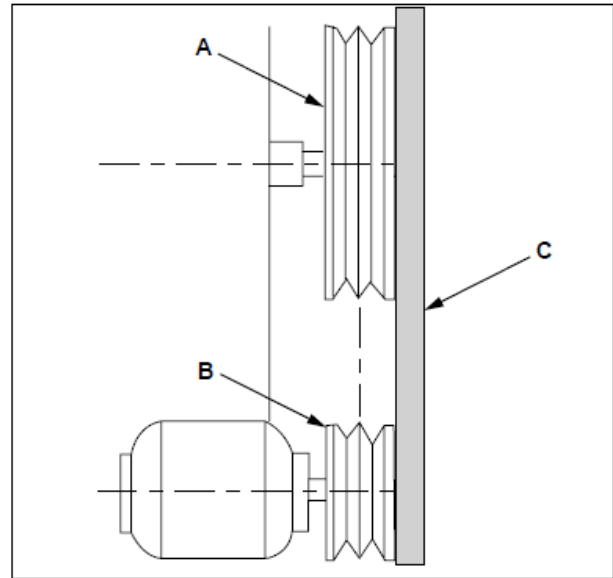
#### 5.3.1 Lubricate Door Latches

Lubricate bearing pin and laminated cam with SAE 30-50 high temperature oil. Tighten set screws in handle as needed. For use in cold areas, use SAE 10-20 high temperature oil. Test explosion-venting feature to verify proper operation. Corrosion and/or build-up of foreign materials may affect proper operation of latches.

### 5.4 EVERY SIX MONTHS

#### 5.4.1 Check Fan Belts

1. The fan sheave (A) and motor sheave (B) must be in axial alignment. Shafts must be parallel in both vertical and horizontal planes.
2. The sheaves must be in radial alignment. When sheaves are of equal width, align with a straight edge (C). When sheaves are of unequal width, align center of sheaves.
3. Check fan belts for proper tension and for signs of wear. Belt should have a slight sag at bottom of sheaves. Belt (D) is properly adjusted. Belt (E) is too loose. Belt (F) is too tight.



### 5.5 EVERY YEAR

#### 5.5.1 Inspect Motor

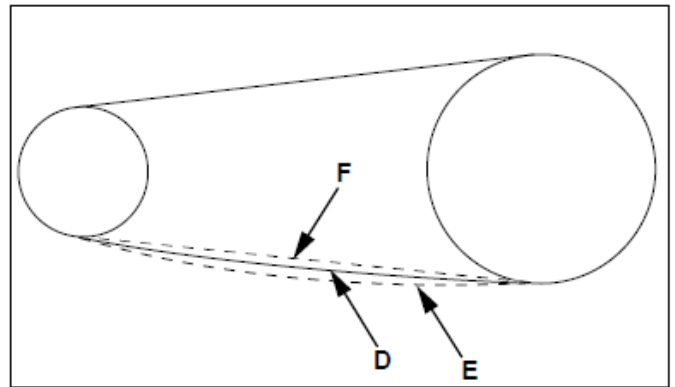
Verify that cooling air to motor has not been diverted or blocked by dirty guards or other obstacles.

#### 5.5.2 Inspect Fan Wheel

Inspect fan wheel for buildup of material, which may cause an unbalanced fan wheel. An unbalanced fan wheel may lead to premature failure of the fan wheel, bearings and belt. Clean material buildup as necessary.

#### 5.5.3 Inspect And Clean Air Solenoid Valve

The function of this valve is to interrupt the supply of compressed air to the painting equipment when the booth is not operating as designed or if any booth doors are open.



### **⚠ WARNING**

**Prevent serious injury.**

**Turn off electrical power, depressurize valve, and vent fluid to a safe area before servicing valve.**

The time between cleanings varies depending on the medium and service conditions. If voltage to coil is correct, sluggish valve operation, excessive noise or leakage indicates that cleaning is required. Close strainer or filter when cleaning valve. Thoroughly clean all parts. If parts are worn or damaged, install a complete rebuild kit. Follow instructions included with rebuild kit.

## **6. WARRANTY**

iDEAL Spray Booths have a full one year Warranty on all parts and materials. This warranty does not extend to include labor costs for the replacement of parts or materials covered under warranty. If a part is believed defective, please notify our Customer Service Department. A replacement item shall be shipped and regular freight shall be paid by Tuxedo Distributors, LLC. If Tuxedo Distributors requires the defective part to be returned, appropriate return freight costs shall be paid by Tuxedo Distributors. **IMPORTANT:** Before returning the defective part(s), you must first get an RGA (Return of Goods Authorization) from our Customer Service Department. A copy of the RGA document **MUST** be included with the returned item(s). The Seller warrants to Buyer that the equipment mentioned herein shall be free from defects of materials or workmanship under normal use and maintenance for a period of one (1) year from date of shipment. The liability of Seller under this warranty shall be limited to the repair or replacement, at Seller's option, of any part or component which may prove to be defective under normal use, service and maintenance after Seller, in its sole discretion, determines same to be defective. Said warranty is conditioned upon Buyer giving Seller immediate written notice of an alleged defect and refraining from the attempted repair of alleged defects without prior written consent of Seller. The Seller makes no warranty what so ever with respect to accessories or components not supplied by Seller. For any components purchased by Seller for use on or in conjunction with the equipment which is the subject of this contract, the Seller extends to the Buyer only the same warranty granted to Seller by the component vendor or manufacturer.

THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY OTHER WARRANTIES (EXPRESSED OR IMPLIED) INCLUDING WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND OF ANY NON-CONTRACTUAL LIABILITIES INCLUDING PRODUCT LIABILITIES BASED ON NEGLIGENCE OR STRICT LIABILITY. EVERY FORM OF LIABILITY FOR DIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES OR LOSS IS EXPRESSLY EXCLUDED AND DENIED. IN NO CASE SHALL iDEAL SPRAY BOOTHS LIABILITY ON THIS WARRANTY EXCEED THE AMOUNT OF THE PURCHASE PRICE.

The performance and safety of the equipment mentioned herein is contingent upon proper installation, the use of suitable process materials and operation and maintenance by properly trained personnel. During the warranty period, Tuxedo Distributors will have the option to repair or replace, free of charge, any parts that Tuxedo Distributors has verified to be defective in materials or workmanship. If inspection of the equipment does not disclose any defect in workmanship of material, repaired or replacement parts will be offered at a reasonable price, which will include the costs of labor, materials and transportation.

### **6.1 Returning Items For Credit**

Tuxedo Distributors will take back any standard stocked items returned and issue a credit, less a 15% handling and restocking fee. Customer is responsible for all Freight Charges and the item **MUST** be returned in its original condition. If the item is damaged in transit you will not receive credit. Tuxedo Distributors will mark the Bill of Lading "Damaged" and send you pictures of the damaged item. For custom or non-stock special order items you must contact our Customer Service Department to determine if the item may be returned. Any restocking charges shall be determined on a case by case basis. If an item needs to be returned, Tuxedo Distributors will issue you an RGA (Return Goods Authorization) form. Please ensure that a copy is sent back with returned item(s). Without an RGA the product may be lost or returned to stock withno credit issued. Please note that in some cases the freight may be more than the item is worth when credit is received.

### **6.2 Back Charges For Material And Labor**

Tuxedo Distributors shall not be held responsible for any back-charges incurred for materials or labor without prior written consent. Should a problem arise, please notify Tuxedo Distributors immediately. Once the issue is investigated, should costs be incurred, an amount shall be agreed upon by both parties before-hand. Do **NOT** attempt modifications or repairs without prior consent as this may void further warranty repairs or credit. Tuxedo Distributors will not accept back-charges associated with any type of late delivery.

#### **Please address warranty repairs to:**

Tuxedo Distributors, LLC / iDEAL Paint Spray Booths  
1905 N. Main, Suite C.  
Cleburne, TX 76033  
Attention: Customer Service  
Toll Free: 817-558-9337 / Fax: 817-558-9740