

# **Versa-Coat<sup>®</sup> Batch and Conveyor Booths**

Customer Product Manual  
Part 106535E



NORDSON CORPORATION • AMHERST, OHIO • USA

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# Table of Contents

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## **Section 1** **Safety**

---

1. Introduction .....	1-1
2. Qualified Personnel .....	1-1
3. Intended Use .....	1-1
4. Regulations and Approvals .....	1-1
5. Personal Safety .....	1-2
6. Fire Safety .....	1-2
7. Grounding .....	1-3
8. Action in the Event of a Malfunction .....	1-4
9. Disposal .....	1-4

---

## **Section 2** **Description**

---

1. Booth Overview .....	2-1
Booth Configurations .....	2-1
Fan/Collector Module .....	2-2
Electrical Control Panel .....	2-3
Booth Controls .....	2-3
2. Theory of Operation .....	2-6
3. Optional Equipment .....	2-8

---

## **Section 3** **Installation**

---

1. Introduction .....	3-1
2. Unpacking .....	3-1
3. Canopy Assembly .....	3-2
4. Electrical .....	3-2
Conduit and Wiring .....	3-2
5. Pneumatic .....	3-6
6. Cartridge Filters .....	3-8
7. Final Filters .....	3-10
8. Additional Lighting .....	3-11

---

**Section 4**  
***Canopy Assembly***

---

1. Introduction .....	4-1
Canopy Assembly Drawings .....	4-1
Fasteners .....	4-2
2. Assembly Instructions .....	4-2
3. Booth Dimensions .....	4-7
3400-cfm Batch Booths .....	4-7
5100-cfm Batch Booths .....	4-8
3400-cfm Conveyor Booths .....	4-9
4. 3400-cfm Batch Booths .....	4-10
Model A .....	4-10
Model B .....	4-12
Model C .....	4-14
Model D .....	4-16
Model E .....	4-18
Model F .....	4-20
Model G .....	4-22
Model H .....	4-24
Model I .....	4-26
Model J .....	4-28
Model K .....	4-30
5. 5100-cfm Batch Booths .....	4-32
Model HFB-1 .....	4-32
Model HFB-2 .....	4-34
Model HFB-3 .....	4-36
Model HFB-4 .....	4-38
Model HFB-5 .....	4-40
Model HFB-6 .....	4-42

---

**Section 4**  
**Canopy Assembly** (contd)

---

6. 3400-cfm Conveyor Booths .....	4-45
Model CA .....	4-45
Model CB .....	4-47
Model CC .....	4-49
Model CD .....	4-51
Model CE .....	4-53
Model CF .....	4-55
Model CG .....	4-57
Model CH .....	4-59
Model CI .....	4-61
Model CJ .....	4-63
Model CK .....	4-65
Model CL .....	4-67
Model CM .....	4-69

---

**Section 5**  
**Operation**

---

1. Introduction .....	5-1
2. Startup .....	5-2
3. Shutdown .....	5-2
4. Maintenance .....	5-3
Daily Maintenance .....	5-3
Periodic Maintenance .....	5-4

---

**Section 6**  
**Troubleshooting**

---

1. Introduction .....	6-1
2. Troubleshooting Charts .....	6-2
3. Electrical Schematics .....	6-7
3400-cfm Control Panel .....	6-7
5100-cfm Control Panel .....	6-8

---

**Section 7**  
**Repair**

---

1. Introduction .....	7-1
2. Replacing the Cartridge Filters .....	7-2
3. Replacing the Final Filters .....	7-4
4. Replacing the Pulse Valves .....	7-6
5. Replacing the Fan and Motor .....	7-8

---

**Section 8**  
**Parts**

---

1. Introduction .....	8-1
Using the Illustrated Parts List .....	8-1
2. Control Panels .....	8-2
3. Control Panel/Solenoid Enclosure Parts .....	8-3
3400-cfm Control Panel .....	8-3
5100-cfm Control Panel .....	8-6
4. Fan/Collector Module .....	8-9
Optional Cartridge Filters .....	8-13
Optional Motor .....	8-13
5. Batch Booth Parts .....	8-14
Wall Panels .....	8-14
Roof Panels .....	8-14
Brackets .....	8-15
Roof Supports .....	8-15
6. 3400-cfm Conveyor Booth Parts .....	8-17
Roof Parts .....	8-17
7. Power Supply Mounting Brackets .....	8-18
8. Miscellaneous Accessories .....	8-18

---

**Section 9**  
**Specifications**

---

1. Introduction .....	9-1
2. Operating Environment .....	9-1
3. Normal Design Conditions .....	9-1
Cross Drafts .....	9-1
Average Face Velocity .....	9-1
Part Temperature .....	9-1
Powder .....	9-2
Cartridge Filters .....	9-2
4. Compressed Air .....	9-2
5. Workpiece Clearance .....	9-3
6. Primary Electrical Services .....	9-3
3400-cfm Booths .....	9-3
5100-cfm Booths .....	9-3

## *Section 1*

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# ***Safety***

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# Section 1

## Safety

---

### **1. Introduction**

---

Read and follow these safety instructions. Task- and equipment-specific warnings, cautions, and instructions are included in equipment documentation where appropriate.

Make sure all equipment documentation, including these instructions, is accessible to all persons operating or servicing equipment.

---

### **2. Qualified Personnel**

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Equipment owners are responsible for making sure that Nordson equipment is installed, operated, and serviced by qualified personnel. Qualified personnel are those employees or contractors who are trained to safely perform their assigned tasks. They are familiar with all relevant safety rules and regulations and are physically capable of performing their assigned tasks.

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### **3. Intended Use**

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Use of Nordson equipment in ways other than those described in the documentation supplied with the equipment may result in injury to persons or damage to property.

Some examples of unintended use of equipment include

- using incompatible materials
- making unauthorized modifications
- removing or bypassing safety guards or interlocks
- using incompatible or damaged parts
- using unapproved auxiliary equipment
- operating equipment in excess of maximum ratings

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### **4. Regulations and Approvals**

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Make sure all equipment is rated and approved for the environment in which it is used. Any approvals obtained for Nordson equipment will be voided if instructions for installation, operation, and service are not followed.

All phases of equipment installation must comply with all federal, state, and local codes.

---

## **5. Personal Safety**

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To prevent injury follow these instructions.

- Do not operate or service equipment unless you are qualified.
- Do not operate equipment unless safety guards, doors, or covers are intact and automatic interlocks are operating properly. Do not bypass or disarm any safety devices.
- Keep clear of moving equipment. Before adjusting or servicing any moving equipment, shut off the power supply and wait until the equipment comes to a complete stop. Lock out power and secure the equipment to prevent unexpected movement.
- Relieve (bleed off) hydraulic and pneumatic pressure before adjusting or servicing pressurized systems or components. Disconnect, lock out, and tag switches before servicing electrical equipment.
- Obtain and read Material Safety Data Sheets (MSDS) for all materials used. Follow the manufacturer's instructions for safe handling and use of materials, and use recommended personal protection devices.
- To prevent injury, be aware of less-obvious dangers in the workplace that often cannot be completely eliminated, such as hot surfaces, sharp edges, energized electrical circuits, and moving parts that cannot be enclosed or otherwise guarded for practical reasons.

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## **6. Fire Safety**

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To avoid a fire or explosion, follow these instructions.

- Do not smoke, weld, grind, or use open flames where flammable materials are being used or stored.
- Provide adequate ventilation to prevent dangerous concentrations of volatile materials or vapors. Refer to local codes or your material MSDS for guidance.
- Do not disconnect live electrical circuits while working with flammable materials. Shut off power at a disconnect switch first to prevent sparking.

- Know where emergency stop buttons, shutoff valves, and fire extinguishers are located. If a fire starts in a spray booth, immediately shut off the spray system and exhaust fans.
- Clean, maintain, test, and repair equipment according to the instructions in your equipment documentation.
- Use only replacement parts that are designed for use with original equipment. Contact your Nordson representative for parts information and advice.

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## 7. Grounding

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**WARNING:** Operating faulty electrostatic equipment is hazardous and can cause electrocution, fire, or explosion. Make resistance checks part of your periodic maintenance program. If you receive even a slight electrical shock or notice static sparking or arcing, shut down all electrical or electrostatic equipment immediately. Do not restart the equipment until the problem has been identified and corrected.

All work conducted inside the spray booth or within 1 m (3 ft) of booth openings is considered within a Class 2, Division 1 or 2 Hazardous location and must comply with NFPA 33, NFPA 70 (NEC articles 500, 502, and 516), and NFPA 77, latest conditions.

- All electrically conductive objects in the spray areas shall be electrically connected to ground with a resistance of not more than 1 megohm as measured with an instrument that applies at least 500 volts to the circuit being evaluated.
- Equipment to be grounded includes, but is not limited to, the floor of the spray area, operator platforms, hoppers, photoeye supports, and blow-off nozzles. Personnel working in the spray area must be grounded.
- There is a possible ignition potential from the charged human body. Personnel standing on a painted surface, such as an operator platform, or wearing non-conductive shoes, are not grounded. Personnel must wear shoes with conductive soles or use a ground strap to maintain a connection to ground when working with or around electrostatic equipment.
- Operators must maintain skin-to-handle contact between their hand and the gun handle to prevent shocks while operating manual electrostatic spray guns. If gloves must be worn, cut away the palm or fingers, wear electrically conductive gloves, or wear a grounding strap connected to the gun handle or other true earth ground.

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**7. Grounding** *(contd)*

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- Shut off electrostatic power supplies and ground gun electrodes before making adjustments or cleaning powder spray guns.
- Connect all disconnected equipment, ground cables, and wires after servicing equipment.

---

**8. Action in the Event of a Malfunction**

---

If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:

- Disconnect and lock out electrical power. Close pneumatic shutoff valves and relieve pressures.
- Identify the reason for the malfunction and correct it before restarting the equipment.

---

**9. Disposal**

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Dispose of equipment and materials used in operation and servicing according to local codes.

## Section 2

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# ***Description***

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## Section 2

# Description

### 1. Booth Overview

The following paragraphs explain the major variations of the 3400- and 5100-cfm Versa-Coat booths.

### Booth Configurations

Refer to Table 2-1 for a description of standard booth configurations.

The booths easily assemble with pre-punched, stainless or galvanized steel panels and brackets that fasten together. Batch booth roof panels are fitted with clear plastic windows to allow overhead lighting into the booth. Polypropylene roof panels on conveyor booths allow overhead lighting into the booth.

Table 2-1 Booth Configurations

Booth	Standard Configurations	Maximum Number of Fan/Collector Modules	Maximum Number of Operator Platforms
3400-cfm Batch	11	4	—
3400-cfm Conveyor	13	2	2
5100-cfm Batch	6	2	—
5100-cfm Conveyor	—	—	—
NOTE: All 5100-cfm conveyor booths are custom-configured. Contact your Nordson representative for more information.			

## Fan/Collector Module

See Figure 2-1. The fan/collector module consists of two sections: a fan section and a collector section.

The fan section consists of

- a circulating fan (1),
- an air manifold (2),
- three reverse pulse (blowdown) valves (3), and
- a cartridge filter differential pressure gauge (7).

The collector section consists of

- six high-efficiency cartridge filters (4) arranged in three columns,
- final filters (5), and
- a final filter differential pressure gauge (6).

**NOTE:** 3400-cfm collector modules have three final filters. 5100-cfm collector modules have four final filters.

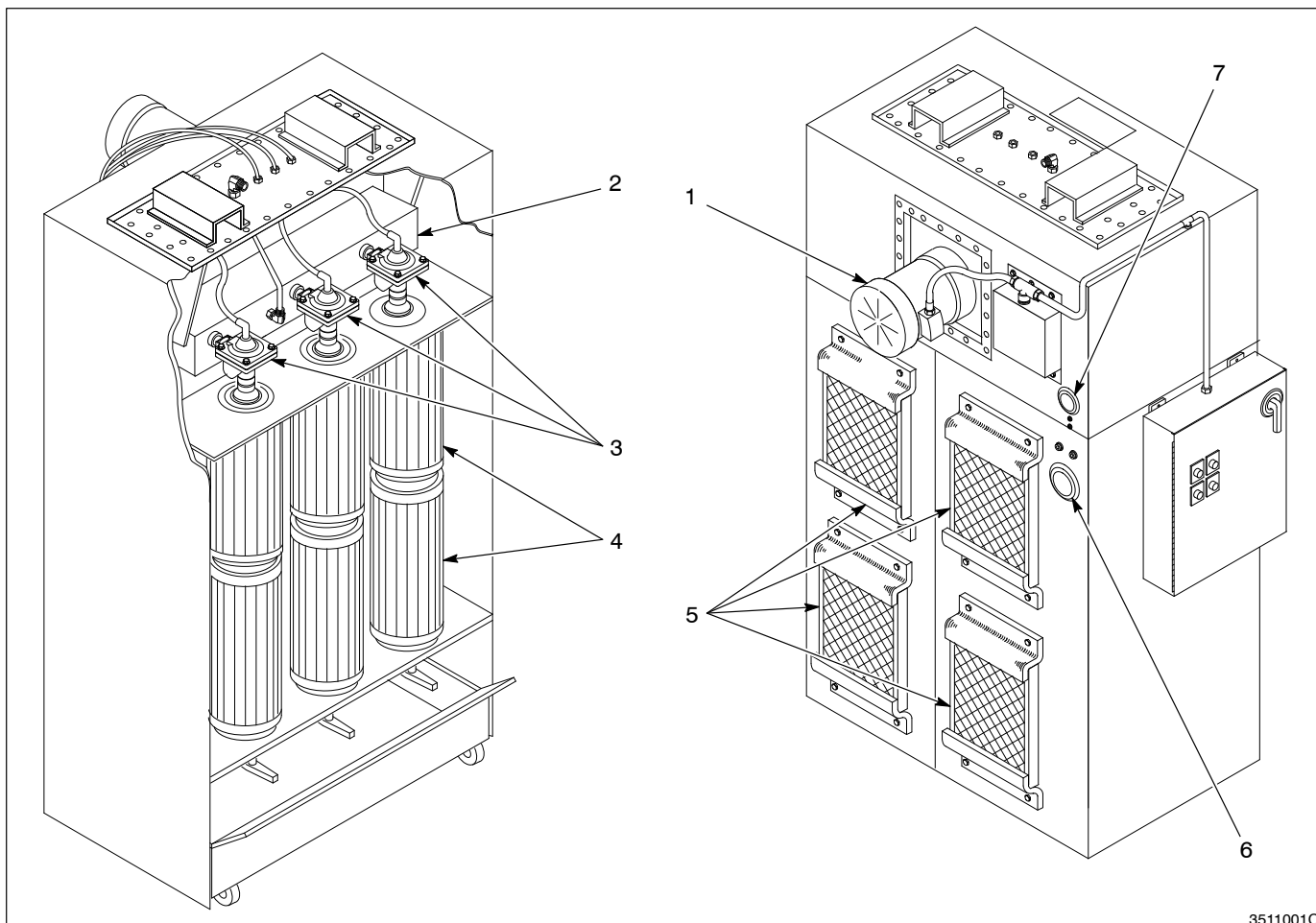


Fig. 2-1 Fan/Collector Module

- |                    |                                      |   |
|--------------------|--------------------------------------|---|
| 1. Circulating fan | 4. High-efficiency cartridge filters | 6. Final filter differential pressure gauge     |
| 2. Air manifold    | 5. Final filters                     | 7. Cartridge filter differential pressure gauge |
| 3. Pulse valves    |                                      |   |

*Note:* 5100-cfm fan/collector module shown.



**Electrical Control Panel**

Each booth includes an electrical control panel which can supply 120 Vac, 3 amp service to powder spray equipment. This power supply is interlocked with the differential pressure switch to automatically shut down the spray equipment if the final filters become clogged. Included in the electrical control panel are

- a main disconnect switch,
- a transformer,
- fuse block with fuses,
- fan motor starters,
- overload protectors,
- a timer board to control cartridge filter pulsing, and
- outlets to supply power to powder application equipment.

**Booth Controls**

**NOTE:** Versa-Coat control panels are UL 508 listed. The UL label is located inside of the electrical control panel enclosure.

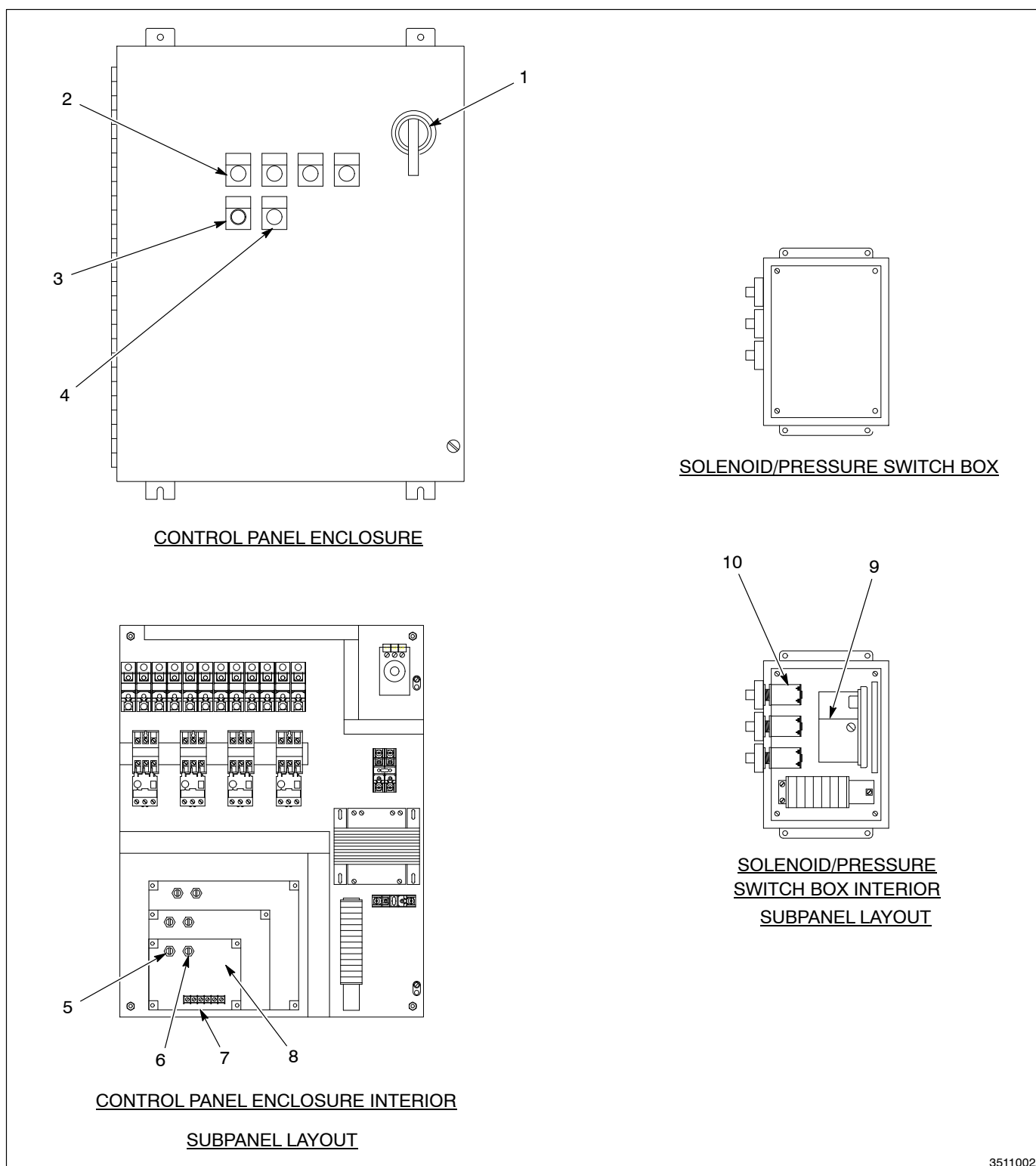
See Figure 2-2.

Use Table 2-2 to identify and explain the booth operating controls and indicators.

**Booth Controls** (contd)

Table 2-2 Booth Operating Controls and Indicators

Item	Control	Function
1	Main disconnect switch	Connects or disconnects line voltage to the electrical panel
2	EXHAUSTER START button(s)	Starts exhaust fans in designated module; buttons and lights will glow amber when the fans are on <b>NOTE:</b> There is one EXHAUSTER START button for each fan/collector module in your booth.
3	EXHAUSTER STOP button	Stops the exhaust fan(s)
4	BLOWDOWN switch	Starts or stops cartridge pulsing in all modules <b>NOTE:</b> Pulse delay and duration are controlled by the timer board.
5	Pulse valve off time	Adjusts time between reverse cartridge pulses from 8.5–180 seconds
6	Pulse valve on time	Adjusts reverse pulse duration from 0.05–0.5 seconds
7	Pulse valve LEDs	Turns red when the timer board activates the pulse valves <b>NOTE:</b> Timer boards have either 6 or 12 outputs, with an LED for each output.
8	Pulse valve jumper	Connects to the numbered terminal matching the total number of pulse valves in the system
9	Differential pressure switch (In the solenoid enclosure on the rear of the module)	Senses differential pressure across final filters; opens to shut down module exhaust fan if the final filter setting (4-in. water column) is exceeded <b>NOTE:</b> Adjusting the screw changes the setting. One switch is used for each module.
10	Solenoid valves (In the enclosure on the rear of the module)	Open when triggered by the timer board on output, exhausting air from top of pulse valves, which then directs reverse pulse of air into the cartridge filters <b>NOTE:</b> Three solenoid valves and three pulse valves are used with each fan/collector module.



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Fig. 2-2 Booth Operating Controls and Indicators (Four Exhauster Starter Version Shown)

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## **2. Theory of Operation**

---

Powder is fluidized in a feed hopper by compressed air diffused through a porous membrane called a fluidizing plate. The fluidized powder is supplied to the spray gun by a venturi-type powder pump operating on compressed air. Powder particles sprayed through a powder spray gun are charged by the spray gun and attracted to the grounded parts suspended within the booth.

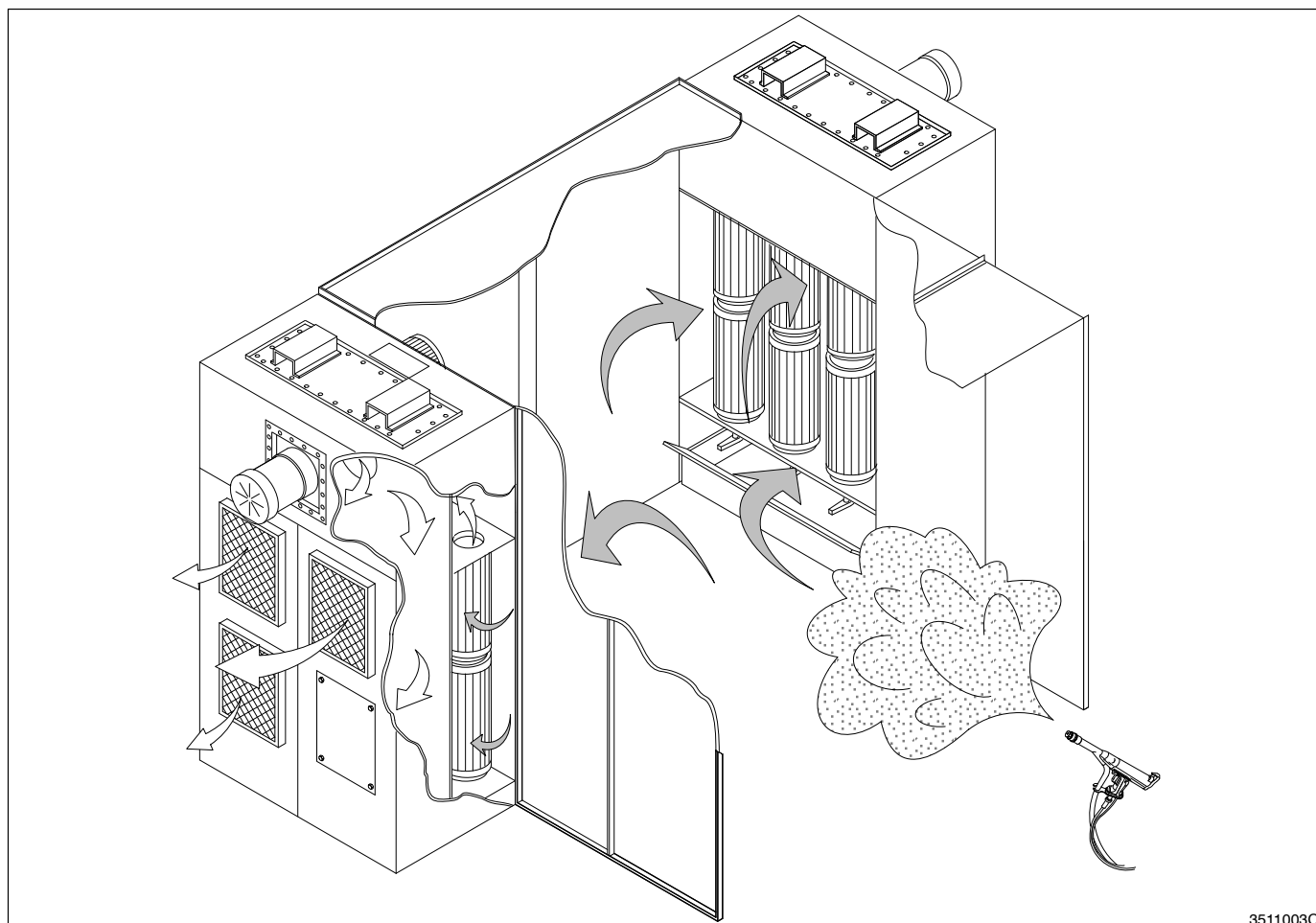
See Figure 2-3.

The booth exhaust fans draw air through the booth and cartridge filters and return it to the spray room through the final filters. Oversprayed powder is drawn by the exhaust fans to the cartridge filters, where it collects on the filter media.

The solenoid valves, located in the control panel, are sequentially energized by the timer board, activating the pulse valves. Reverse pulses of air are directed through the centers of the cartridges, blowing the collected powder off the filter media. The powder falls into the collection tray.

A differential pressure gauge on the collector module and a pressure switch in the control panel monitor the difference between room air pressure and the air pressure inside the final filter sections. The difference is measured in inches of water column.

If powder bypasses clogged cartridge filters, the final filters will clog, preventing air flow through the filter media. When the final filters clog, the air pressure differential in the fan section increases until it reaches 5-in. wc, at which point the pressure switch shuts down that module's exhaust fan.



3511003C

Fig. 2-3 Booth Operation (Typical Batch Booth Shown)

---

### **3. Optional Equipment**

---

The following options are available for your Versa-Coat booth. Refer to the *Parts* section of this manual or contact your Nordson representative for ordering information.

1. Air dryers
2. Compressed air filter packages
3. Powder application systems consisting of
  - Feed hoppers
  - Powder pumps
  - Electrostatic powder spray handguns
  - Gun controllers/electrostatic power supplies
  - Dolly (portable systems)
  - Air tubing, powder feed tubing, power cords, and ground cables

**NOTE:** Powder application system components must be ordered separately.

4. Mounting brackets for the following electrostatic power supplies
  - Versa-Spray II IPS gun controller
  - EXP-100 electrostatic power supply
  - Sure Coat gun controller

The mounting brackets mount on either the flanges around the face opening of the batch booth or the conveyor booths' operator platform handrail.

A mounting bracket with a sliding window is also available for the Versa-Spray II IPS gun controller used inside of the batch booth. The clear plastic window slides upward to allow the operator to adjust the gun controls without leaving the booth.

## *Section 3*

---

# ***Installation***

---





## Section 3 Installation



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

---

### 1. Introduction

---



**CAUTION:** Do not put electrostatic power supplies inside the booth. Any electrical device within three feet of any booth opening must be dust tight.

Install your Nordson Versa-Coat booth in accordance with local, state, and national codes, including NFPA 33.

Use the following procedures to install your Versa-Coat booth. Refer to the *Specifications* section of this manual for other important information, including booth design considerations.

**NOTE:** There must be at least 1 m (3 ft) of clearance between the final filters and any wall or other object to allow free air flow.

---

### 2. Unpacking

---

Versa-Coat booths are shipped unassembled. The following major booth components are shipped in a crate and attached to a wooden pallet:

- wall panels
- brackets
- roof panels
- roof supports (if used)
- fan/collector module(s)
- operator platform(s) (if used)

Before unpacking the components, move the pallets to an area close to the installation site. The installation site should be clean and free of obstructions. Plan the air and electrical drops in advance.

---

## 2. Unpacking (contd)

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Follow these steps to unpack the Versa-Coat booth parts.

1. Remove the crating and lay out the panels, brackets, and roof supports (if used) in a clean area. Set the roof panels, operator platforms (if used), cartridge filters, and final filters aside.
2. Sort the panels and brackets by size and usage, according to the bill of materials and assembly drawings for your booth.

**NOTE:** Do not remove the protective plastic film from the panels until you are ready to install them.

3. Inspect each component for damage. Document any damage that you find and report it to both the carrier and your Nordson representative.

---

## 3. Canopy Assembly

---

Assemble the booth according to its assembly drawings. Refer to the *Canopy Assembly* section in this manual. After the booth canopy is assembled, proceed with the following installation instructions.

---

## 4. Electrical

---



**WARNING:** Risk of electric shock. Install all wiring in accordance with National Code NFPA 70 and all state and local codes.



**WARNING:** Disconnect equipment from line voltage. Failure to observe this warning could result in equipment damage, personal injury, or death.

Use the following procedures to make the necessary electrical connections to the booth.

### Conduit and Wiring



**WARNING:** Risk of electrical shock. Make sure that all conduit and conduit fittings are liquid tight.

See Figure 3-1.

Connect the control panel (4) to the fan motor(s) (1) and solenoid enclosure(s) (2) using the following procedures.

**NOTE:** Wiring, conduit fittings, flexible and rigid conduit, and anchor clips are shipped with the booth assembly. These wiring parts are not available when purchasing individual fan/collector modules.

1. Route a length of flexible conduit (3) from the control panel (4) to each fan/collector module.
2. Secure the flexible conduit to the fan/collector modules using anchor clips and  $\frac{1}{4}$ -20 screws.
3. Pull the wiring through the conduit.



**CAUTION:** Connecting the pressure switches incorrectly could cause the wrong fan motor to shut down if the final filters in one module clog. Connecting the solenoids incorrectly could cause erratic cartridge pulsing.

4. Refer to Table 3-1.

Make sure that each module's wiring is connected to the proper overload protectors and terminals on the main terminal strip and on terminal strip TR116.

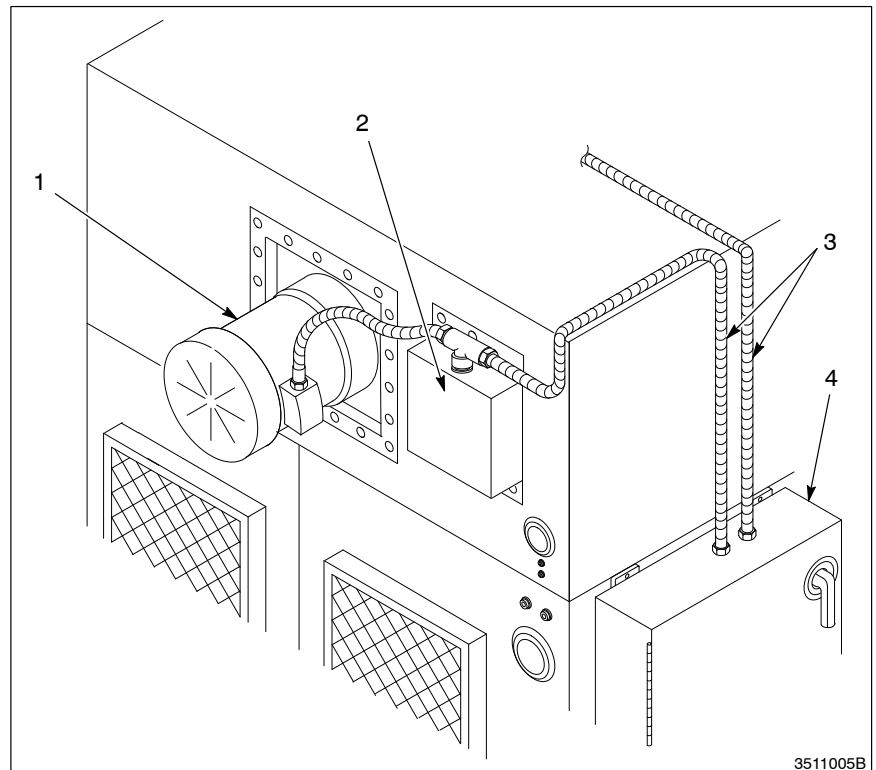


Fig. 3-1 Conduit and Wiring

- |                       |                     |
|-----------------------|---------------------|
| 1. Fan motor          | 3. Flexible conduit |
| 2. Solenoid enclosure | 4. Control panel    |

**Conduit and Wiring** (contd)

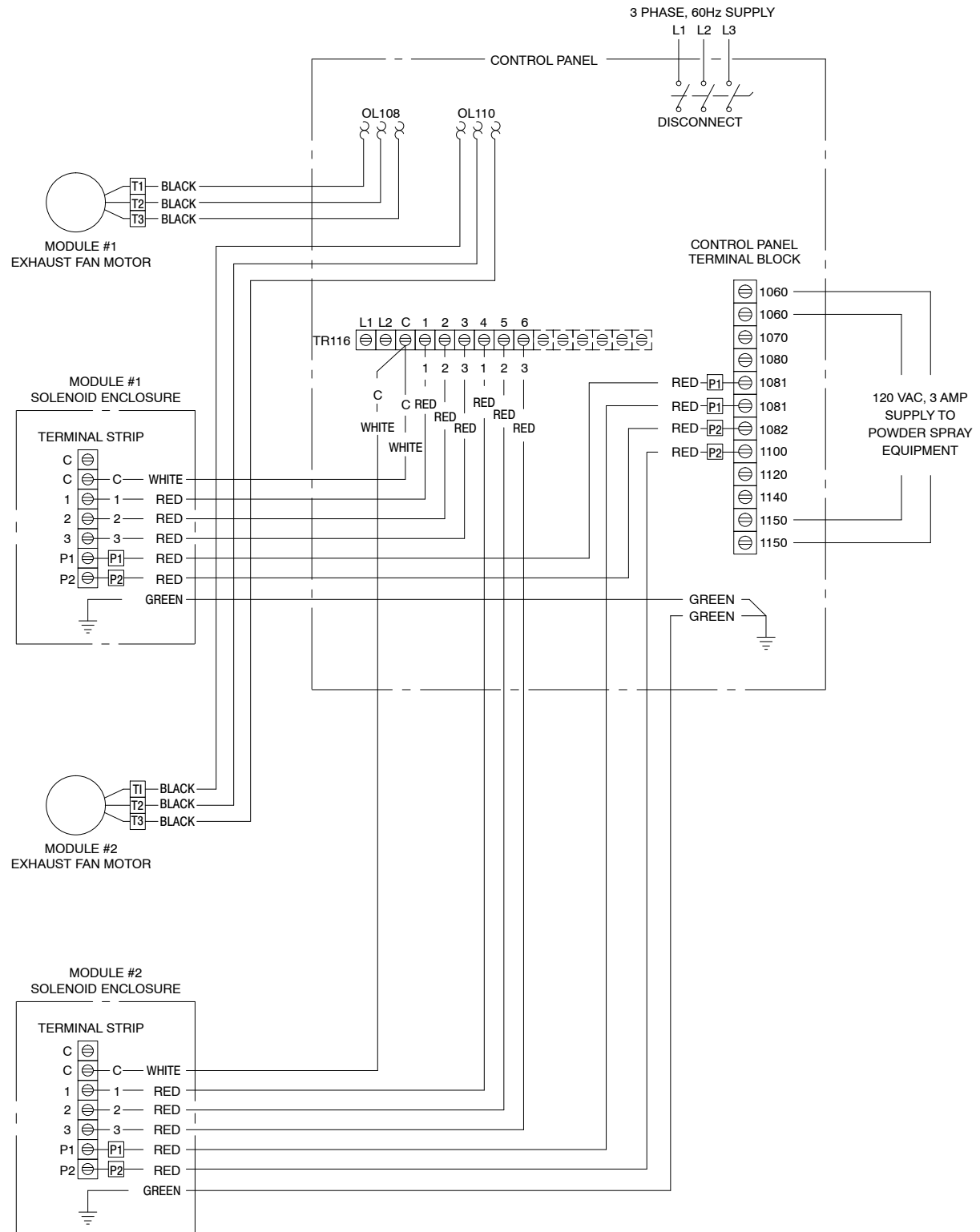
5. See Figure 3-2.

Using the wiring diagram, connect and label the wiring appropriately.

6. Install a locking breaker or disconnect in the line ahead of the control panel.
7. Connect the electrical service leads to the L1, L2, and L3 terminals on the electrical control panel's master disconnect switch.

Table 3-1 Wiring Connection

Wire Number	Module 1 Terminal	Module 2 Terminal	Module 3 Terminal	Module 4 Terminal
T1 (Black)	OL108 (T1)	OL110 (T1)	OL112 (T1)	OL114 (T1)
T2 (Black)	OL108 (T2)	OL110 (T2)	OL112 (T2)	OL114 (T2)
T3 (Black)	OL108 (T3)	OL110 (T3)	OL112 (T3)	OL114 (T3)
C (White)	TR116 (C)	TR116 (C)	TR116 (C)	TR116 (C)
1 (Red)	TR116 (1)	TR116 (4)	TR116 (7)	TR116 (10)
2 (Red)	TR116 (2)	TR116 (5)	TR116 (8)	TR116 (11)
3 (Red)	TR116 (3)	TR116 (6)	TR116 (9)	TR116 (12)
P1 (Red)	1081	1081	1081	1081
P2 (Red)	1082	1100	1120	1140
Green	Ground	Ground	Ground	Ground
<b>NOTE:</b> Numbers in parenthesis are terminal numbers on the device indicated. Wires in the <i>Wire Number</i> column are the required wires to each module.				



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Fig. 3-2 Booth Wiring Diagram

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## 5. Pneumatic

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**WARNING:** System or material pressurized. Relieve system pressure before servicing.



**WARNING:** Do not operate equipment at a pressure greater than the maximum rated working pressure of any component in the system.

See Figure 3-3.

Use the following steps to make the pneumatic connections to the fan/collector modules of your Versa-Coat booth.

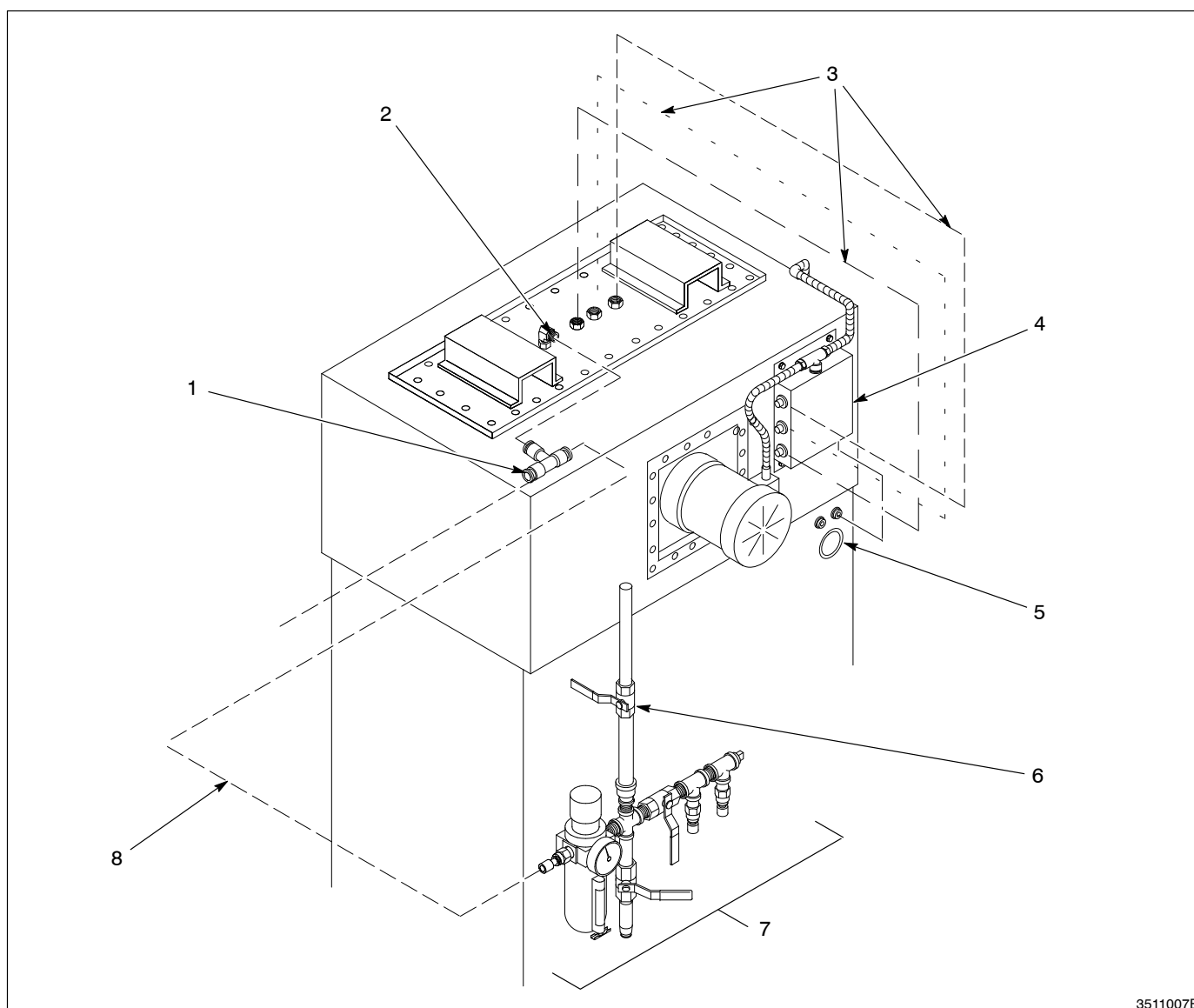
**NOTE:** The manual shutoff valve and the air dryers and filters are not included with the Versa-Coat booths.

1. Install a manual shutoff valve (6) and the air purge regulator assembly (7) to the air supply line after the air dryer and filters.

**NOTE:** If your booth has more than one fan/collector module, add a tee (1) to supply air to the other modules.

2. Run 12-mm tubing (8) from the air purge regulator assembly to the main air supply fitting (2) on top of fan section #1.
3. Connect 12-mm tubing to the main air supply fitting on the other module(s) as required.
4. Connect 6-mm air tubing (3) from the three straight fittings in the center of the valve panel to the elbows on the solenoid enclosure (4).

**NOTE:** Do not connect tubing to either the fitting labeled VENT on the solenoid enclosure or the fitting labeled V above the final filter differential pressure gauge (5).



3511007B

Fig. 3-3 Pneumatic Connections

- |                            |   |                                 |
|----------------------------|---|---------------------------------|
| 1. Tee                     | 4. Solenoid enclosure                       | 7. Air purge regulator assembly |
| 2. Main air supply fitting | 5. Final filter differential pressure gauge | 8. 12-mm tubing                 |
| 3. 6-mm air tubing         | 6. Manual shutoff valve                     |                                 |

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## **6. Cartridge Filters**

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Use the following steps to install the cartridge filters into the fan/collector module.

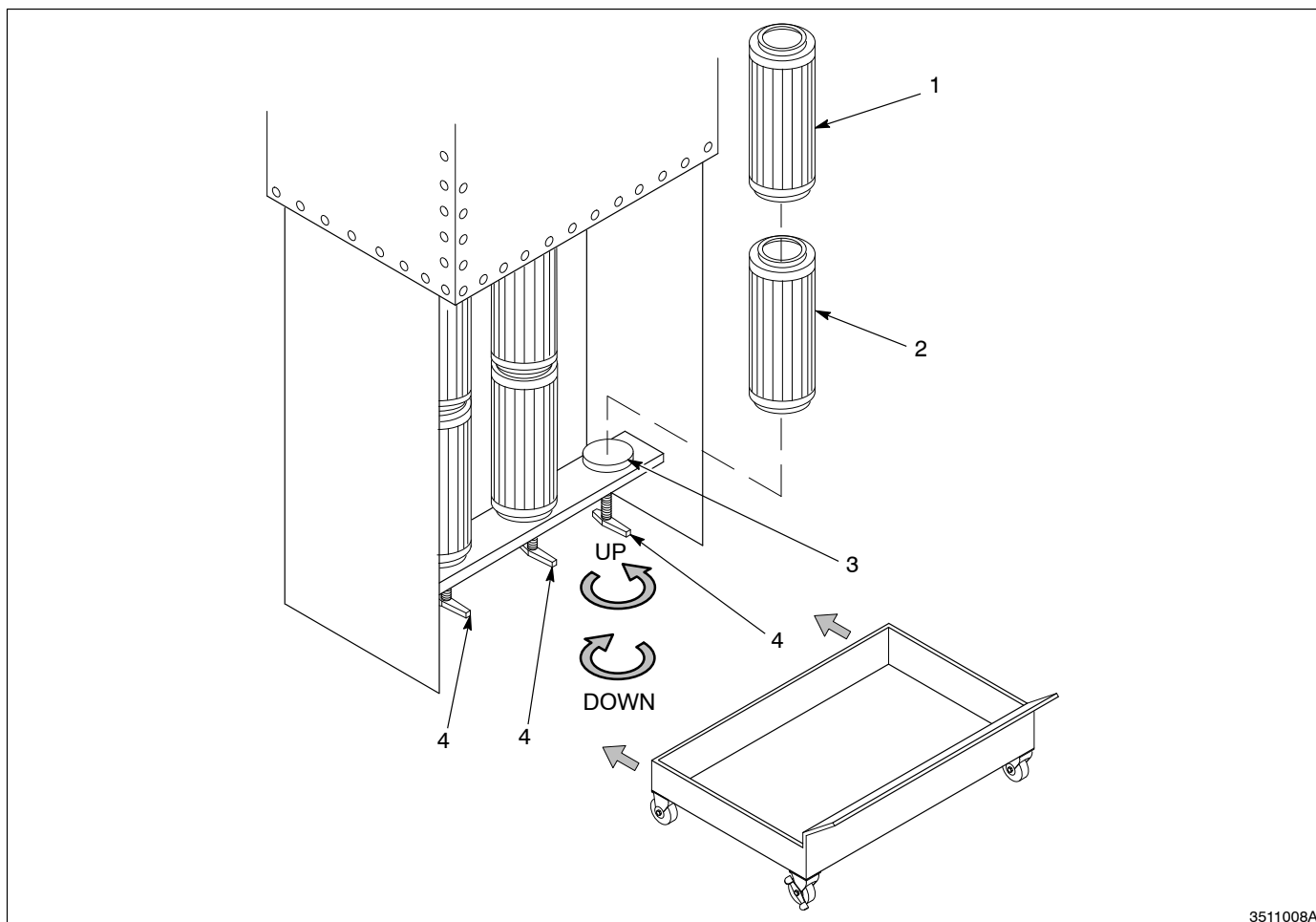
See Figure 3-4.

1. Turn the cartridge filter crank handles (4) to lower the cartridge filter push plates (3) until they bottom-out against the support rail.
2. Center the closed-end cartridge filters (2) on the push plates.
3. Place the flow-through cartridge filters (1) on top of the closed-end cartridge filters. Make sure that the cartridges filters are vertically lined up with each other.
4. Press the outer metal lip of the flow-through cartridge filters against the alignment pins in the fan section.
5. Rotate the cartridge filter crank handles until the flow-through cartridge filter gaskets are evenly compressed against the fan section. Inspect the cartridge filters for proper sealing and alignment.

**NOTE:** You should not be able to slip a 0.5-mm (0.020-in.) feeler gauge between the gasket and the sealing surface.

6. Roll the optional powder collection tray (if used) under the cartridge filter crank handles.





3511008A

**Fig. 3-4** Installing the Cartridge Filters

1. Flow-through cartridge filter
2. Closed-end cartridge filter

3. Push plate

4. Cartridge filter crank handles

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## **7. Final Filters**

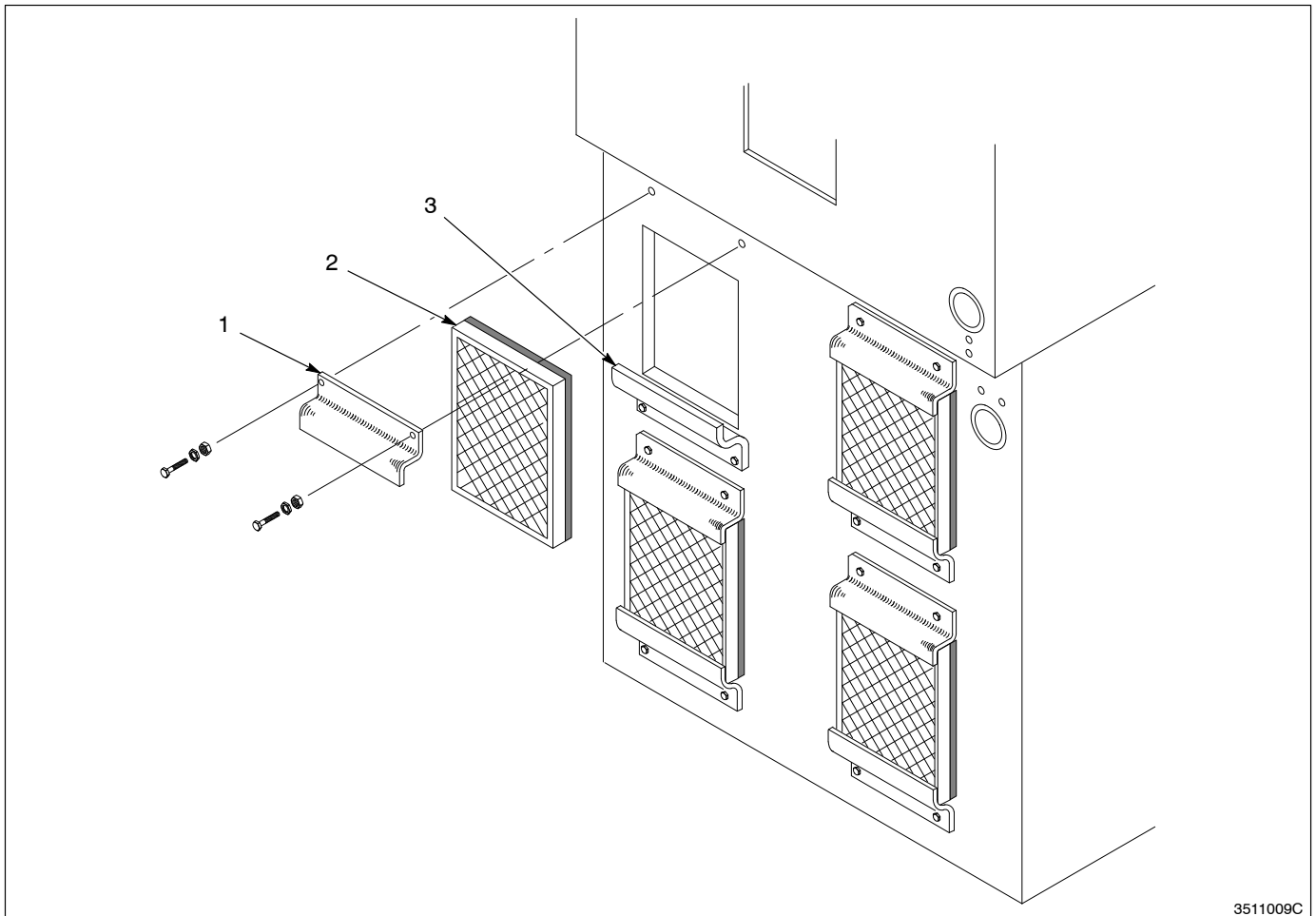
---

If the final filters were not installed at the factory, use the following steps to install the final filters onto the fan/collector module.

See Figure 3-5.

**NOTE:** 3400-cfm modules have three final filters. 5100-cfm modules have four final filters.

1. Remove the upper Z-bracket (1) and loosen the lower Z-bracket (3).
2. Remove the final filters (2) from their cartons. Inspect the filter media, frame, and gasket for damage. Do not use damaged filters.
3. Place the filter, gasket side inward, onto the lower Z-bracket and line up the gasket with the edges of the holes in the collector section.
4. Install the upper Z-bracket and tighten both Z-brackets to evenly compress the gasket. Inspect the gasket to make sure that it is properly sealed and aligned.



3511009C

Fig. 3-5 Installing the Final Filters

1. Upper Z-bracket

2. Final filter

3. Lower Z-bracket

## 8. Additional Lighting



**WARNING:** Risk of electrical shock. All electrical devices within three feet of the booth must conform to code. Failure to observe this warning could result in equipment damage, serious injury, or death.



**WARNING:** Light fixtures installed directly on roof panels must be dust tight. Failure to observe this warning could result in equipment damage, serious injury, or death.

If additional lighting is required inside the booth, hang fixtures over the windows in the roof panels. Light fixtures installed directly on the roof panels must be dust tight.



## *Section 4*

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# ***Canopy Assembly***

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## Section 4

# Canopy Assembly



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

---

### 1. Introduction

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**WARNING:** Always balance the load when lifting components. Never put stress on flat panels. Do not attempt to lift using covers, doors, cables, or hose connections. Use only lifting equipment with a rated capacity greater than the load. While lifting, make sure all personnel stand clear.

### ***Canopy Assembly Drawings***

See Figures 4-1 through 4-46.

Assembly drawings and instructions are included on the following pages. Assemble the booth according to the drawings for your booth and the following instructions.

Each booth configuration has specific assembly drawings. Each configuration's assembly drawings show a three-dimensional view of the completed booth and a series of flat views of the booth's component layout.

**NOTE:** Each booth configuration uses different sizes of wall panels and brackets. Pay close attention to your booth's bill of materials when assembling your Versa-Coat booth.

A bill of materials is included with each booth's assembly drawing. The bill of material lists the dimensions and required quantities of all booth components.

## Fasteners

**NOTE:** Do not tighten fasteners until the entire booth is assembled and squared.

The following fasteners are shipped with the booth.

Use these fasteners to assemble the panels:

- $\frac{5}{16}$ -18 x 1.0-in. hex head cap screws
- $\frac{5}{16}$ -18 hex nuts

Use these fasteners to secure the conduit to the fan sections:

- $\frac{1}{4}$ -20 x 0.75-in. hex head screws
- $\frac{1}{4}$  flat washers
- $\frac{1}{4}$  lock washers
- $\frac{1}{4}$ -20 hex nuts

---

## 2. Assembly Instructions

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**WARNING:** The assembled fan/collector module is top-heavy. Do not attempt to lift an assembled fan/collector module from the bottom. Failure to observe this warning could result in property damage, personal injury, or death.

Follow these steps to assemble the booth.

1. Move one fan/collector module into position.

**NOTE:** If you are assembling a batch booth that has two fan/collector modules side by side, install the final filters on the collector sections before you move them into position. Refer to *Final Filters* later in this section.

**NOTE:** Make sure that the assembly is squared as you proceed.



2. Assemble the wall panels to the fan/collector modules, following these guidelines.

- Move additional fan/collector modules into position as needed.
- **Batch booths:** See Figure 4-1.

Install the roof support legs (3) (if used) between wall panels (5) as shown.

**NOTE:** A batch booth roof support assembly consists of two vertical legs (3) and a horizontal rail (4). Model B uses one-piece horizontal rails (1). All other models use three-piece horizontal rails. Models B and I include two roof support assemblies.

- **Conveyor booths:** Install the hinges to one pair of C panels below the shorter pair of angle brackets. The hinges will allow the C panels to swing open to allow the powder collection tray to roll out of one end of the conveyor booth. Install the latch between the hinged C panels to hold the panels together when the booth is operating.
- Seal any gaps between the wall panels and the collector sections with the provided caulk.

3. Install the roof panels using the following guidelines:

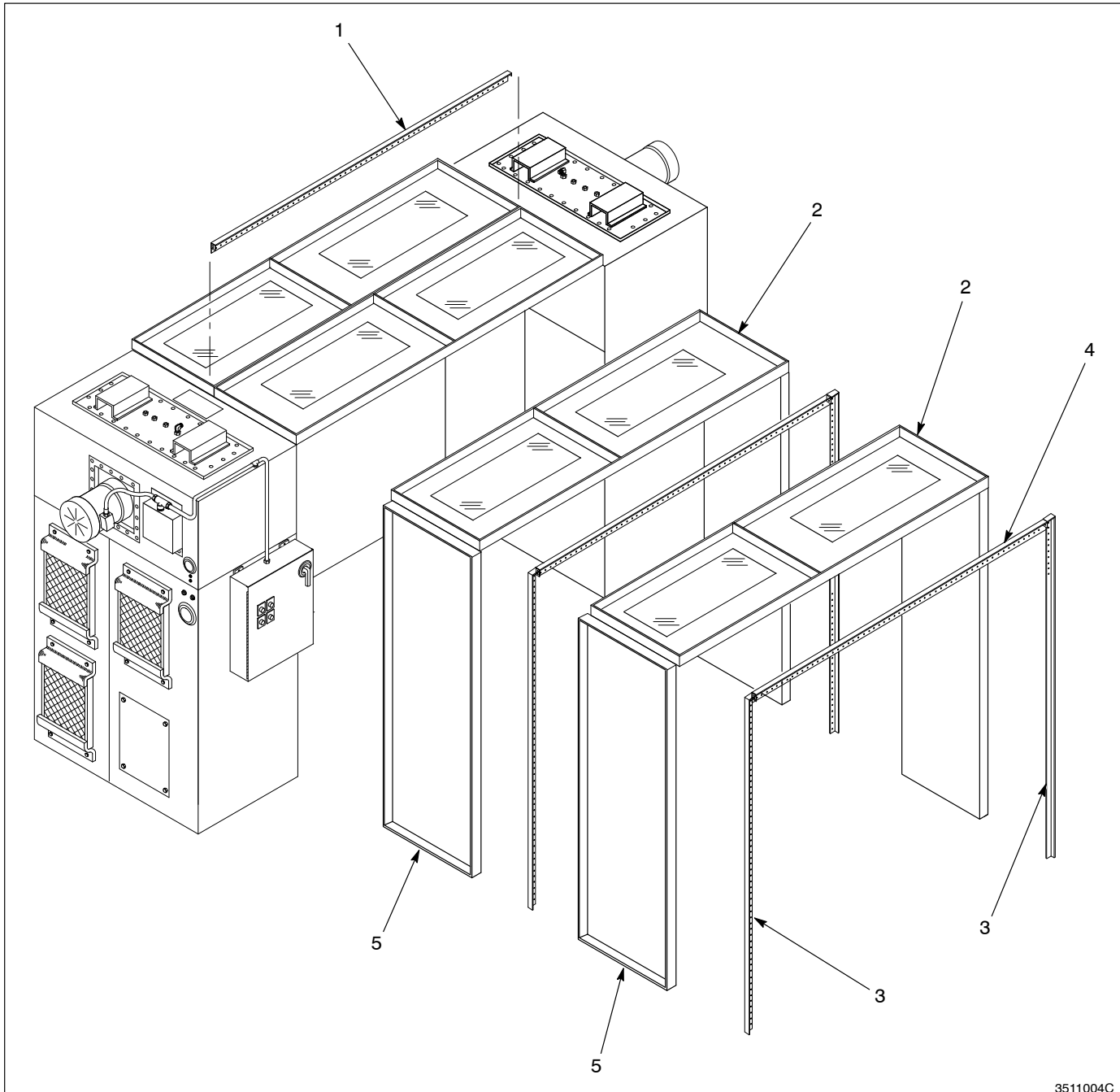
- **Batch booths:** See Figure 4-1.

Assemble the brackets to the top of the wall panels. Install the roof panels (2) and horizontal roof support rails (1, 4) (if used), as shown in the assembly drawings.

- **Conveyor booths:** Bolt the roof panels to the top edges of the wall panels.

## 2. Assembly Instructions

(contd)



3511004C

Fig. 4-1 Batch Booth Roof Support Installation

- |                    |                    |                |
|--------------------|--------------------|----------------|
| 1. Horizontal rail | 3. Legs            | 5. Wall panels |
| 2. Roof panels     | 4. Horizontal rail |                |

*Note:* Typical batch booth shown. Your configuration may differ from the one illustrated.

4. **Models CG–CM conveyor booths only:** To prevent the roof from sagging, install the roof support assembly in the middle of the roof.

See Figure 4-2.

- a. Rest the assembly's horizontal tube (2) on top of the conveyor (3).
  - b. Adjust the vertical threaded rods (1).
  - c. Bolt the rods' horizontal ends (4) to the lips of the roof panels (5).
5. Install  $\frac{5}{16}$ -18 screws in the unused tapped holes in the top, front, and sides of the fan/collector modules.
  6. If used, move the conveyor booth's operator platform(s) into place.
  7. When the entire booth is assembled and squared, bolt the fan/collector modules, wall panels, and operator platforms (if used) to the floor.

## 2. Assembly Instructions

(contd)

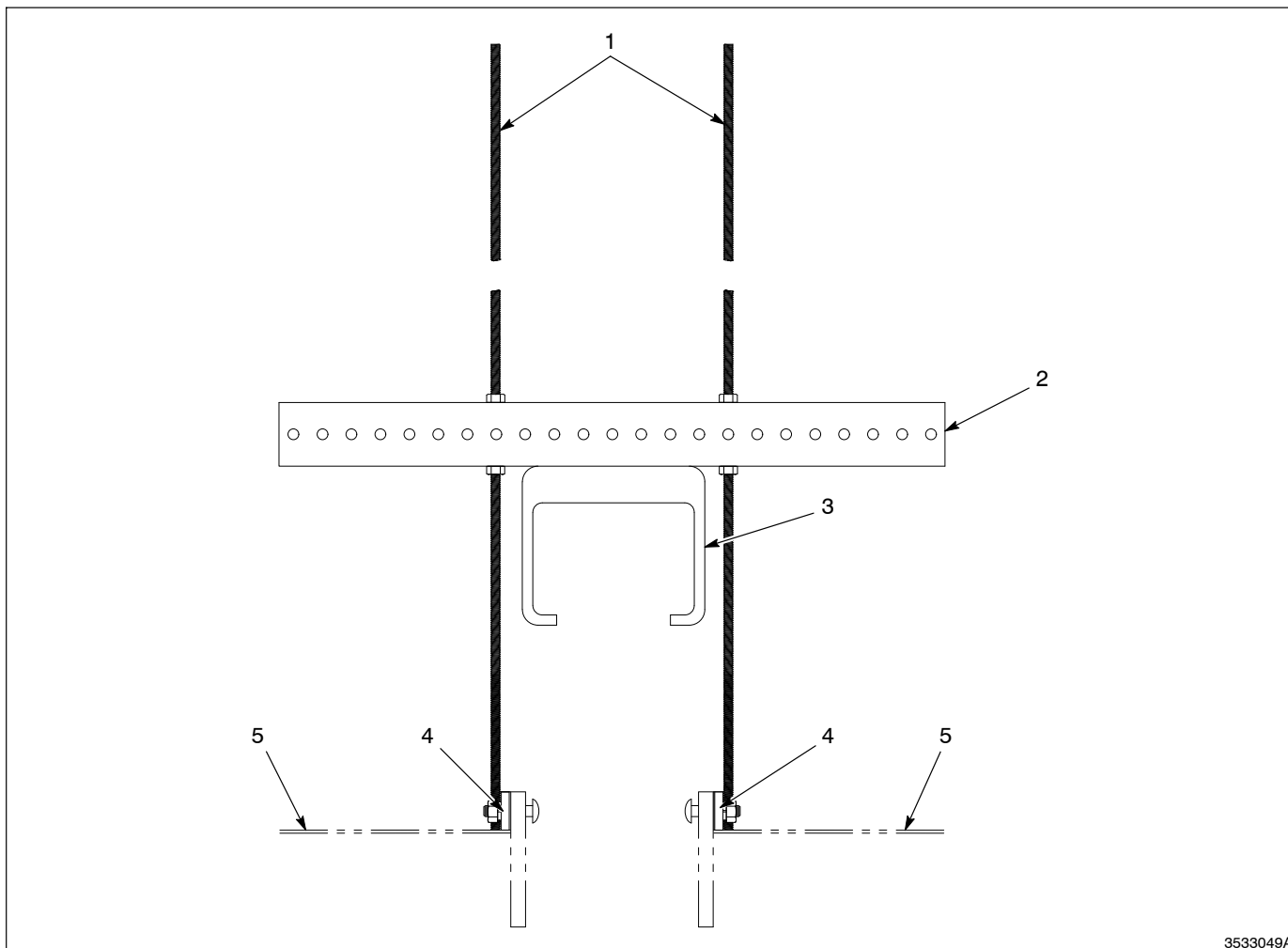


Fig. 4-2 Models CG-CM Conveyor Booth Roof Support Installation

- |                           |                    |                |
|---------------------------|--------------------|----------------|
| 1. Vertical threaded rods | 3. Conveyor        | 5. Roof panels |
| 2. Horizontal tube        | 4. Horizontal ends |                |

### 3. Booth Dimensions

The following tables list the dimensions of the various standard configurations of the Versa-Coat batch and conveyor booths.

#### 3400-cfm Batch Booths

Refer to Table 4-1 for a listing of the dimensions of the standard 3400-cfm batch booth canopies.

Table 4-1 Standard 3400-cfm Batch Booth Dimensions

Model	Work Area (H x W x D) m (ft)	Footprint (H x W x D) m (ft)	Number of Fan/Collector Modules	cfm
A	2.1 x 1.5 x 1.5 (7.0 x 5.0 x 5.0)	2.6 x 1.6 x 2.7 (8.5 x 5.25 x 9.0)	1	3400
B	2.1 x 2.7 x 3.0 (7.0 x 9.0 x 10.0)	2.6 x 5.2 x 3.1 (8.5 x 17.0 x 10.16)	2	6800
C	2.4 x 2.4 x 3.0 (8.0 x 8.0 x 10.0)	2.6 x 4.9 x 3.1 (8.5 x 16.0 x 10.16)	2	6800
D	2.4 x 3.7 x 3.0 (8.0 x 12.0 x 10.0)	2.6 x 4.9 x 4.3 (8.5 x 16.16 x 14.0)	3	10200
E	2.4 x 4.6 x 3.0 (8.0 x 15.0 x 10.0)	2.6 x 7.0 x 4.3 (8.5 x 23.0 x 14.0)	4	13600
F	2.7 x 2.1 x 3.0 (9.0 x 7.0 x 10.0)	2.8 x 4.6 x 3.1 (9.16 x 15.0 x 10.16)	2	6800
G	2.7 x 4.3 x 3.0 (9.0 x 14.0 x 10.0)	2.8 x 6.7 x 4.3 (9.16 x 22.0 x 14.0)	4	13600
H	3.0 x 1.8 x 3.0 (10.0 x 6.0 x 10.0)	3.1 x 4.3 x 3.1 (10.16 x 14.0 x 10.16)	2	6800
I	3.0 x 3.0 x 3.0 (10.0 x 10.0 x 10.0)	3.1 x 4.3 x 4.3 (10.16 x 14.16 x 14.0)	3	10200
J	3.0 x 3.7 x 3.0 (10.0 x 12.0 x 10.0)	3.1 x 6.1 x 4.3 (10.16 x 20.0 x 14.0)	4	13600
K	3.7 x 2.4 x 3.0 (12.0 x 8.0 x 10.0)	3.7 x 4.9 x 4.3 (12.16 x 16.0 x 14.0)	3	10200

**5100-cfm Batch Booths**

Refer to Table 4-1 for a listing of the dimensions of the standard 5100-cfm batch booth canopies.

Table 4-2 Standard 5100-cfm Batch Booth Dimensions

<b>Model</b>	<b>Work Area (H x W x D) m (ft)</b>	<b>Footprint (H x W x D) m (ft)</b>	<b>Number of Fan/Collector Modules</b>	<b>cfm</b>
HFB-1	2.4 x 2.1 x 3.0 (8 x 7 x 10)	2.4 x 3.4 x 3.0 (8 x 11 x 10)	1	5100
HFB-2	2.4 x 3.0 x 3.0 (8 x 10 x 10)	2.4 x 3.0 x 4.3 (8 x 10 x 14)	2	10200
HFB-3	2.4 x 3.7 x 3.0 (8 x 12 x 10)	2.4 x 3.7 x 4.3 (8 x 12 x 14)	2	10200
HFB-4	2.4 x 4.3 x 3.0 (8 x 14 x 10)	2.4 x 4.3 x 4.3 (8 x 14 x 14)	2	10200
HFB-5	2.7 x 3.8 x 3.0 (9 x 12.0 x 10)	2.7 x 3.8 x 4.3 (9 x 12.5 x 14)	2	10200
HFB-6	3.0 x 3.0 x 3.0 (10 x 10 x 10)	3.0 x 3.0 x 4.3 (10 x 10 x 14)	2	10200

**3400-cfm Conveyor Booths**

Refer to Table 4-3 for a listing of the dimensions of the standard 3400-cfm conveyor booths.

Table 4-3 Standard 3400-cfm Conveyor Booth Dimensions

Model	Canopy Height (min-max) m (ft)	Work Area (W x D) m (ft)	Footprint (W x D) m (ft)	Part Opening (H x W) m (ft)	Operator Opening (H x W) m (ft)	Number of Fan/Collector Modules
CA	2.6–3.7 (8.5–12.0)	1.5 x 1.5 (5.0 x 5.0)	3.7 x 1.7 (12.0 x 5.66)	2.1 x 0.5 (7.0 x 1.5)	1.8 x 0.8 (6.0 x 2.5)	1
CB	2.4–3.7 (8.0–12.0)	1.5 x 1.5 (5.0 x 5.0)	3.7 x 1.7 (12.0 x 5.66)	1.8 x 0.6 (6.0 x 2.0)	1.8 x 0.8 (6.0 x 2.5)	1
CC	2.4–3.7 (8.0–12.0)	1.5 x 1.5 (5.0 x 5.0)	3.7 x 1.7 (12.0 x 5.66)	1.5 x 0.8 (5.0 x 2.5)	1.8 x 0.8 (6.0 x 2.5)	1
CD	2.4–3.7 (8.0–12.0)	1.5 x 1.5 (5.0 x 5.0)	3.7 x 1.7 (12.0 x 5.66)	1.2 x 0.9 (4.0 x 3.0)	1.8 x 0.8 (6.0 x 2.5)	1
CE	2.4–3.7 (8.0–12.0)	1.5 x 1.5 (5.0 x 5.0)	3.7 x 1.7 (12.0 x 5.66)	1.0 x 1.0 (3.5 x 3.5)	1.8 x 0.8 (6.0 x 2.5)	1
CF	2.4–3.7 (8.0–12.0)	1.5 x 1.5 (5.0 x 5.0)	3.7 x 1.7 (12.0 x 5.66)	0.9 x 1.2 (3.0 x 4.0)	1.8 x 0.8 (6.0 x 2.5)	1
CG	2.4–3.7 (8.0–12.0)	3.0 x 1.5 (10.0 x 5.0)	3.7 x 3.2 (12.0 x 10.66)	1.5 x 0.6 (5.0 x 2.0)	0.9 x 0.8 (3.0 x 2.5)	1
CH	2.4–3.7 (8.0–12.0)	3.0 x 1.5 (10.0 x 5.0)	3.7 x 3.2 (12.0 x 10.66)	1.2 x 0.8 (4.0 x 2.5)	0.9 x 0.8 (3.0 x 2.5)	1
CI	2.4–3.7 (8.0–12.0)	3.0 x 1.5 (10.0 x 5.0)	3.7 x 3.2 (12.0 x 10.66)	1.0 x 0.9 (3.5 x 3.0)	0.9 x 0.8 (3.0 x 2.5)	1
CJ	2.4–3.7 (8.0–12.0)	3.0 x 1.5 (10.0 x 5.0)	3.7 x 3.2 (12.0 x 10.66)	0.9 x 1.0 (3.0 x 3.5)	0.9 x 0.8 (3.0 x 2.5)	1
CK	2.4–3.7 (8.0–12.0)	3.0 x 1.5 (10.0 x 5.0)	3.7 x 3.2 (12.0 x 10.66)	0.8 x 1.2 (2.5 x 4.0)	0.9 x 0.8 (3.0 x 2.5)	1
CL	2.6–3.7 (8.5–12.0)	3.0 x 1.5 (10.0 x 5.0)	4.0 x 3.2 (13.0 x 10.66)	2.1 x 1.0 (7.0 x 3.5)	1.8 x 0.8 (6.0 x 2.5)	2
CM	2.4–3.7 (8.0–12.0)	3.0 x 1.5 (10.0 x 5.0)	4.0 x 3.2 (13.0 x 10.66)	1.8 x 1.2 (6.0 x 4.0)	1.8 x 0.8 (6.0 x 2.5)	2

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**4. 3400-cfm Batch Booths**

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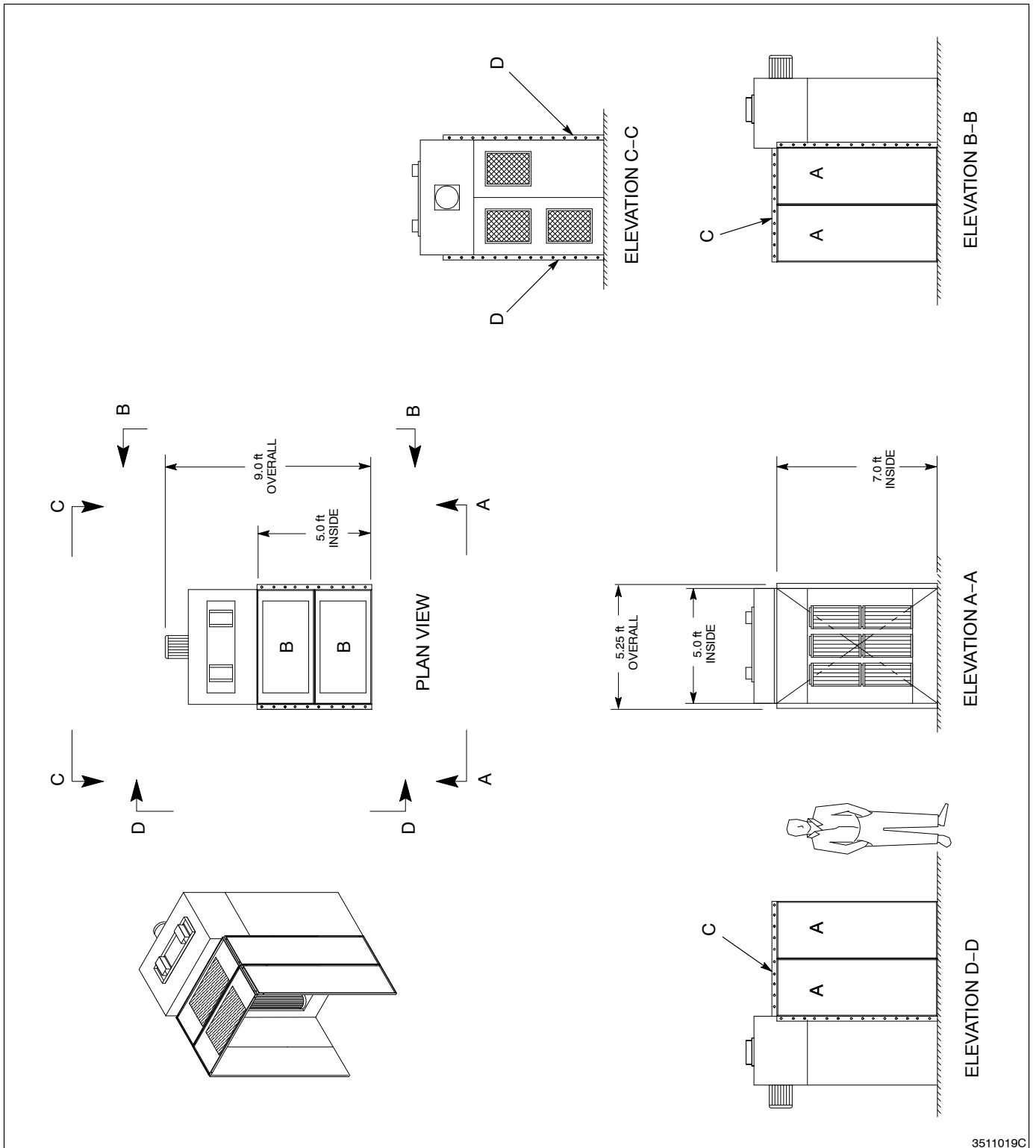
Use the appropriate bill of materials and illustration to assemble your 3400-cfm batch booth.

**Model A**

See Figure 4-3.

Item	Description	Dimensions	Quantity
A	Wall panel	84 x 30 in.	4
B	Roof panel	60 x 30 in.	2
C	Bracket	60 in.	2
D	Bracket	84 in.	2
—	Fan/collector module	8 x 5 x 4 ft	1





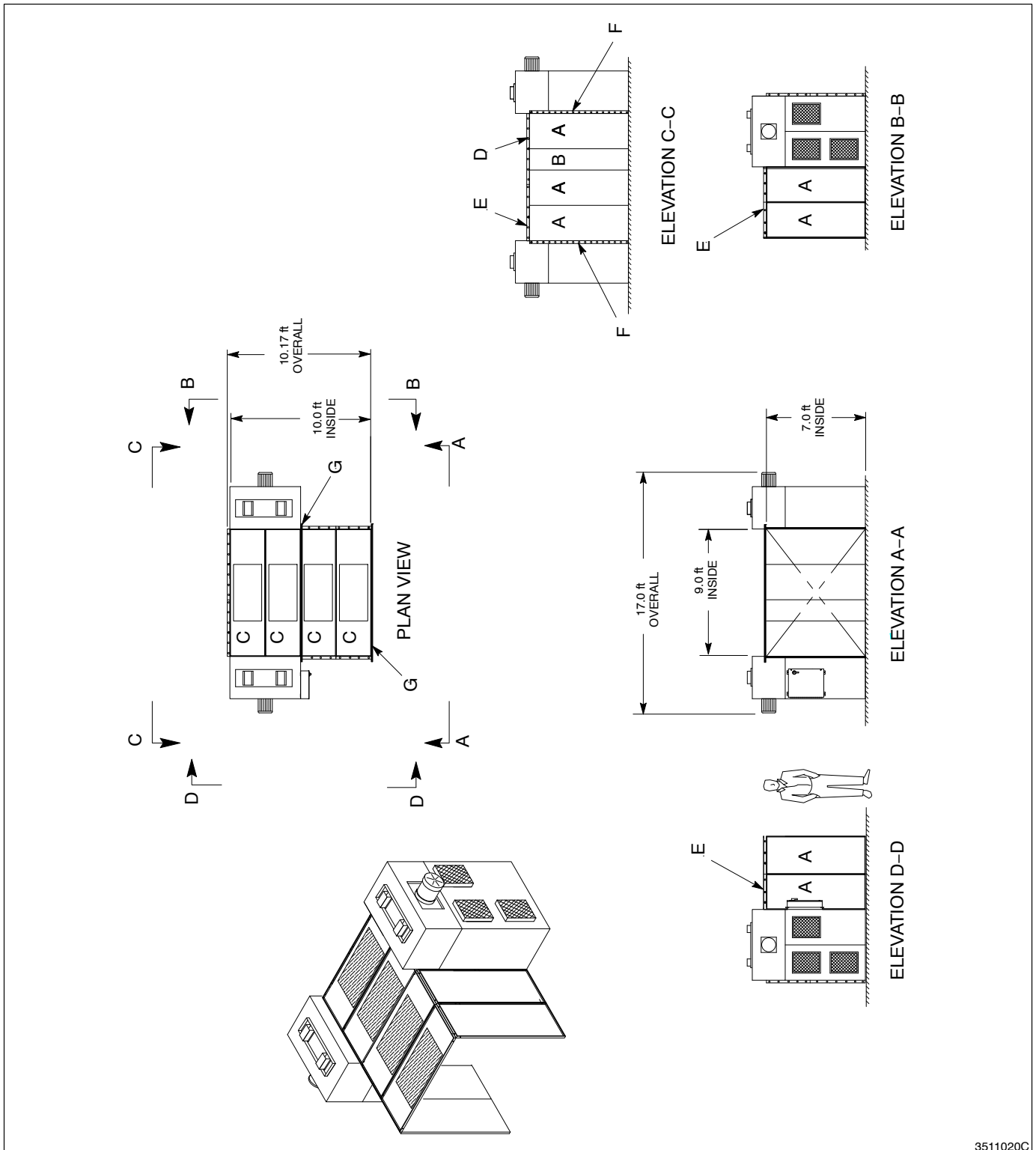
3511019C

Fig. 4-3 Model A Booth Assembly

**Model B**

See Figure 4-4.

Item	Description	Dimensions	Quantity
A	Wall panel	84 x 30 in.	7
B	Wall panel	84 x 18 in.	1
C	Roof panel	108 x 30 in.	4
D	Bracket	48 in.	1
E	Bracket	60 in.	3
F	Bracket	84 in.	2
G	Roof support assy	7 x 9 ft	2
—	Fan/collector module	8 x 5 x 4 ft	2



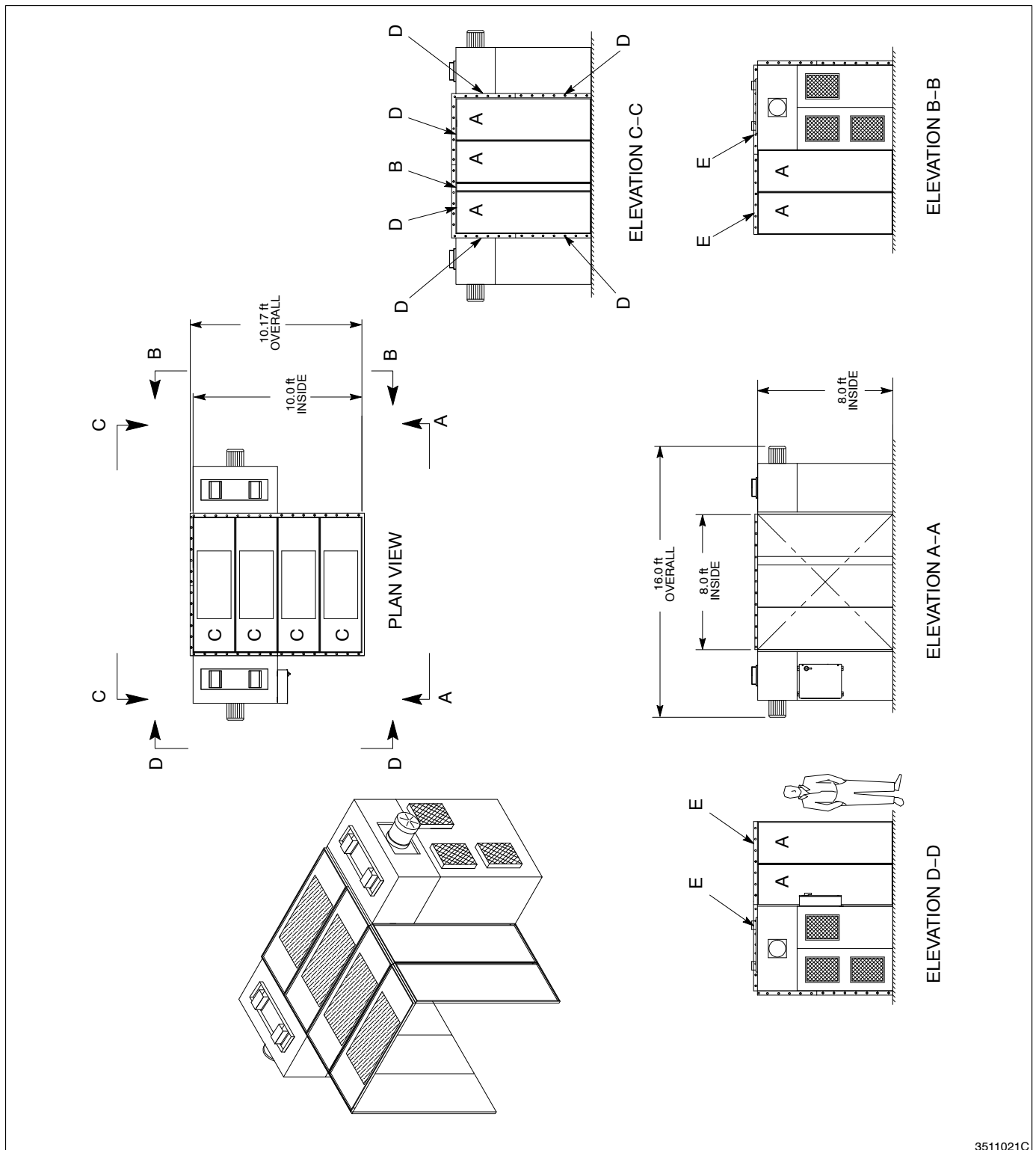
3511020C

Fig. 4-4 Model B Booth Assembly

**Model C**

See Figure 4-5.

Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	7
B	Wall panel	96 x 6 in.	1
C	Roof panel	96 x 30 in.	4
D	Bracket	48 in.	6
E	Bracket	60 in.	4
—	Fan/collector module	8 x 5 x 4 ft	2



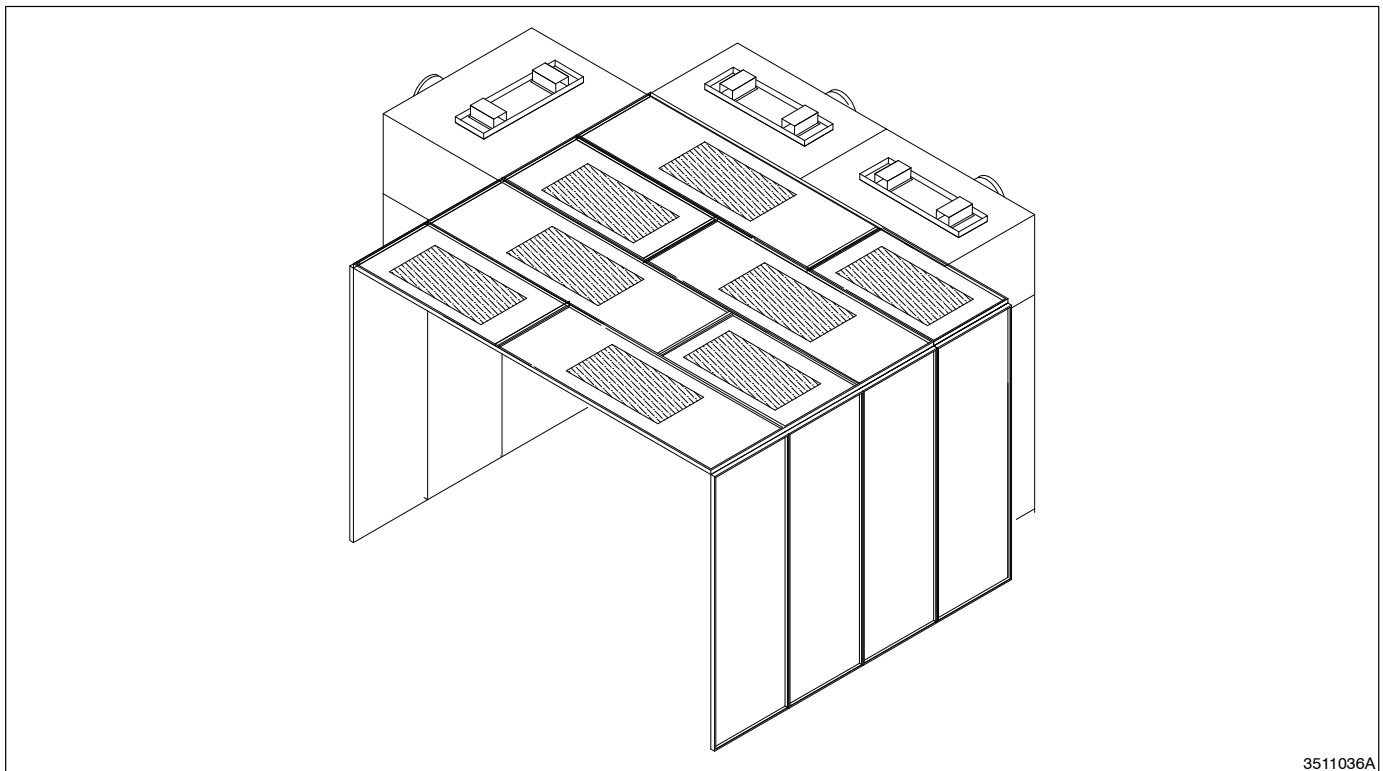
3511021C

Fig. 4-5 Model C Booth Assembly

**Model D**

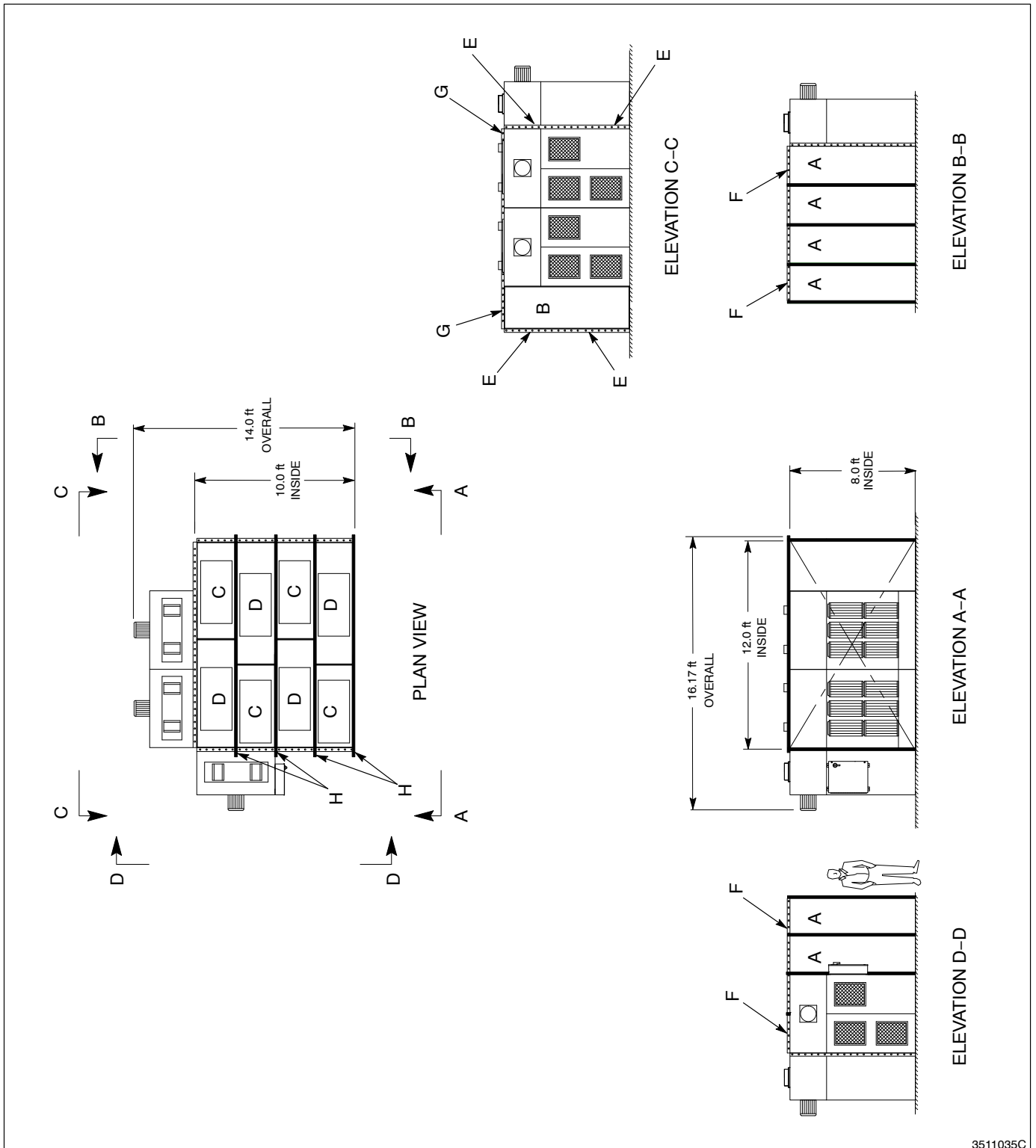
See Figures 4-6 and 4-7.

Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	6
B	Wall panel	96 x 24 in.	1
C	Roof panel	60 x 30 in.	4
D	Roof panel	84 x 30 in.	4
E	Bracket	48 in.	4
F	Bracket	60 in.	4
G	Bracket	72 in.	2
H	Roof support assy	8 x 12 ft	4
—	Fan/collector module	8 x 5 x 4 ft	3



3511036A

Fig. 4-6 Model D



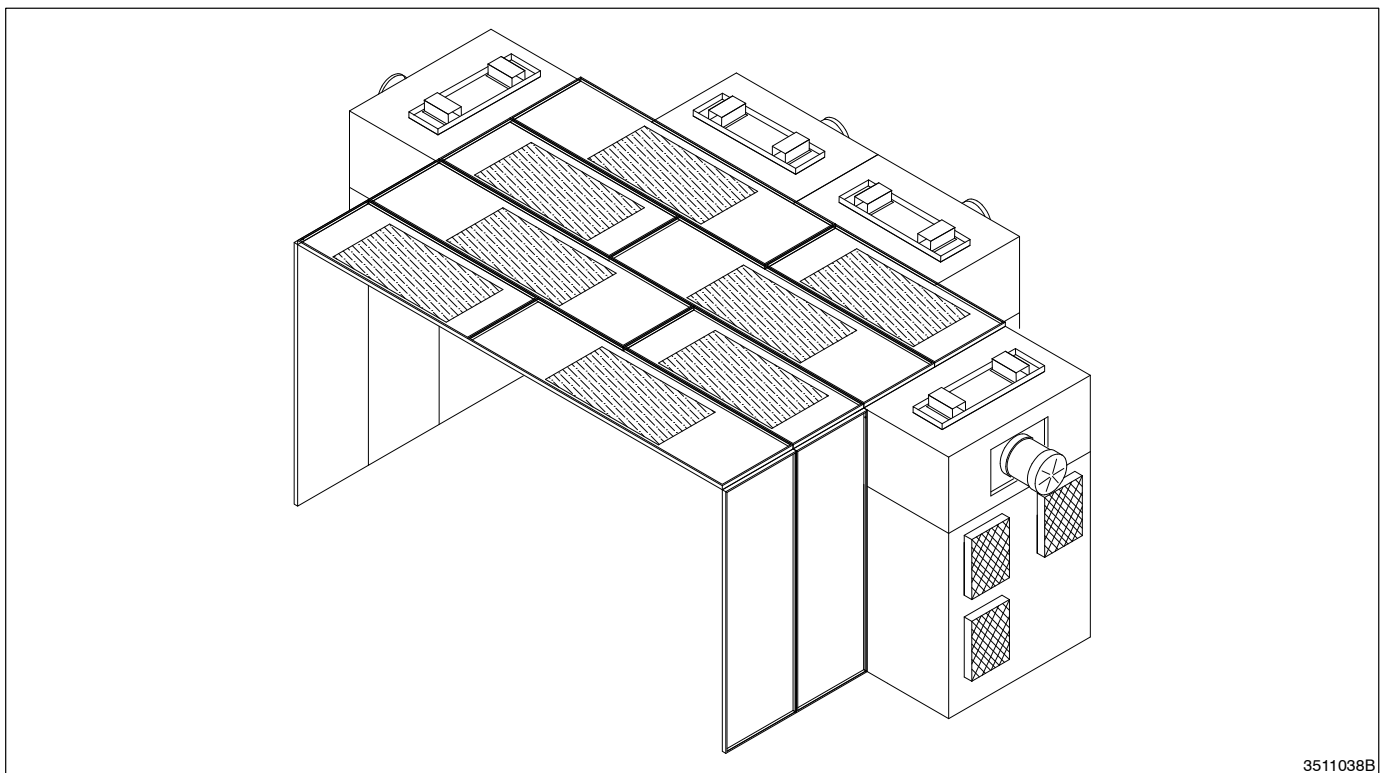
3511035C

Fig. 4-7 Model D Booth Assembly

**Model E**

See Figures 4-8 and 4-9.

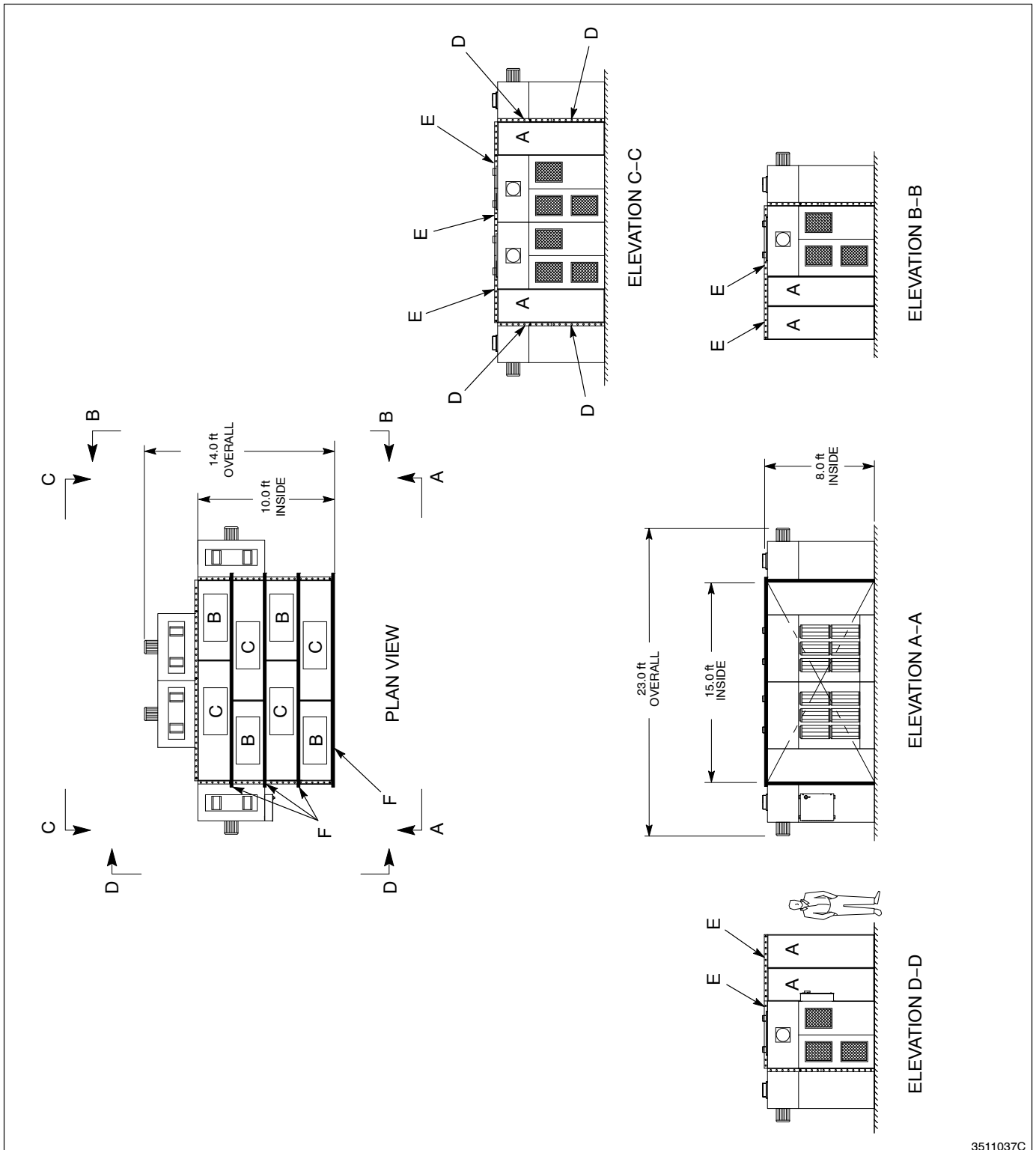
Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	6
B	Roof panel	84 x 30 in.	4
C	Roof panel	108 x 30 in.	4
D	Bracket	48 in.	4
E	Bracket	60 in.	7
F	Roof support assy	8 x 15 ft	4
—	Fan/collector module	8 x 5 x 4 ft	4



3511038B

Fig. 4-8 Model E





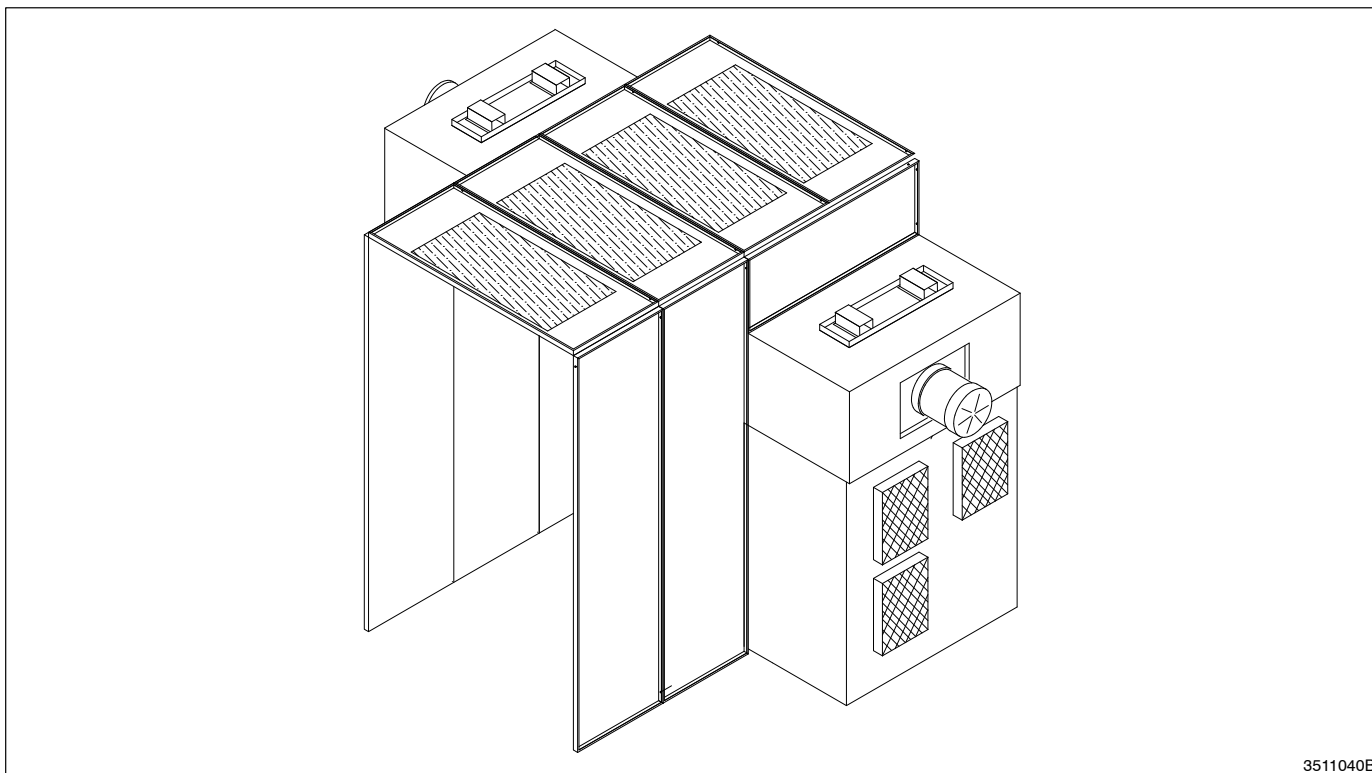
3511037C

Fig. 4-9 Model E Booth Assembly

**Model F**

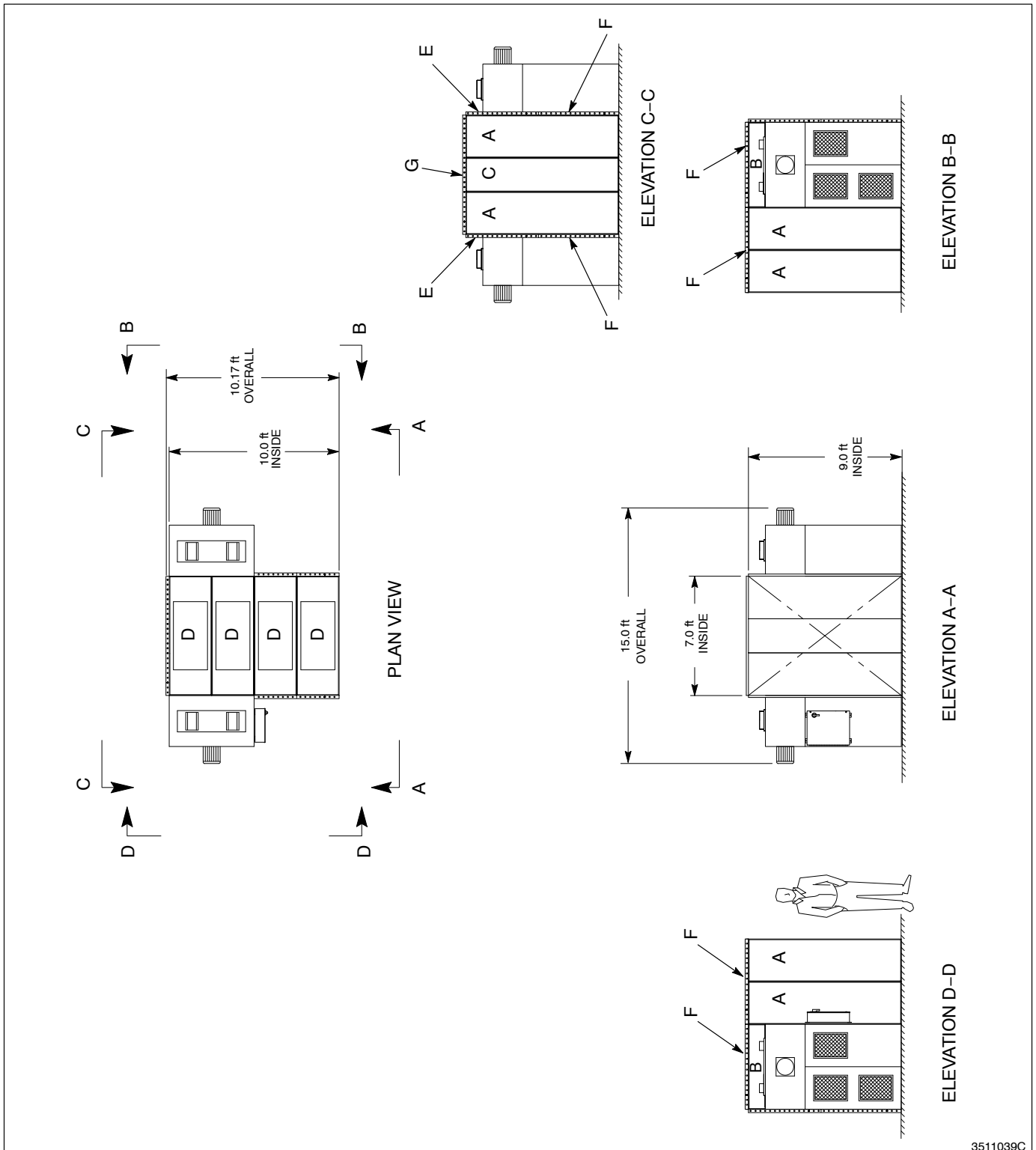
See Figures 4-10 and 4-11.

Item	Description	Dimensions	Quantity
A	Wall panel	108 x 30 in.	6
B	Wall panel	60 x 12 in.	2
C	Wall panel	108 x 24 in.	1
D	Roof panel	84 x 30 in.	4
E	Bracket	48 in.	2
F	Bracket	60 in.	6
G	Bracket	84 in.	1
—	Fan/collector module	8 x 5 x 4 ft	2



3511040B

Fig. 4-10    Model F



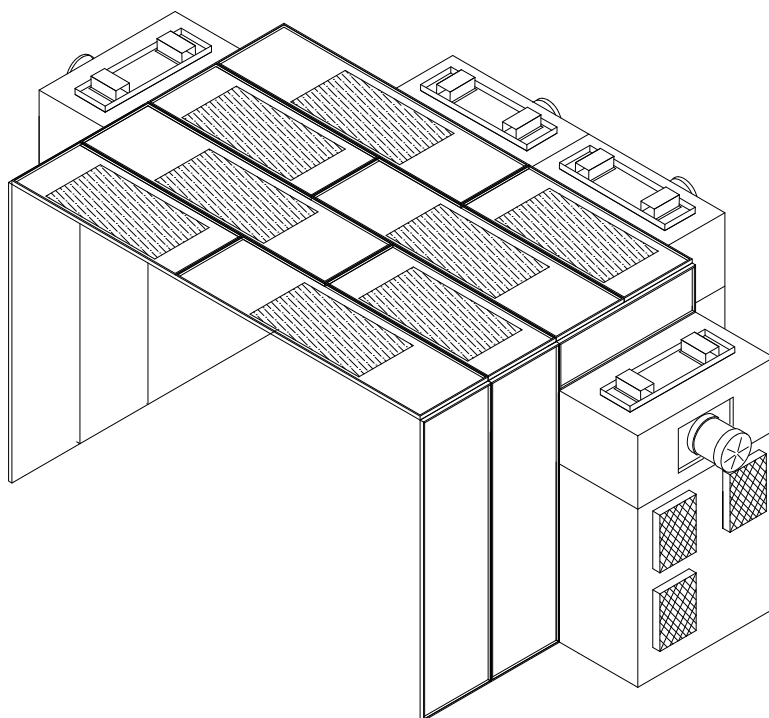
3511039C

Fig. 4-11 Model F Booth Assembly

**Model G**

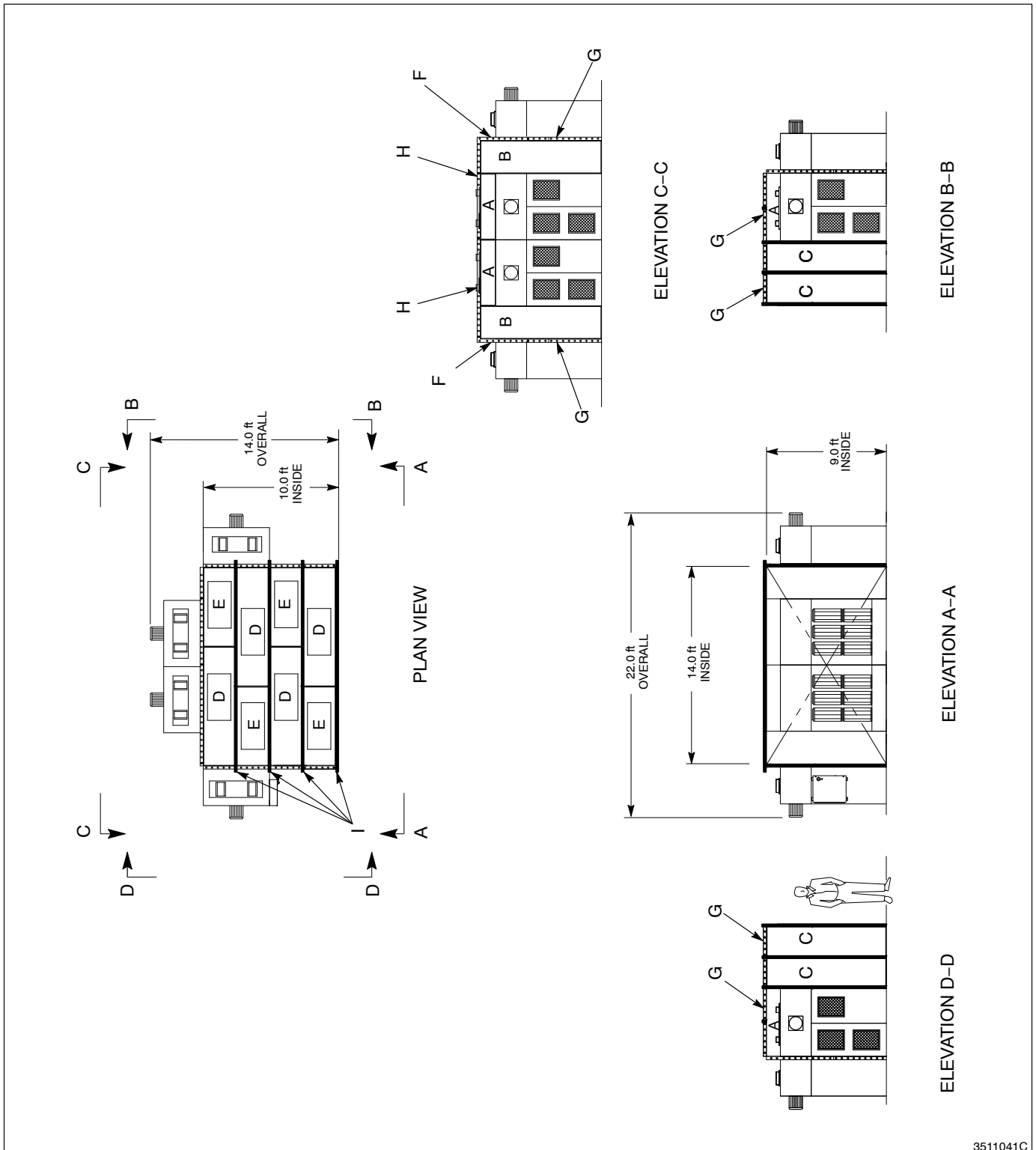
See Figures 4-12 and 4-13.

Item	Description	Dimensions	Quantity
A	Wall panel	60 x 12 in.	4
B	Wall panel	108 x 24 in.	2
C	Wall panel	108 x 30 in.	4
D	Roof panel	96 x 30 in.	4
E	Roof panel	72 x 30 in.	4
F	Bracket	48 in.	2
G	Bracket	60 in.	6
H	Bracket	84 in.	2
I	Roof support assy	9 x 14 ft	4
—	Fan/collector module	8 x 5 x 4 ft	4



3511042B

Fig. 4-12    Model G



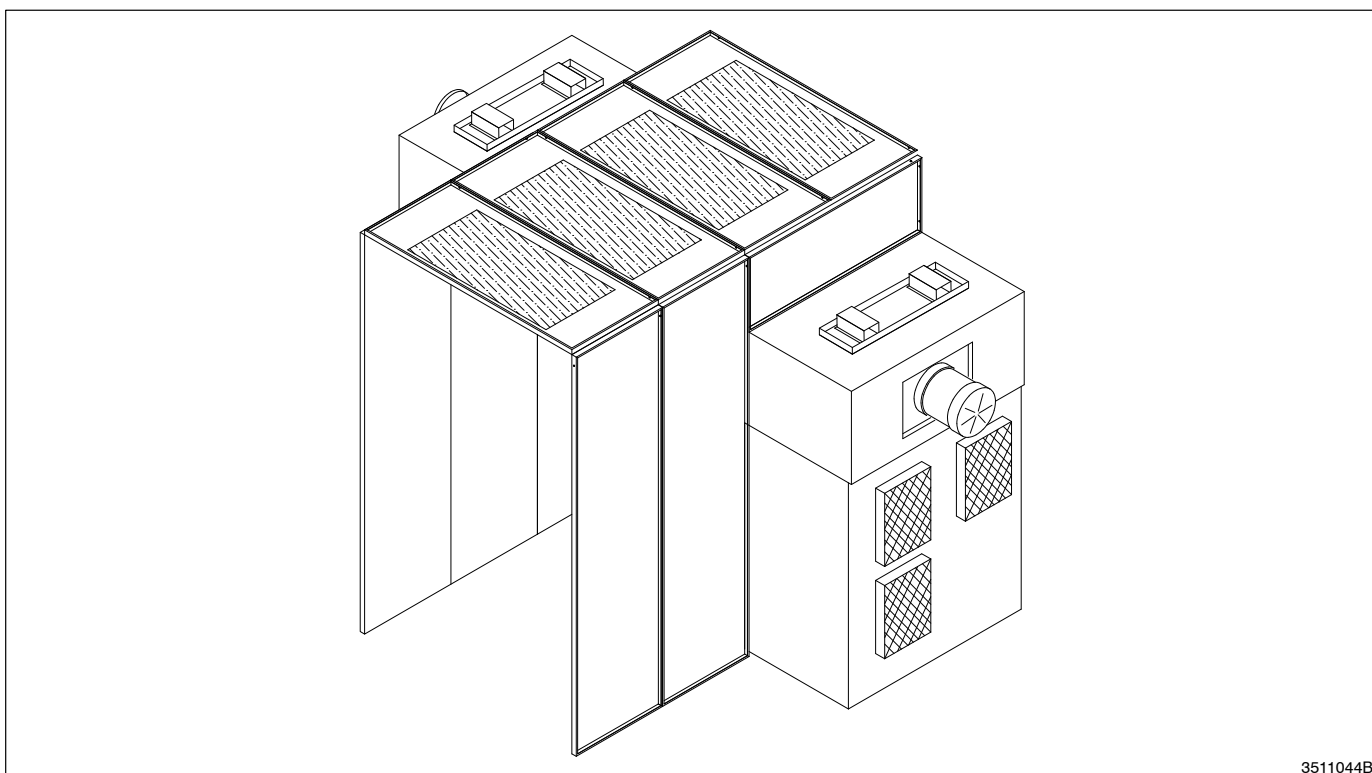
3511041C

Fig. 4-13 Model G Booth Assembly

**Model H**

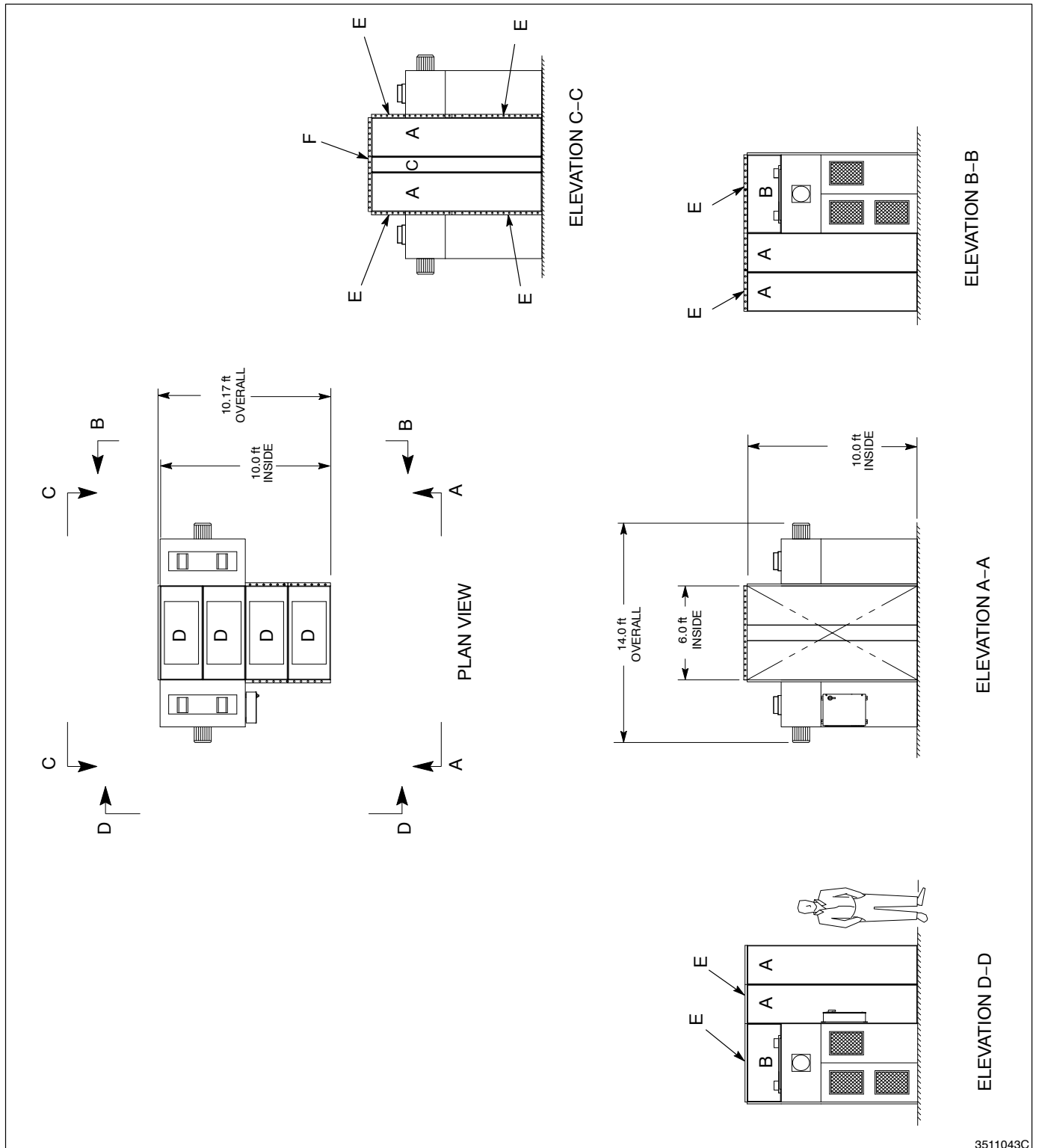
See Figures 4-14 and 4-15.

Item	Description	Dimensions	Quantity
A	Wall panel	120 x 30 in.	6
B	Wall panel	60 x 24 in.	2
C	Wall panel	120 x 12 in.	1
D	Roof panel	72 x 30 in.	4
E	Bracket	60 in.	8
F	Bracket	72 in.	1
—	Fan/collector module	8 x 5 x 4 ft	2



3511044B

Fig. 4-14 Model H



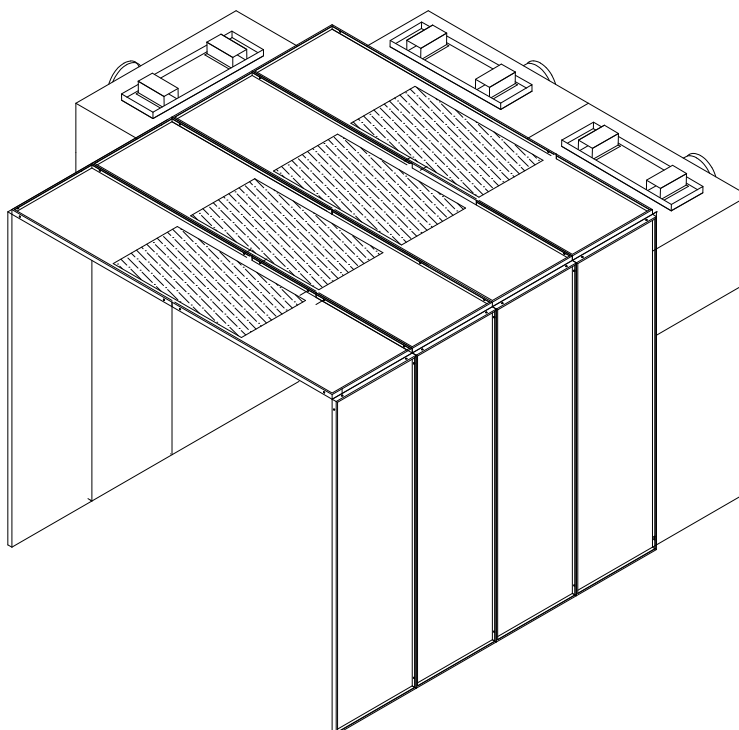
3511043C

Fig. 4-15 Model H Booth Assembly

**Model I**

See Figures 4-16 and 4-17.

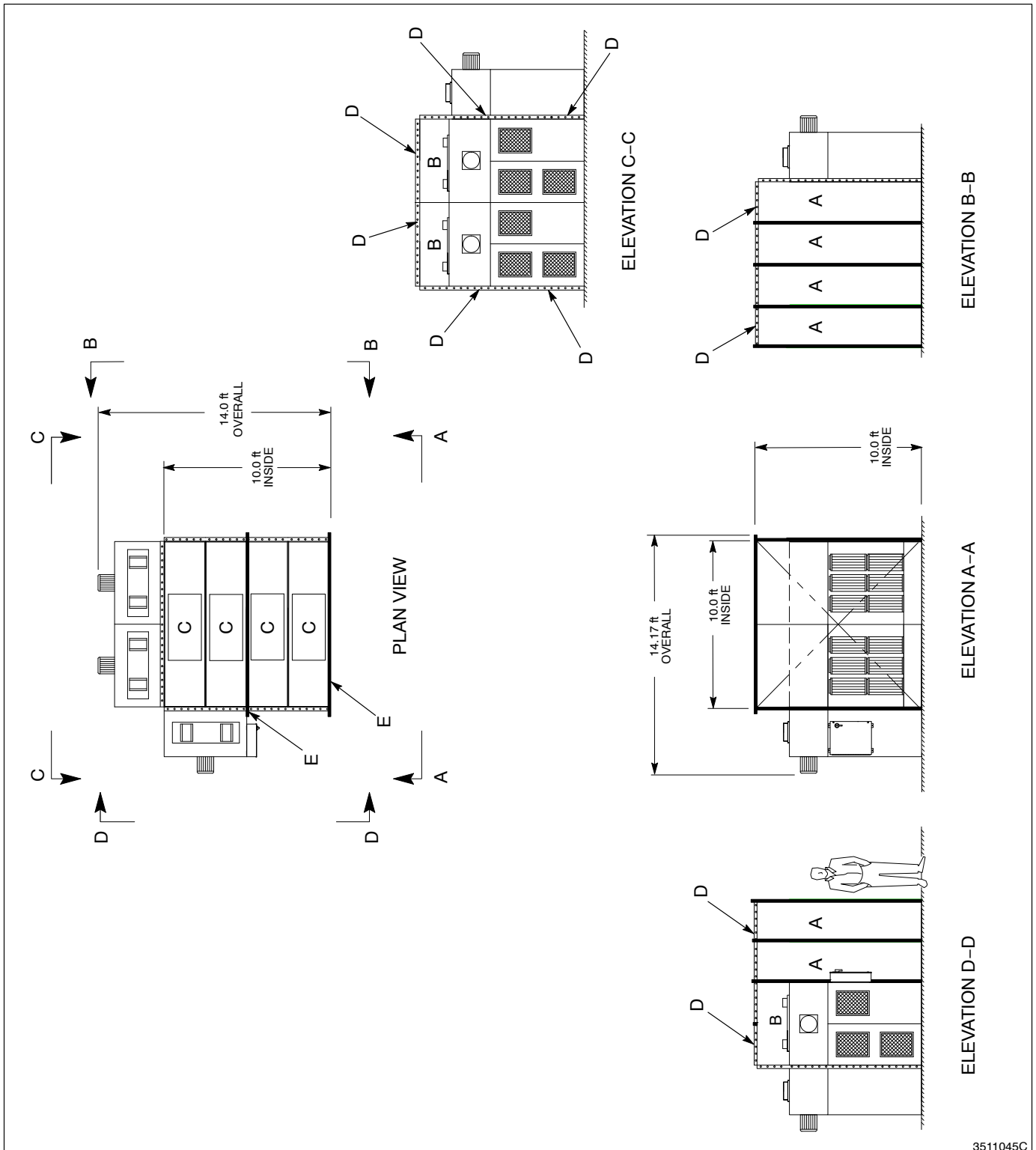
Item	Description	Dimensions	Quantity
A	Wall panel	120 x 30 in.	6
B	Wall panel	60 x 24 in.	3
C	Roof panel	120 x 30 in.	4
D	Bracket	60 in.	10
E	Roof support assy	10 x 10 ft	2
—	Fan/collector module	8 x 5 x 4 ft	3



3511046A

Fig. 4-16 Model I





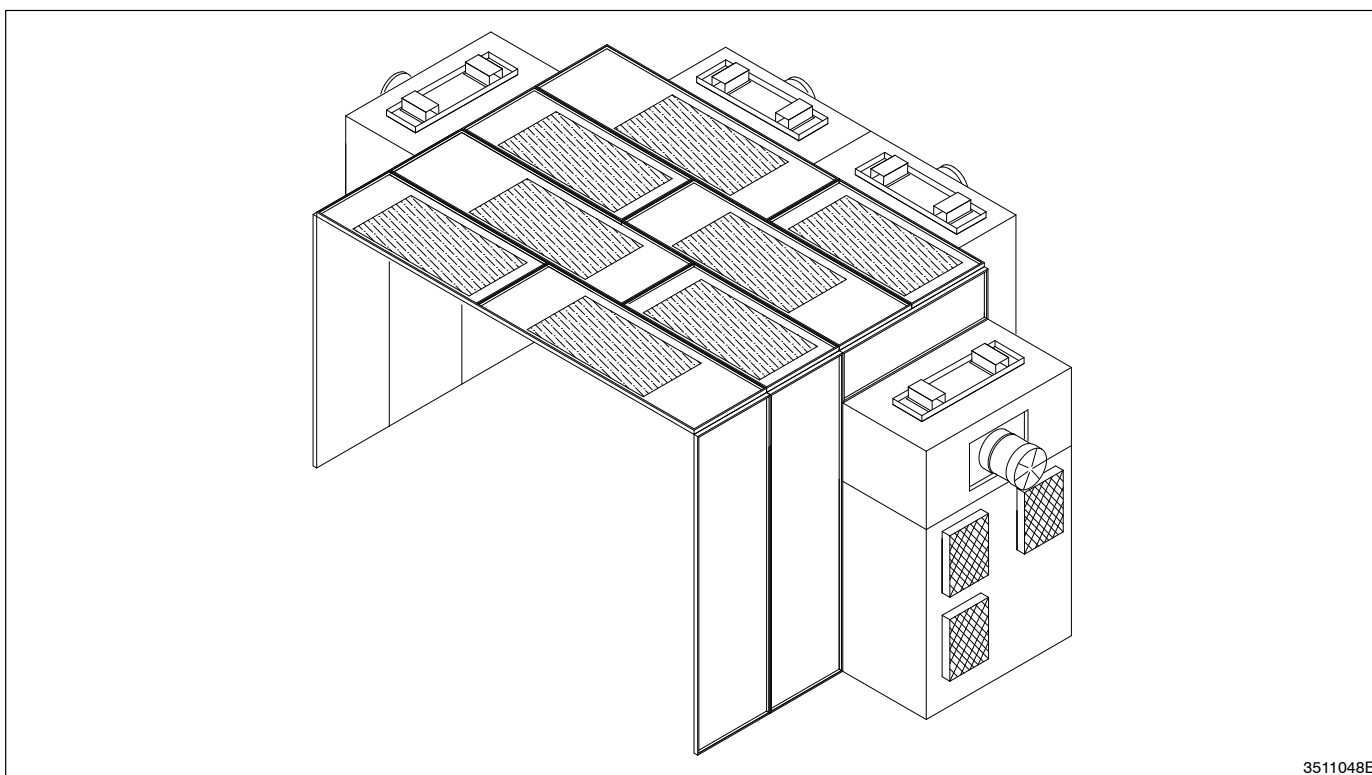
3511045C

Fig. 4-17 Model I Booth Assembly

**Model J**

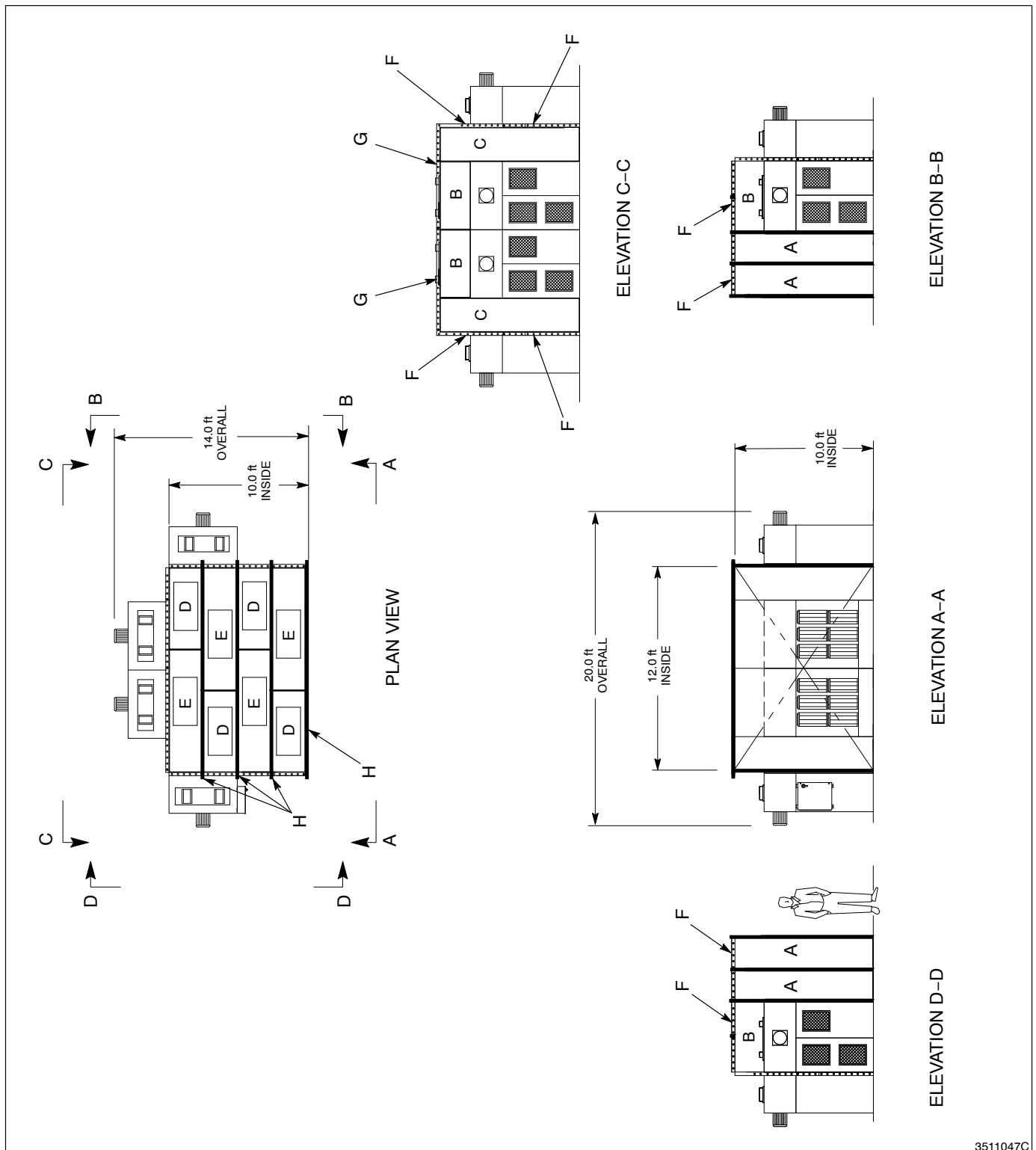
See Figures 4-18 and 4-19.

Item	Description	Dimensions	Quantity
A	Wall panel	120 x 30 in.	4
B	Wall panel	60 x 24 in.	4
C	Wall panel	120 x 12 in.	2
D	Roof panel	60 x 30 in.	4
E	Roof panel	84 x 30 in.	4
F	Bracket	60 in.	8
G	Bracket	72 in.	2
H	Roof support assy	10 x 12 ft	4
—	Fan/collector module	8 x 5 x 4 ft	4



3511048B

Fig. 4-18 Model J



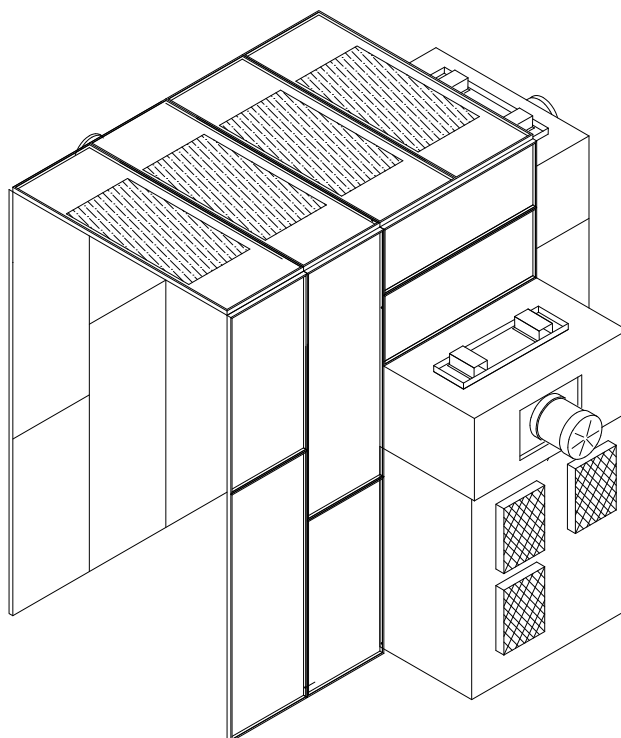
3511047C

Fig. 4-19 Model J Booth Assembly

**Model K**

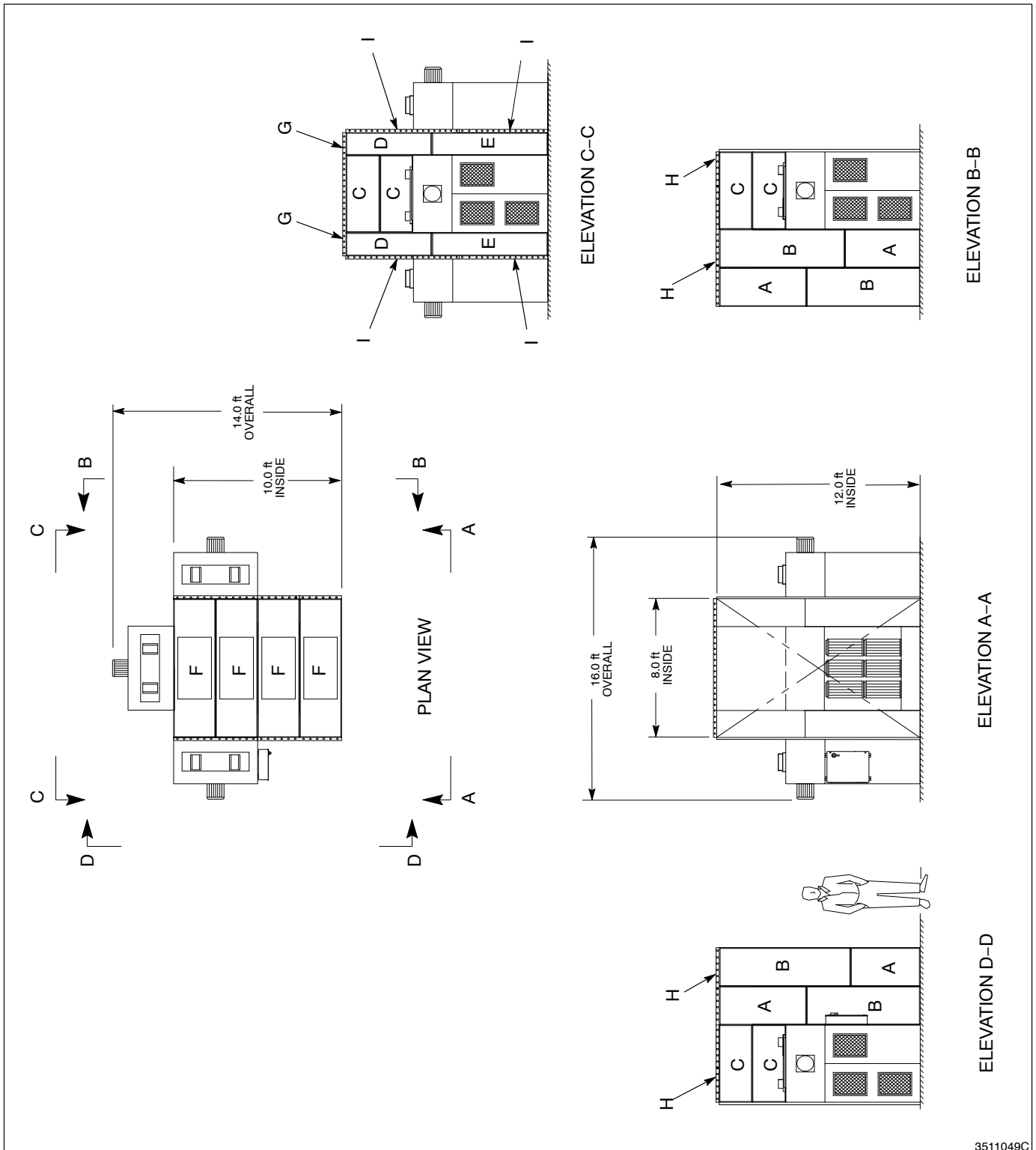
See Figures 4-20 and 4-21.

Item	Description	Dimensions	Quantity
A	Wall panel	60 x 30 in.	4
B	Wall panel	84 x 30 in.	4
C	Wall panel	60 x 24 in.	6
D	Wall panel	60 x 18 in.	2
E	Wall panel	84 x 18 in.	2
F	Roof panel	96 x 30 in.	4
G	Bracket	48 in.	2
H	Bracket	60 in.	4
I	Bracket	72 in.	4
—	Fan/collector module	8 x 5 x 4 ft	3



3511050B

Fig. 4-20 Model K



3511049C

Fig. 4-21 Model K Booth Assembly

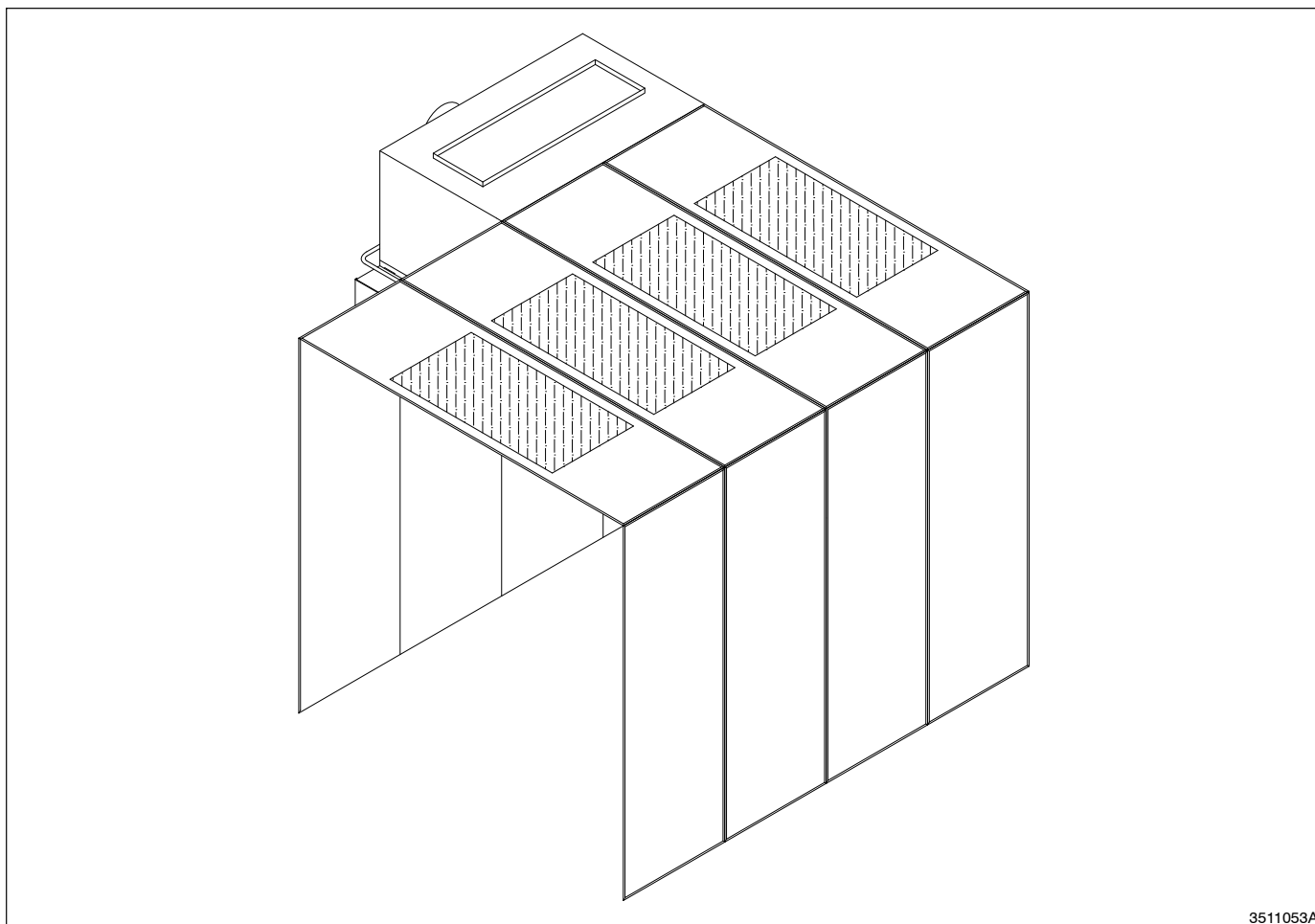
**5. 5100-cfm Batch Booths**

Use the appropriate bill of materials and illustration to assemble a 5100-cfm batch booth.

**Model HFB-1**

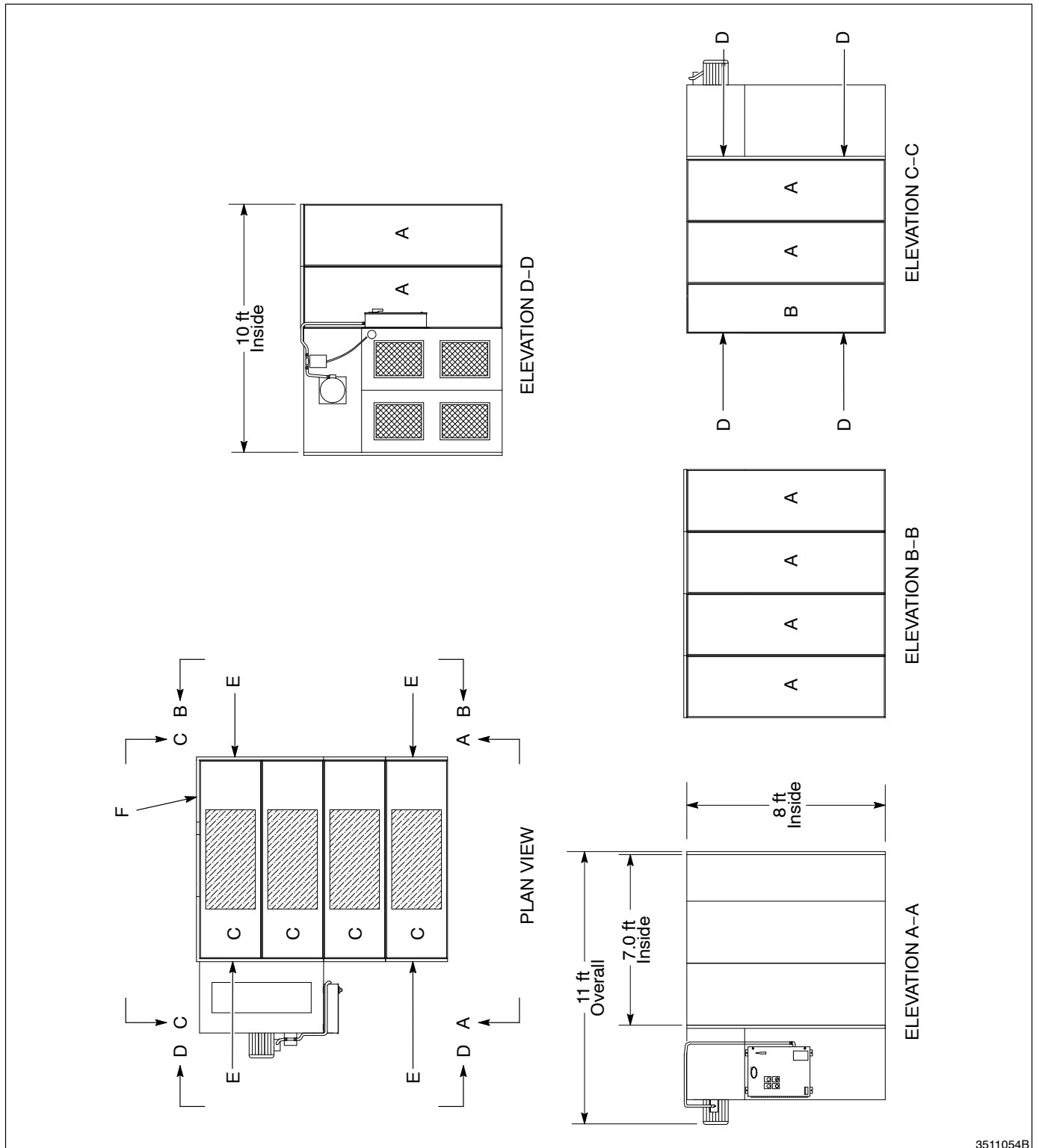
See Figures 4-22 and 4-23.

Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	8
B	Wall panel	96 x 24 in.	1
C	Roof panel	84 x 30 in.	4
D	Bracket	48 in.	4
E	Bracket	60 in.	4
F	Bracket	84 in.	1
—	Fan/collector module	8 x 5 x 4 ft	1



3511053A

Fig. 4-22 Model HFB-1



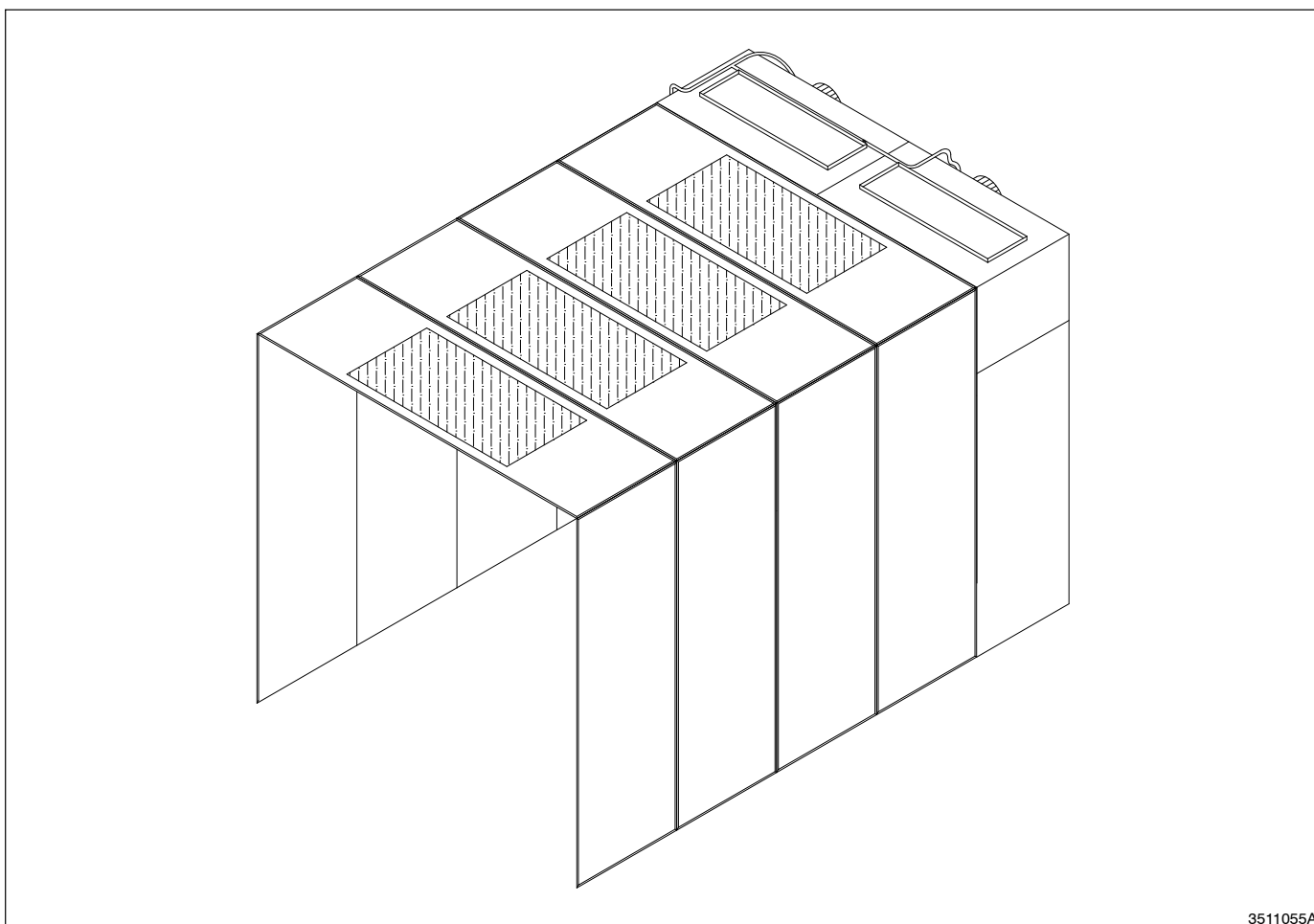
3511054B

Fig. 4-23 Model HFB-1 Booth Assembly

**Model HFB-2**

See Figures 4-24 and 4-25.

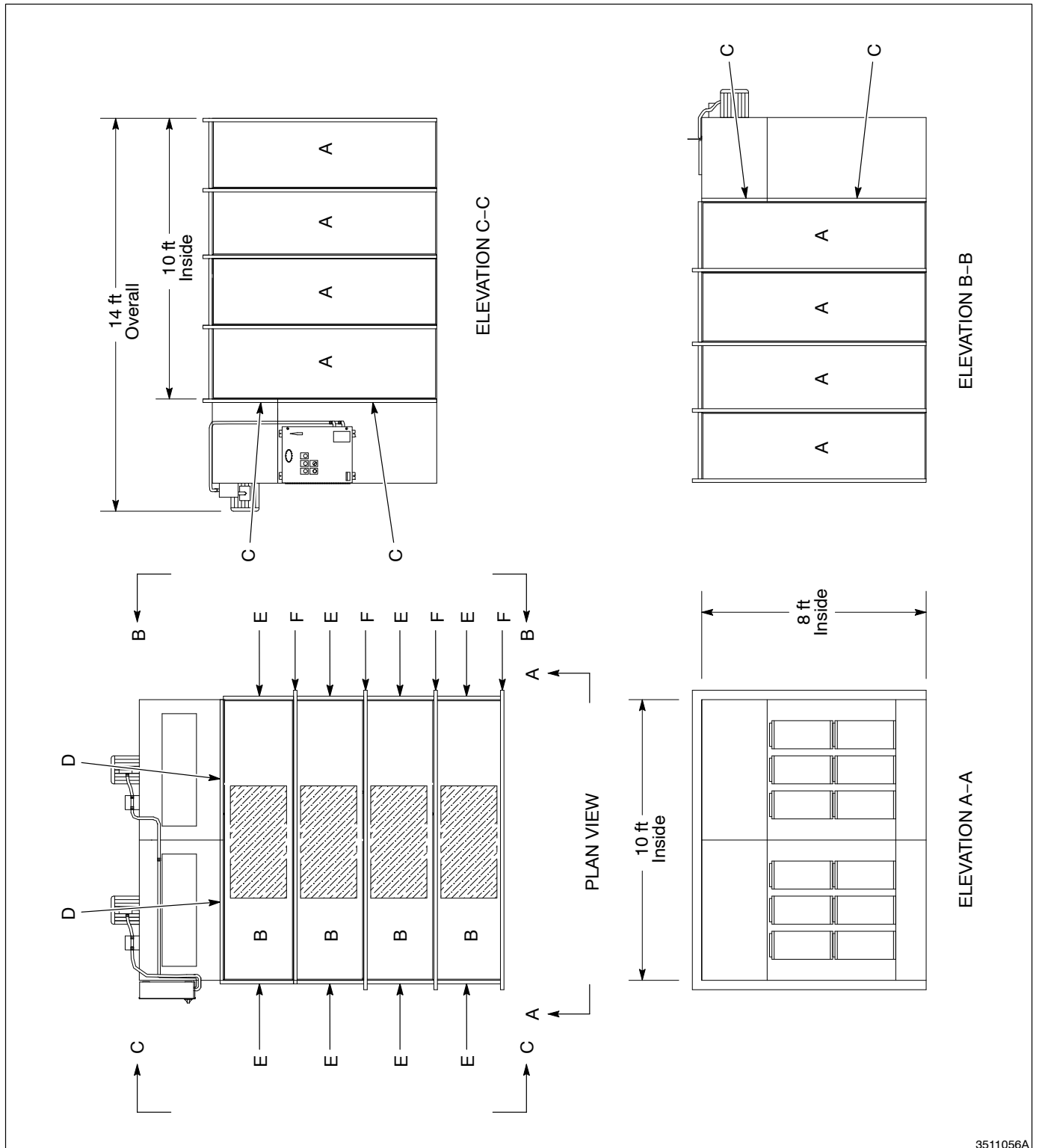
Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	8
B	Roof panel	120 x 30 in.	4
C	Bracket	48 in.	4
D	Bracket	60 in.	2
E	Bracket	30 in.	8
F	Roof support assembly	96 x 120 in.	4
—	Fan/collector module	8 x 5 x 4 ft	2



3511055A

Fig. 4-24 Model HFB-2





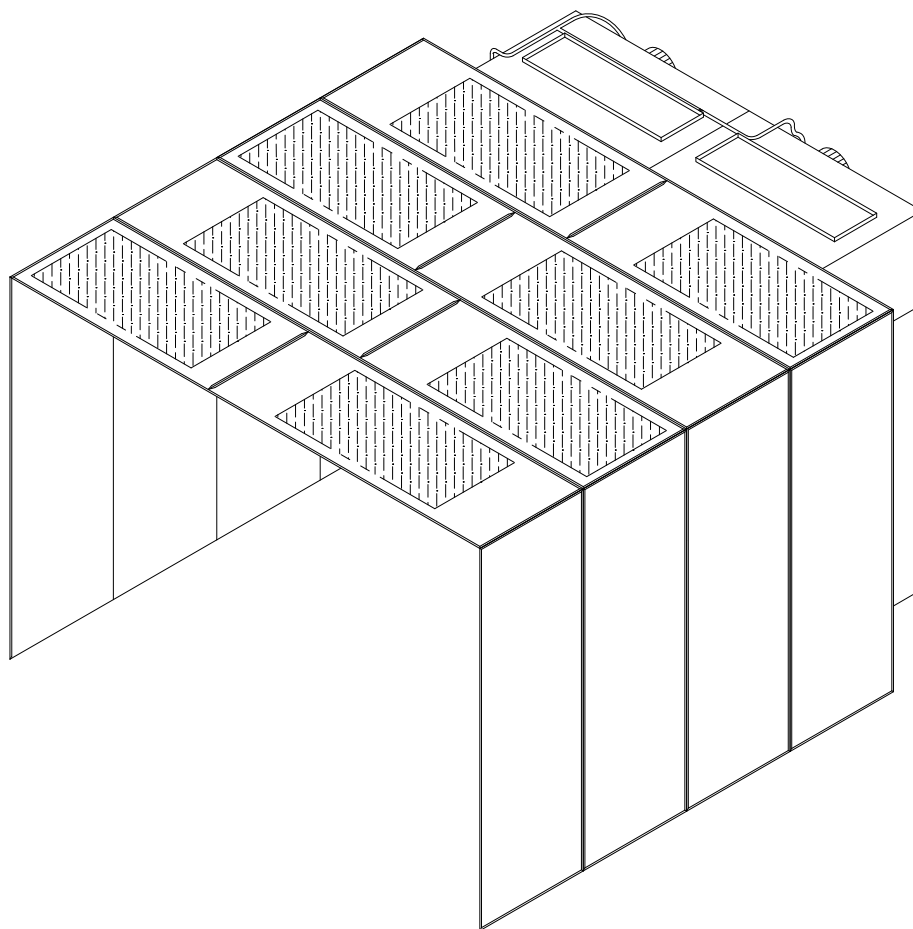
3511056A

Fig. 4-25 Model HFB-2 Booth Assembly

### Model HFB-3

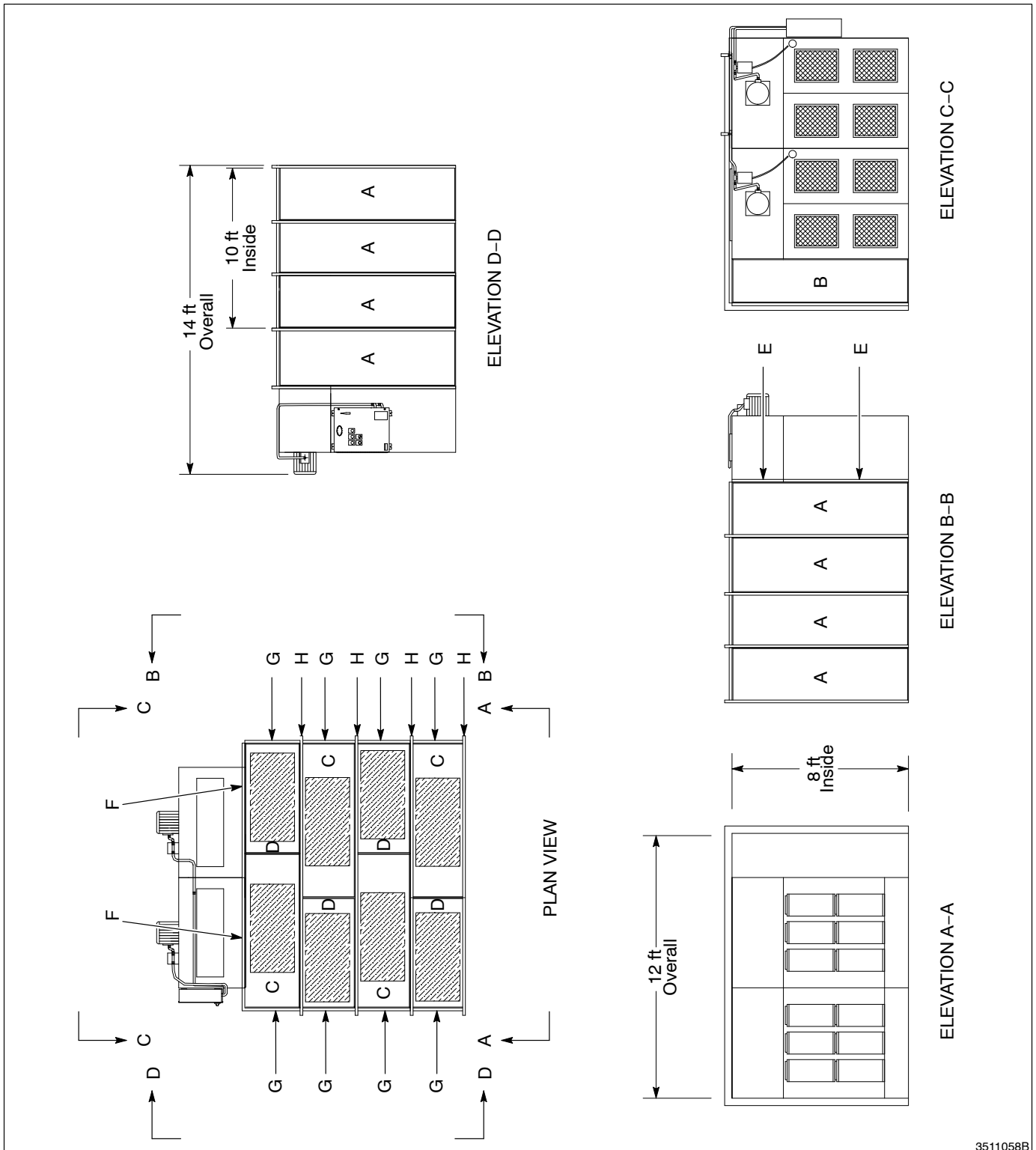
See Figures 4-26 and 4-27.

Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	8
B	Wall panel	96 x 12 in.	2
C	Roof panel	84 x 30 in.	4
D	Roof panel	60 x 30 in.	4
E	Bracket	48 in.	4
F	Bracket	72 in.	2
G	Bracket	30 in.	8
H	Roof support assembly	96 x 144 in.	4
—	Fan/collector module	8 x 5 x 4 ft	2



3511057B

Fig. 4-26 Model HFB-3



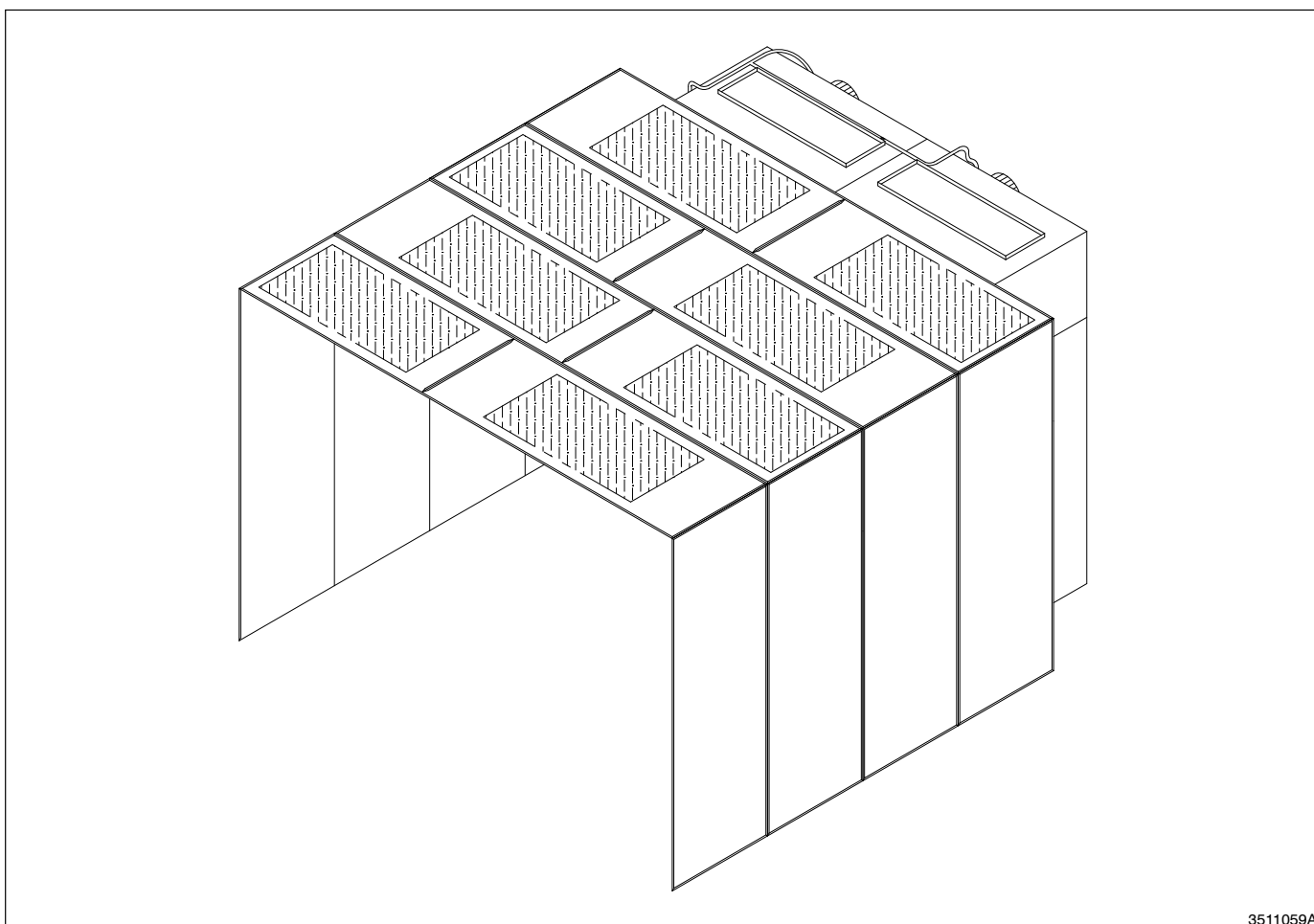
3511058B

Fig. 4-27 Model HFB-3 Booth Assembly

**Model HFB-4**

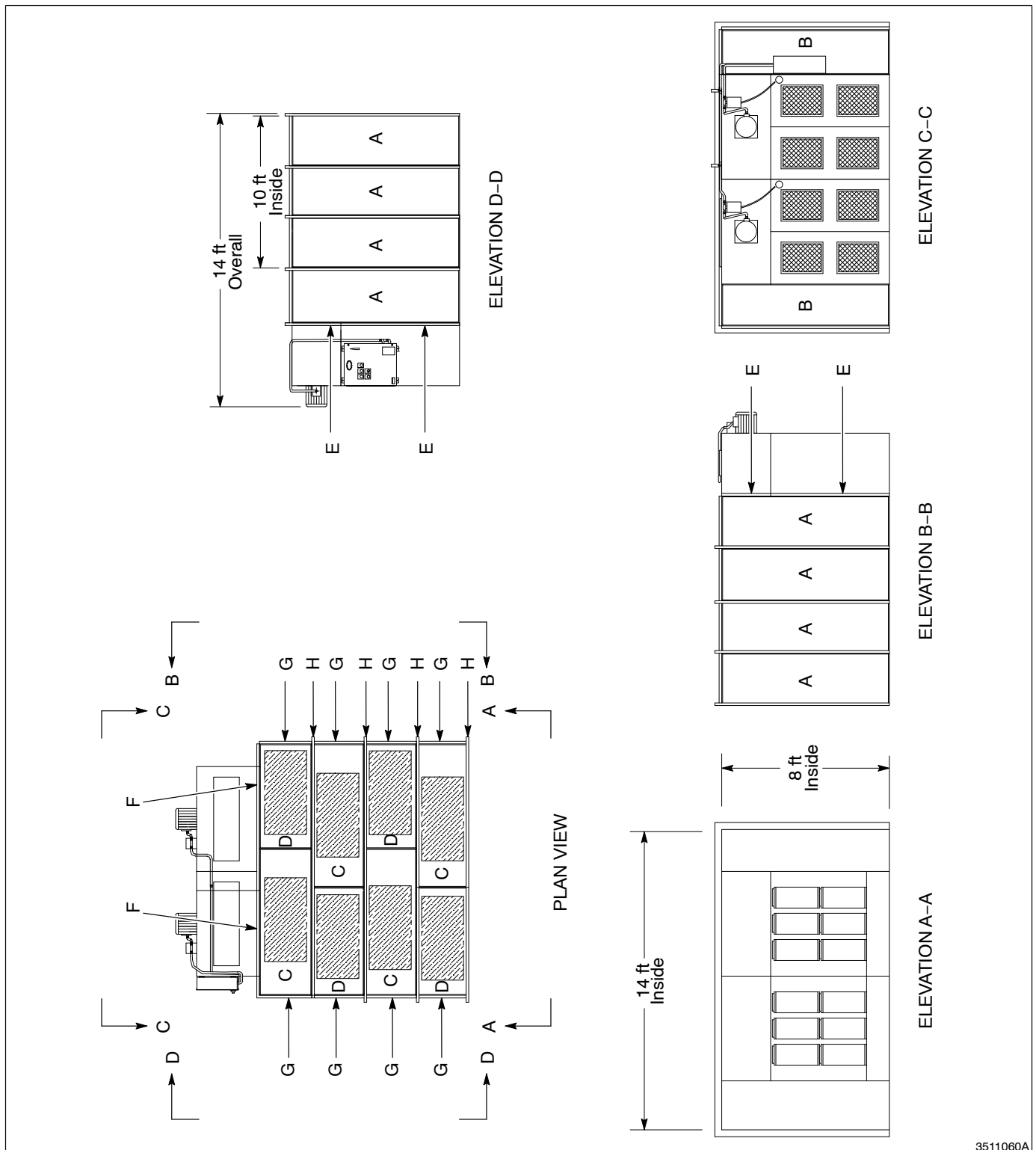
See Figures 4-28 and 4-29.

Item	Description	Dimensions	Quantity
A	Wall panel	96 x 30 in.	8
B	Wall panel	96 x 24 in.	2
C	Roof panel	96 x 30 in.	4
D	Roof panel	72 x 30 in.	4
E	Bracket	48 in.	4
F	Bracket	84 in.	2
G	Bracket	30 in.	8
H	Roof support assembly	96 x 168 in.	4
—	Fan/collector module	8 x 5 x 4 ft	2



3511059A

Fig. 4-28 Model HFB-4



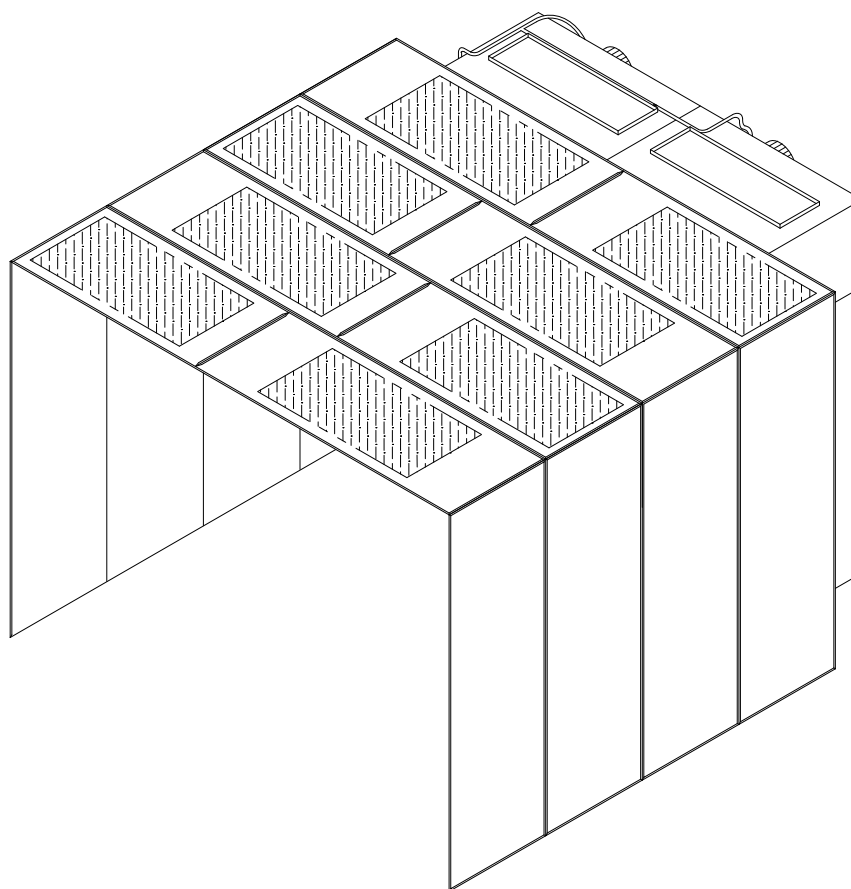
3511060A

Fig. 4-29 Model HFB-4 Booth Assembly

**Model HFB-5**

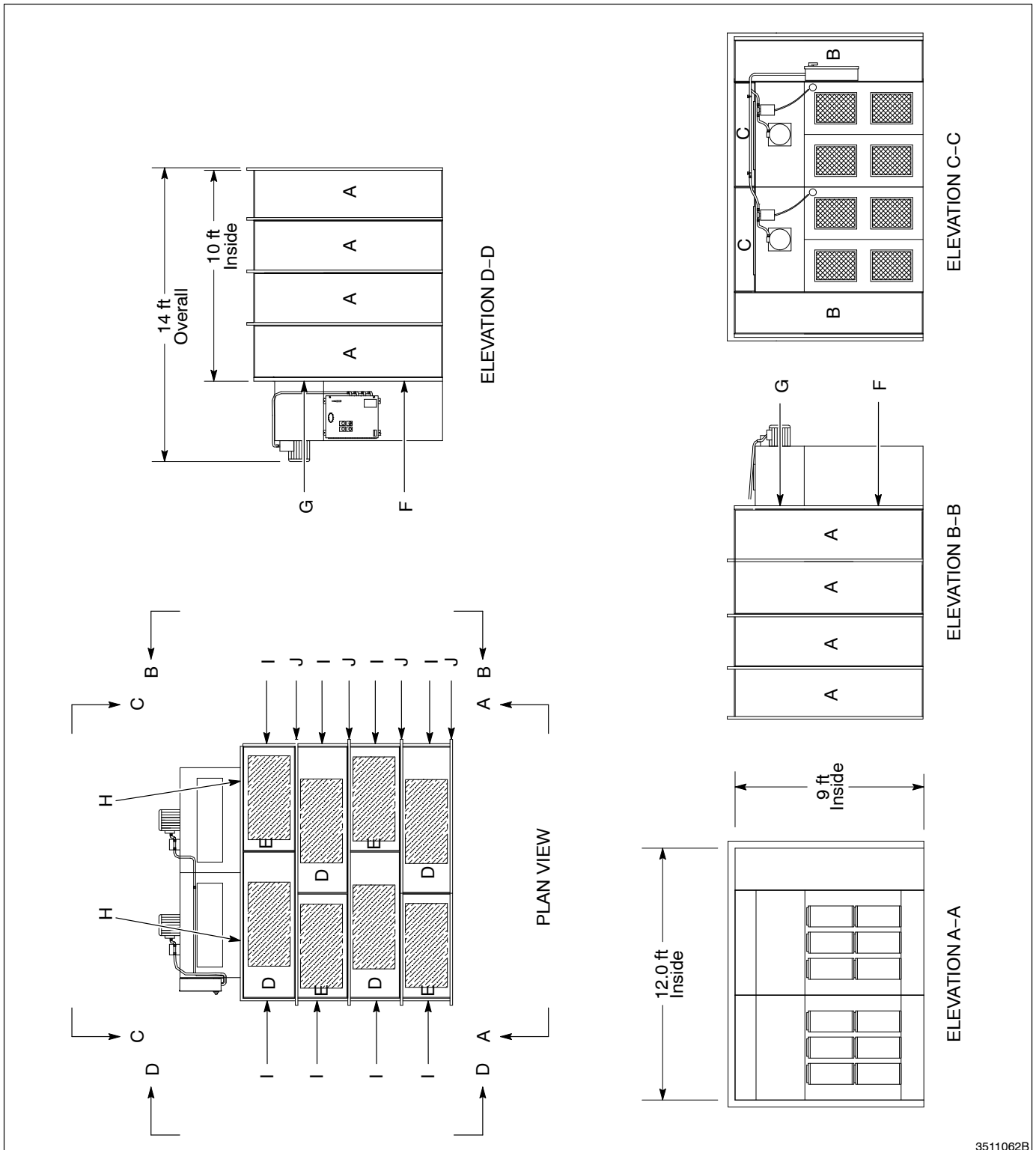
See Figures 4-30 and 4-31.

Item	Description	Dimensions	Quantity
A	Wall panel	108 x 30 in.	8
B	Wall panel	108 x 12 in.	2
C	Wall panel	60 x 12 in.	2
D	Roof panel	84 x 30 in.	4
E	Roof panel	60 x 30 in.	4
F	Bracket	60 in.	2
G	Bracket	48 in.	2
H	Bracket	72 in.	2
I	Bracket	30 in.	8
J	Roof support assembly	108 x 144 in.	4
—	Fan/collector module	8 x 5 x 4 ft	2



3511061B

Fig. 4-30 Model HFB-5



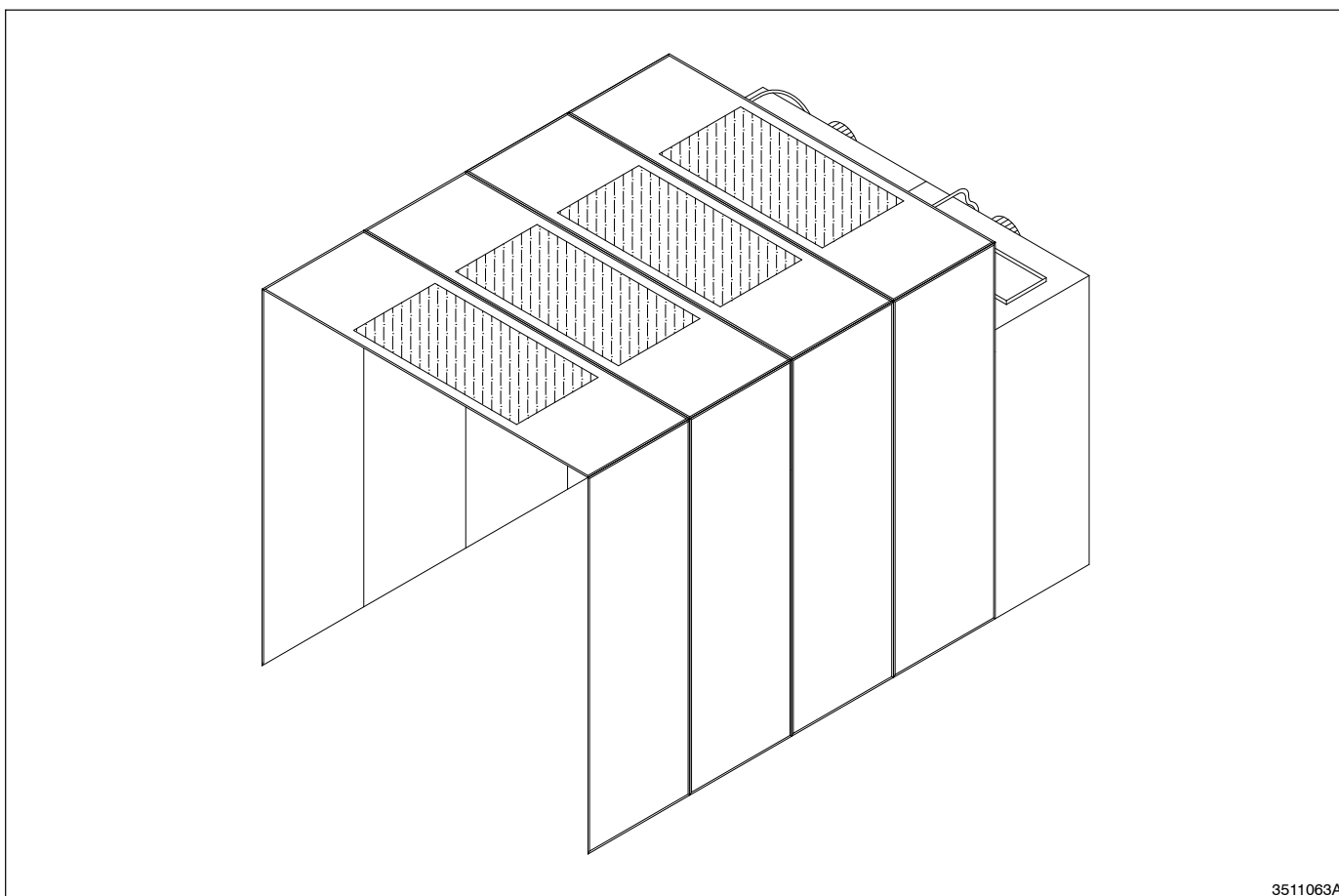
3511062B

Fig. 4-31 Model HFB-5 Booth Assembly

**Model HFB-6**

See Figures 4-32 and 4-33.

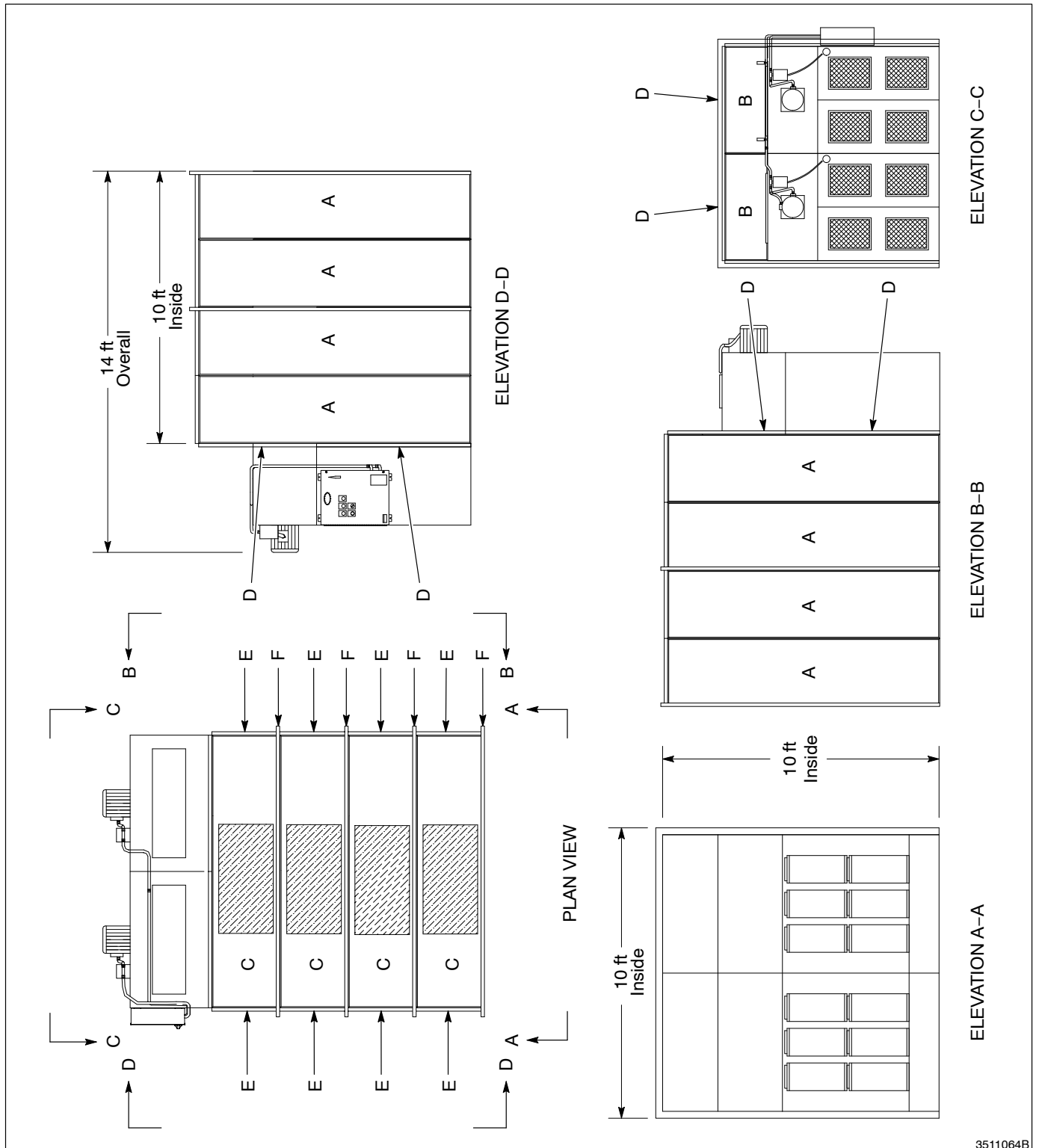
Item	Description	Dimensions	Quantity
A	Wall panel	120 x 30 in.	8
B	Wall panel	60 x 24 in.	2
C	Roof panel	120 x 30 in.	4
D	Bracket	60 in.	6
E	Bracket	30 in.	8
F	Roof support assembly	120 x 120 in.	4
—	Fan/collector module	8 x 5 x 4 ft	2



3511063A

Fig. 4-32    Model HFB-6





3511064B

Fig. 4-33 Model HFB-6 Booth Assembly

## 6. 3400-cfm Conveyor Booths

### Model CA

See Figure 4-34.

Item	Description	Canopy Height, ft								Quantity	Note
		8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	21 x 84	21 x 84	21 x 84	21 x 84	21 x 84	21 x 84	21 x 84	21 x 84	4	
C	Wall panel, in.	6 x 30	12 x 30	18 x 30	24 x 30	30 x 30	36 x 30	42 x 30	48 x 30	4	
D	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
E	Wall panel, in.	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	1	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	AR	A
G	Bracket, in.	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	12	96	96	96	96	96	96	96	2	
I	Wall panel, in.	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	90	12	18	24	30	36	42	48	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	C
L	Platform, in.	12	18	24	30	36	42	48	54	1	D
M	Roof panel, in.	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	

NOTE A: Two F panels are used on 11.5–12.0-ft booths. All other booths use one F panel.

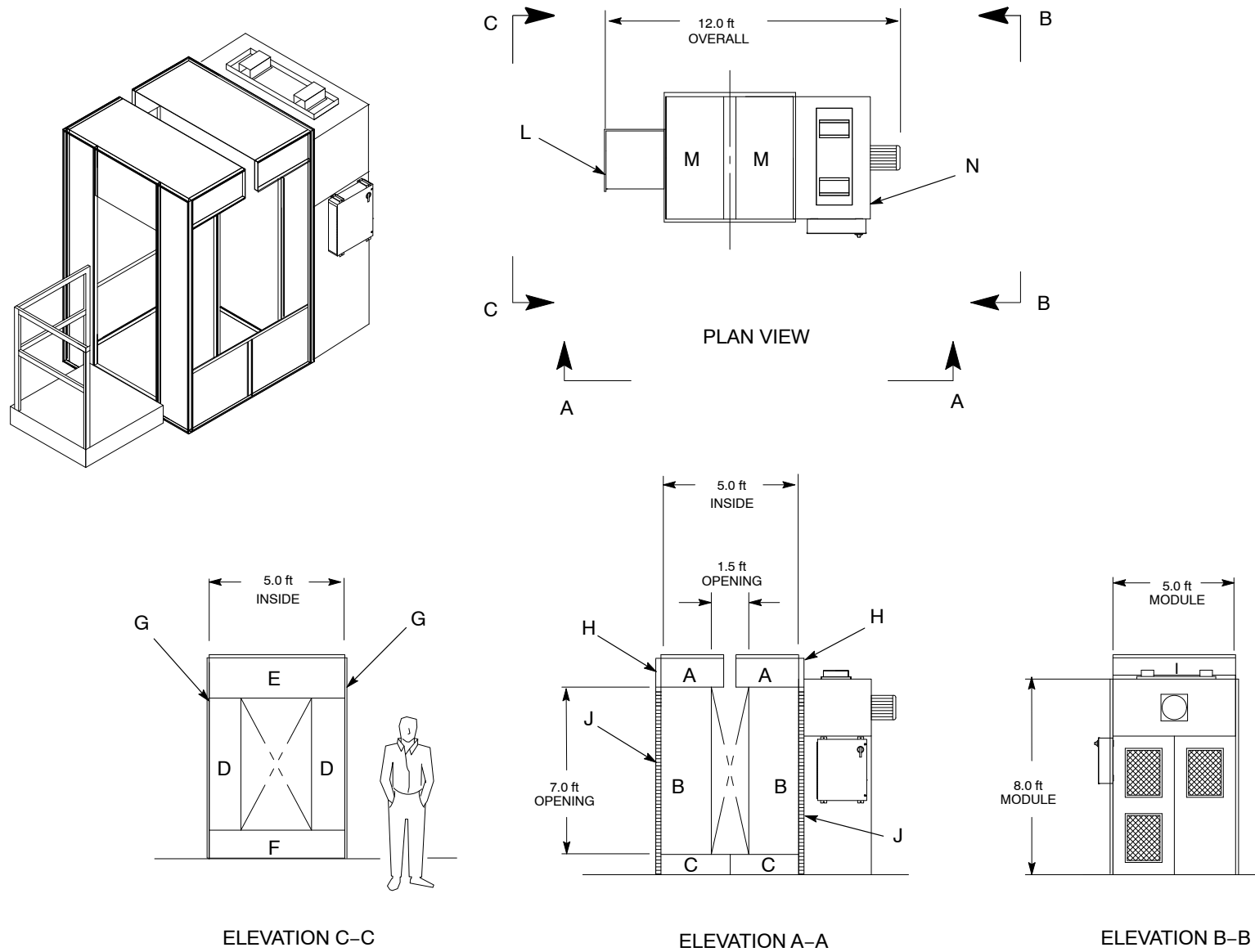
B: Two I panels are used on 12.0-ft booths. All other booths use one I panel.

C: Three latches are used on 8.5-ft booths. All other booths use two latches.

D: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.

NS: Not Shown

AR: As Required



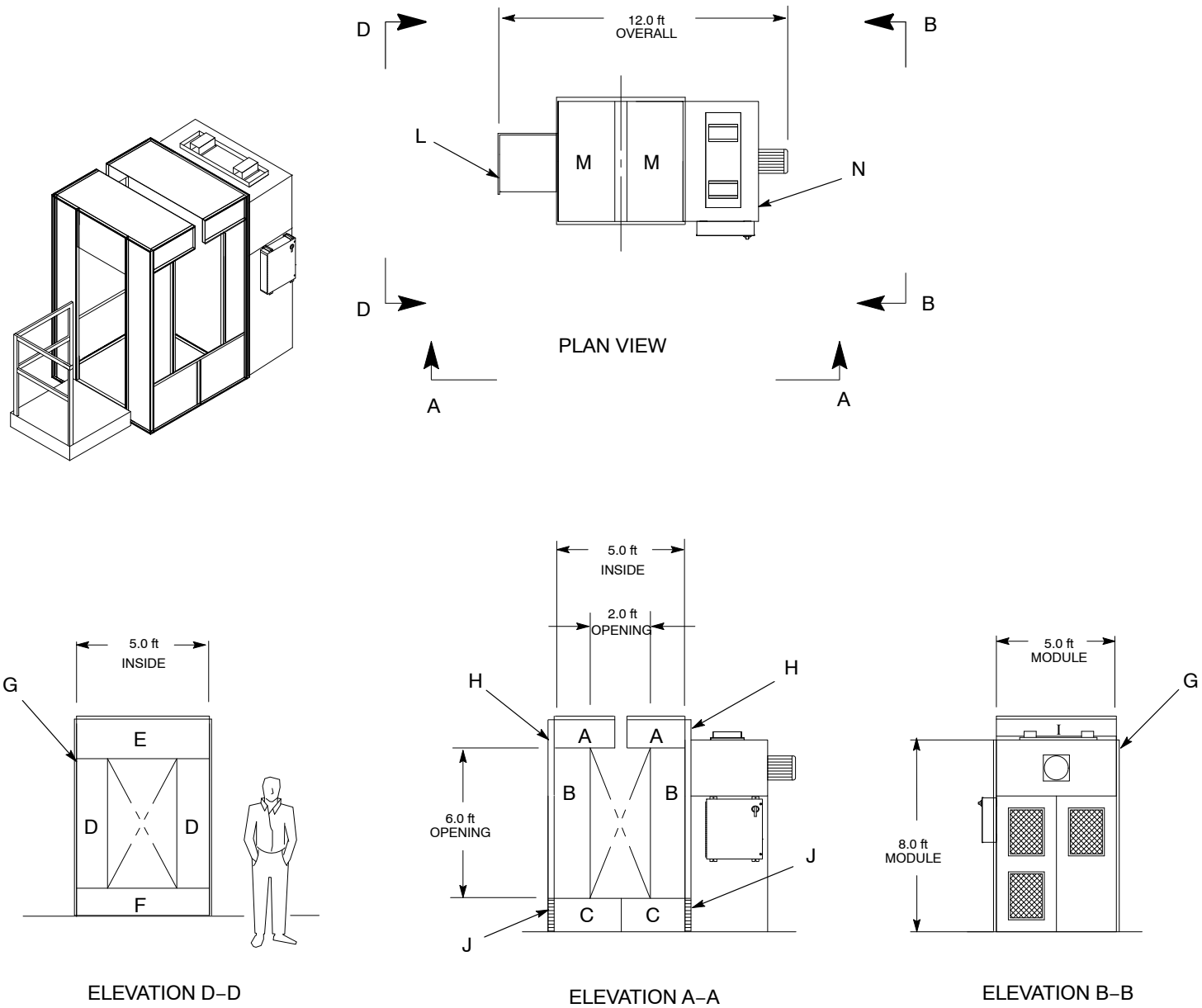
3511022B

Fig. 4-34 Model CA Booth Assembly

**Model CB**

See Figure 4-35.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	18 x 72	18 x 72	18 x 72	18 x 72	18 x 72	18 x 72	18 x 72	18 x 72	18 x 72	4	
C	Wall panel, in.	12 x 30	18 x 30	24 x 30	30 x 30	36 x 30	42 x 30	48 x 30	54 x 30	60 x 30	4	
D	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
E	Wall panel, in.	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	1	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	30 x 60	AR	A
G	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	84	84	84	84	84	84	84	84	84	2	
I	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	12	18	24	30	36	42	48	54	60	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
L	Platform, in.	12	18	24	30	36	42	48	54	60	1	C
M	Roof panel, in.	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Two F panels are used on 11.0–12.0-ft booths. All other booths use one F panel.</p> <p>B: Two I panels are used on 12.0-ft booths. One I panel is used on 8.5–11.5-ft booths.</p> <p>C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



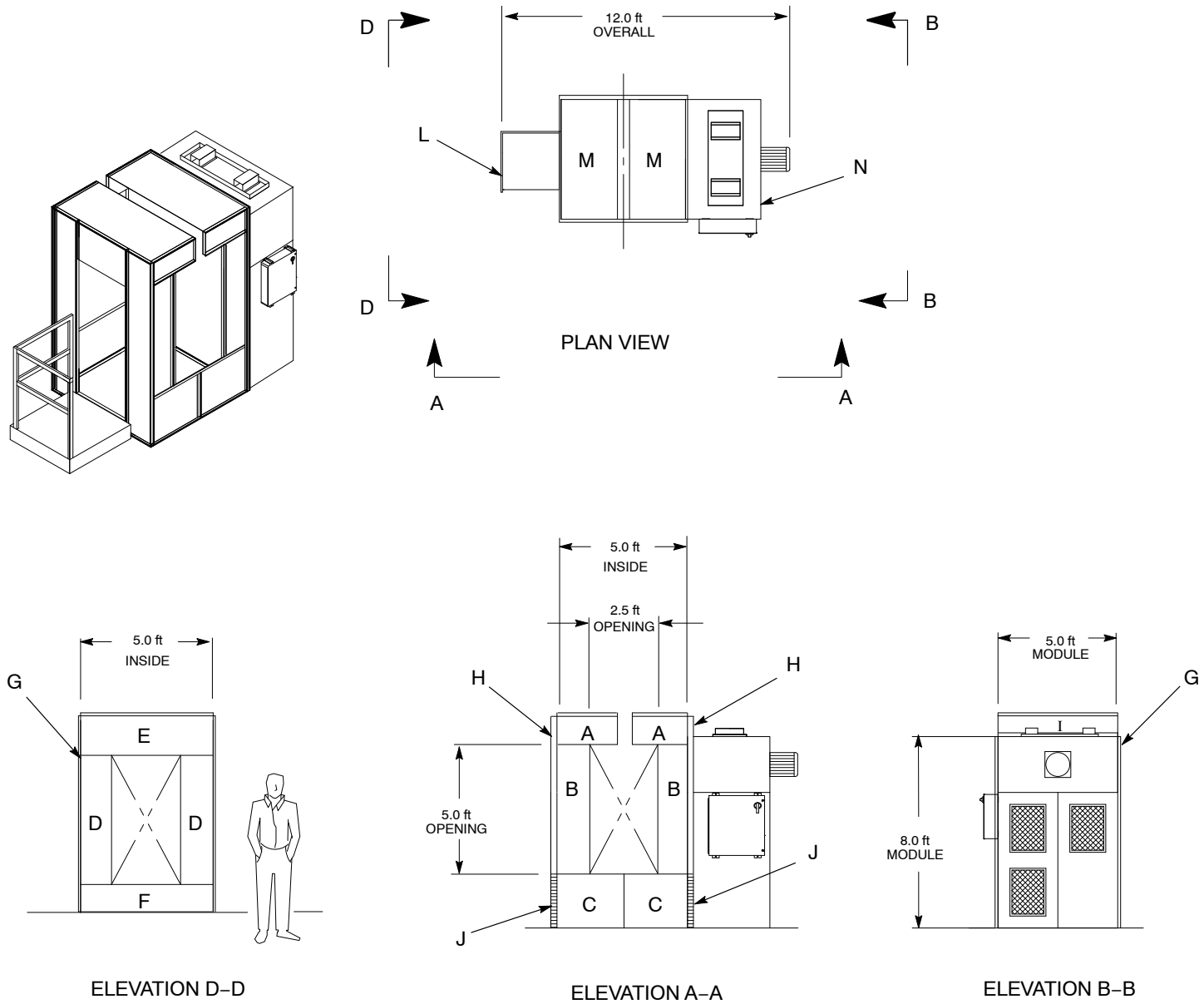
3511023B

Fig. 4-35 Model CB Booth Assembly

**Model CC**

See Figure 4-36.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	15 x 60	15 x 60	15 x 60	15 x 60	15 x 60	15 x 60	15 x 60	15 x 60	15 x 60	4	
C	Wall panel, in.	24 x 30	30 x 30	36 x 30	42 x 30	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	4	
D	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
E	Wall panel, in.	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	1	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	30 x 60	AR	A
G	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	72	72	72	72	72	72	72	72	72	2	
I	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	24	30	36	42	48	54	60	66	72	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
L	Platform, in.	12	18	24	30	36	42	48	54	60	1	C
M	Roof panel, in.	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Two F panels are used on 11.0–12.0-ft booths. All other booths use one F panel.</p> <p>B: Two I panels are used on 12.0-ft booths. One I panel is used on 8.5–11.5-ft booths.</p> <p>C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



3511024B

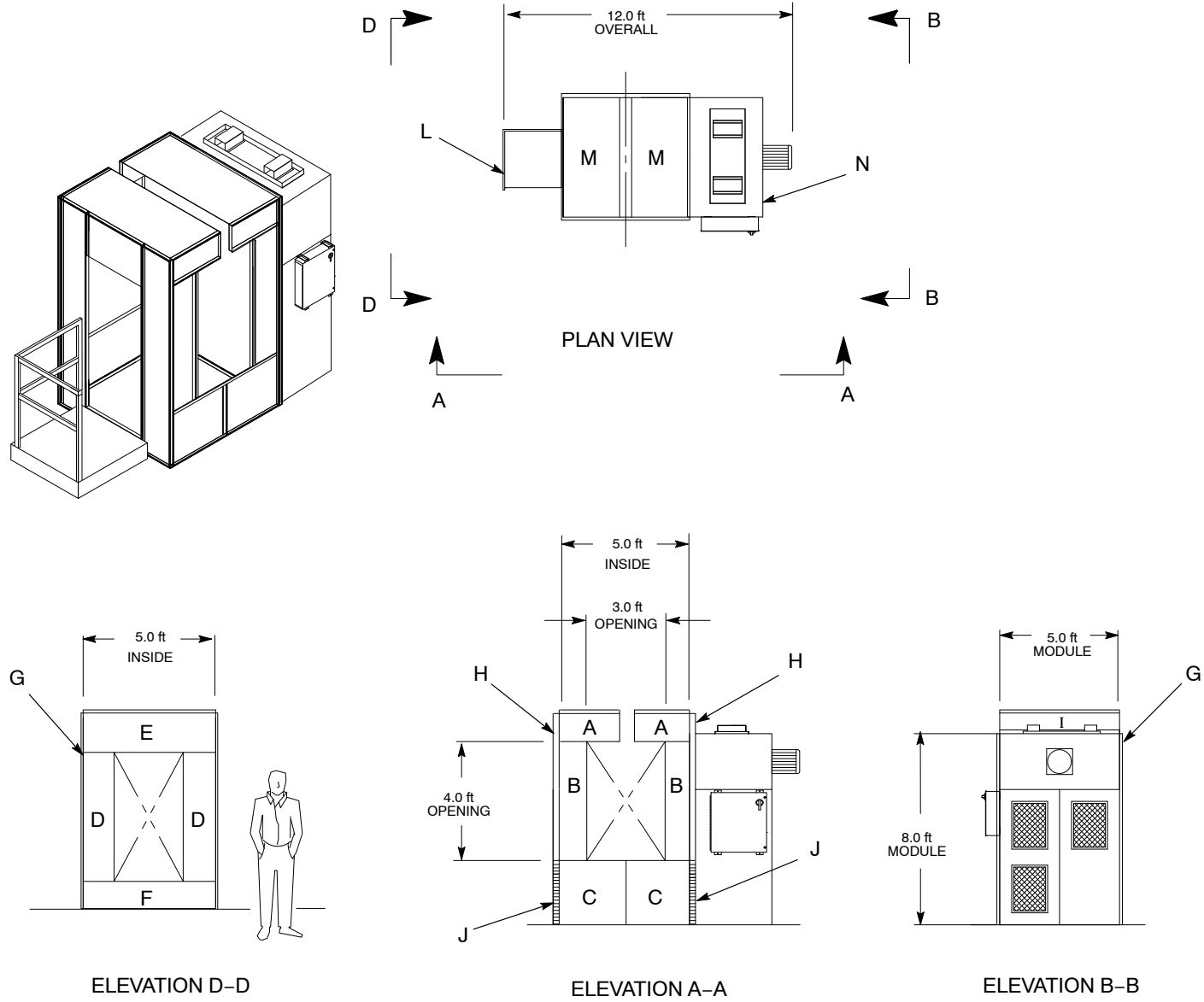
Fig. 4-36 Model CC Booth Assembly

**Model CD**

See Figure 4-37.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	12 x 48	12 x 48	12 x 48	12 x 48	12 x 48	12 x 48	12 x 48	12 x 48	12 x 48	4	
C	Wall panel, in.	36 x 30	42 x 30	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	4	
D	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
E	Wall panel, in.	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	1	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	30 x 60	AR	A
G	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	60	60	60	60	60	60	60	60	60	2	
I	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	36	42	48	54	60	66	72	78	84	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
L	Platform, in.	12	18	24	30	36	42	48	54	60	1	C
M	Roof panel, in.	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Two F panels are used on 11.0–12.0-ft booths. All other booths use one F panel.</p> <p>B: Two I panels are used on 12.0-ft booths. One I panel is used on 8.5–11.5-ft booths.</p> <p>C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												





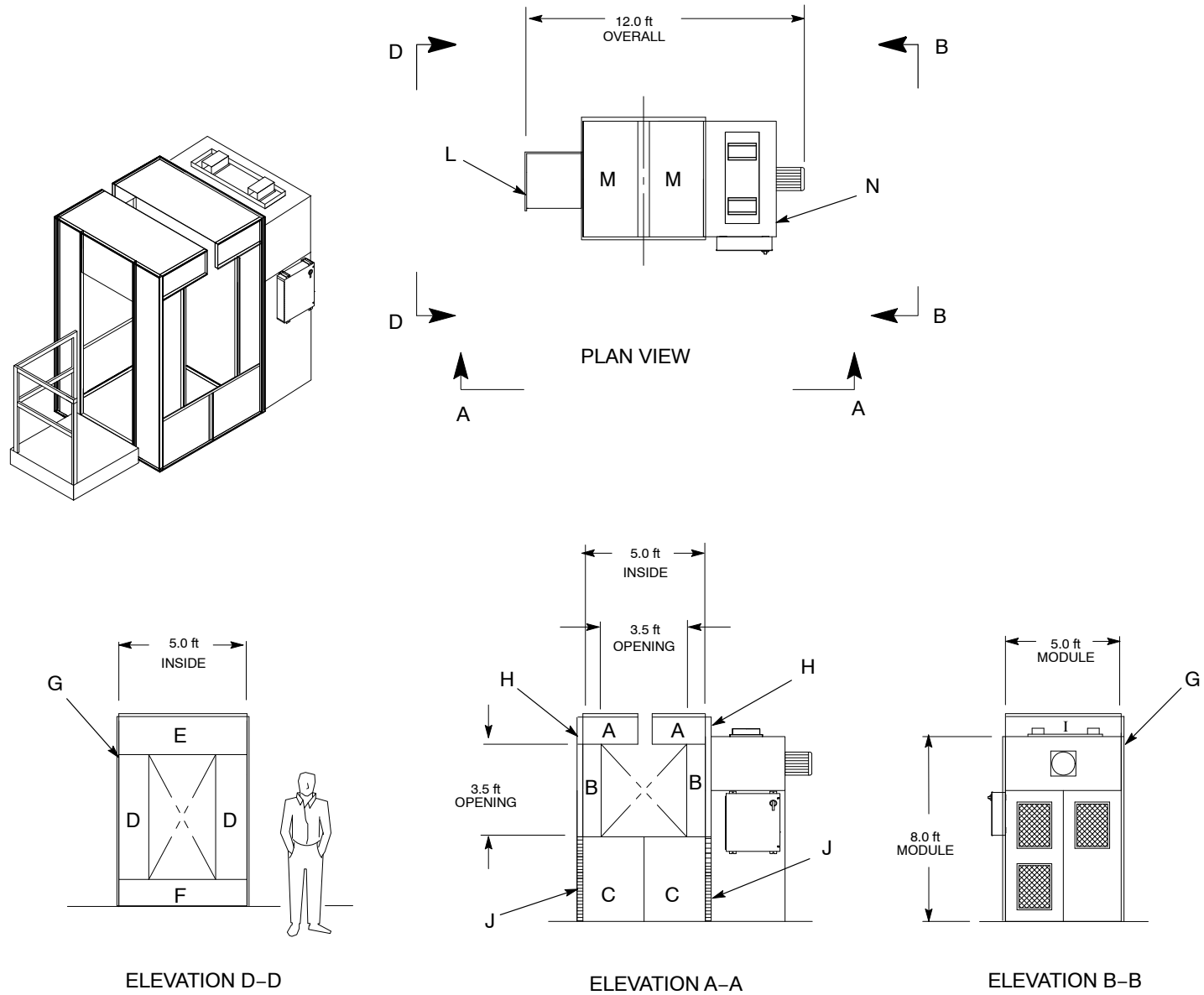
3511025B

Fig. 4-37 Model CD Booth Assembly

**Model CE**

See Figure 4-38.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	9 x 42	9 x 42	9 x 42	9 x 42	9 x 42	9 x 42	9 x 42	9 x 42	9 x 42	4	
C	Wall panel, in.	42 x 30	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	90 x 30	4	
D	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
E	Wall panel, in.	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	1	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	30 x 60	AR	A
G	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	54	54	54	54	54	54	54	54	54	2	
I	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	42	48	54	60	66	72	78	84	90	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
L	Platform, in.	12	18	24	30	36	42	48	54	60	1	C
M	Roof panel, in.	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Two F panels are used on 11.0–12.0-ft booths. All other booths use one F panel.</p> <p>B: Two I panels are used on 12.0-ft booths. One I panel is used on 8.5–11.5-ft booths.</p> <p>C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



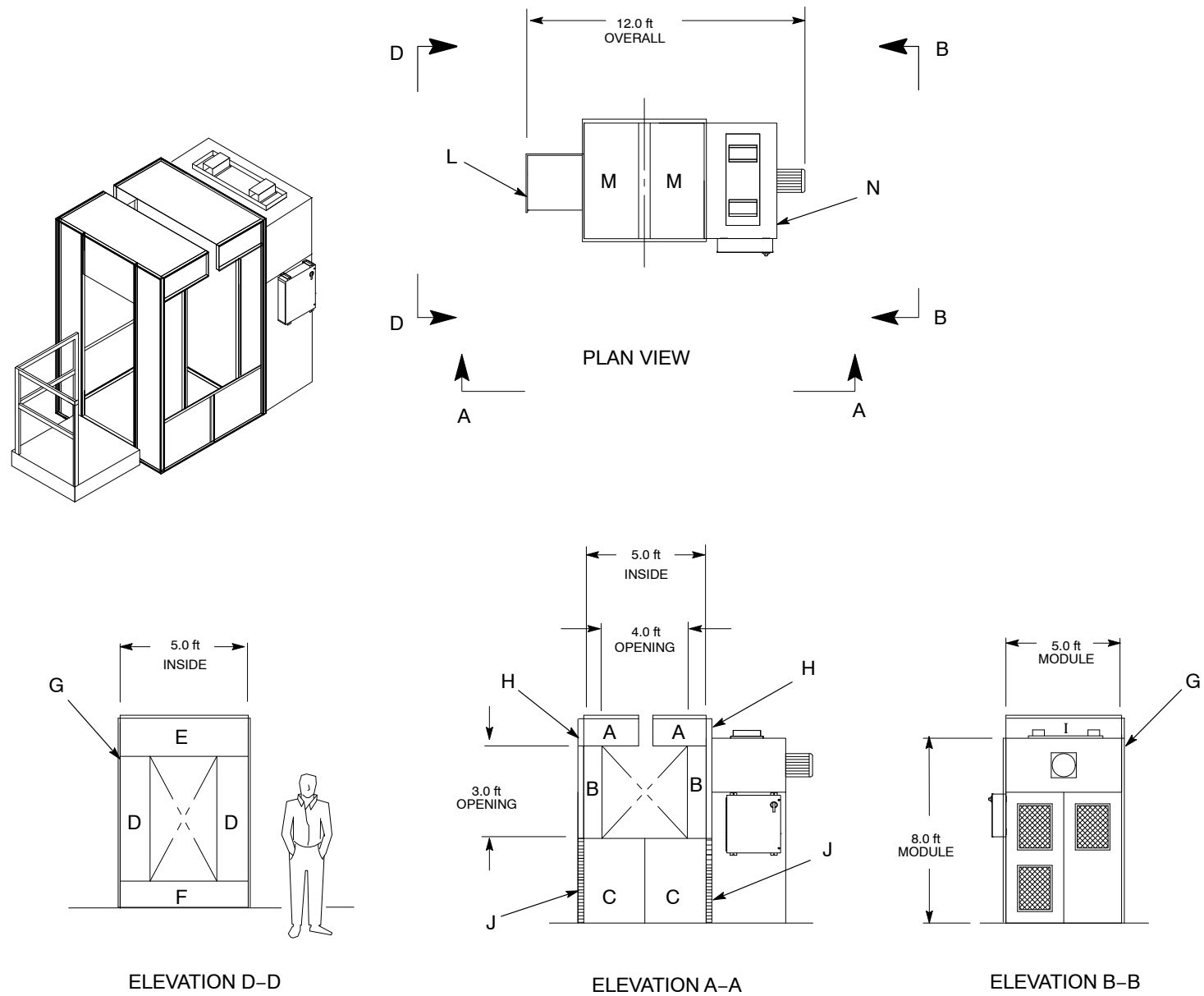
3511026B

Fig. 4-38 Model CE Booth Assembly

**Model CF**

See Figure 4-39.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	6 x 36	6 x 36	6 x 36	6 x 36	6 x 36	6 x 36	6 x 36	6 x 36	6 x 36	4	
C	Wall panel, in.	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	90 x 30	96 x 30	4	
D	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
E	Wall panel, in.	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	12x 60	1	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	30 x 60	AR	A
G	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	48	48	48	48	48	48	48	48	48	2	
I	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	48	54	60	66	72	78	84	90	96	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
L	Platform, in.	12	18	24	30	36	42	48	54	60	1	C
M	Roof panel, in.	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	28.5 x 63	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Two F panels are used on 11.0–12.0-ft booths. All other booths use one F panel.</p> <p>B: Two I panels are used on 12.0-ft booths. One I panel is used on 8.5–11.5-ft booths.</p> <p>C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



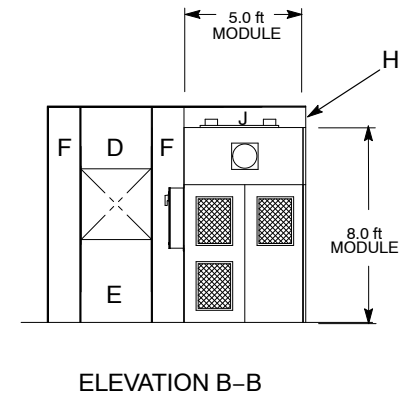
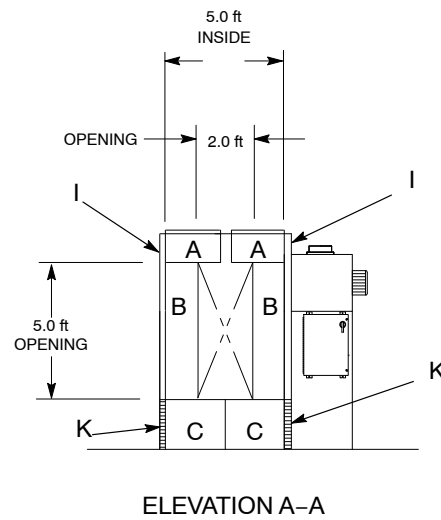
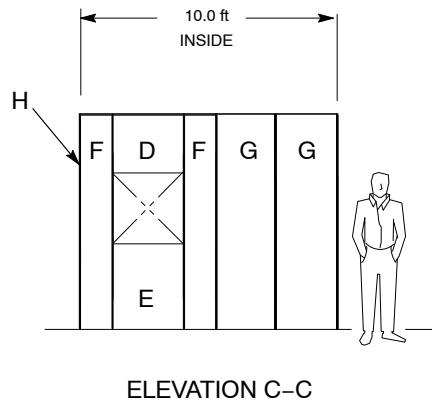
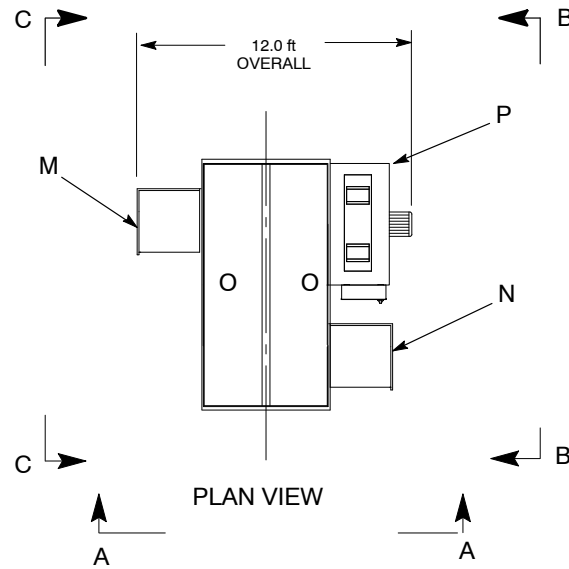
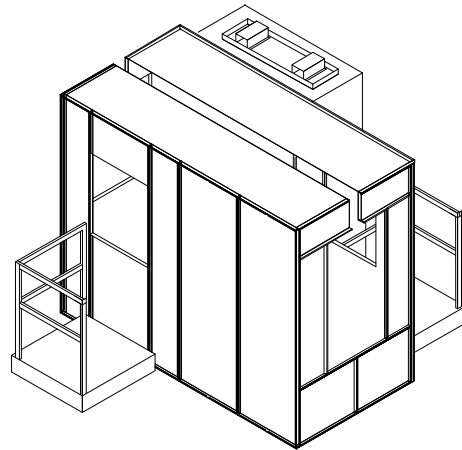
3511034B

Fig. 4-39 Model CF Booth Assembly

**Model CG**

See Figure 4-40.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	4	
C	Wall panel, in.	24 x 30	30 x 30	36 x 30	42 x 30	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	4	
D	Wall panel, in.	24 x 30	24 x 30	24 x 30	24 x 30	24 x 30	24 x 30	24 x 30	24 x 30	24 x 30	2	
E	Wall panel, in.	30 x 36	30 x 42	30 x 48	30 x 54	30 x 60	30 x 66	30 x 72	30 x 78	30 x 84	2	
F	Wall panel, in.	15 x 96	15 x 102	15 x 108	15 x 114	15 x 60	15 x 63	15 x 66	15 x 69	15 x 72	AR	A
G	Wall panel, in.	30 x 96	30 x 102	30 x 108	30 x 114	30 x 60	30 x 63	30 x 66	30 x 69	30 x 72	AR	B
H	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
I	Bracket, in.	72	72	72	72	72	72	72	72	72	2	
J	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	C
K	Hinge, in.	24	30	36	42	48	54	60	66	72	2	
L	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
M	Right platform, in.	—	6	12	18	24	30	36	42	48	1	D
N	Left platform, in.	—	6	12	18	24	30	36	42	48	1	D
O	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
P	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Eight F panels are used on 10.0–12.0-ft booths. All other booths use four F panels.</p> <p>B: Four G panels are used on 10.0–12.0-ft booths. All other booths use two G panels.</p> <p>C: Two J panels are used on 12.0-ft booths. One J panel is used on 8.5–11.5-ft booths.</p> <p>D: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



3511027B

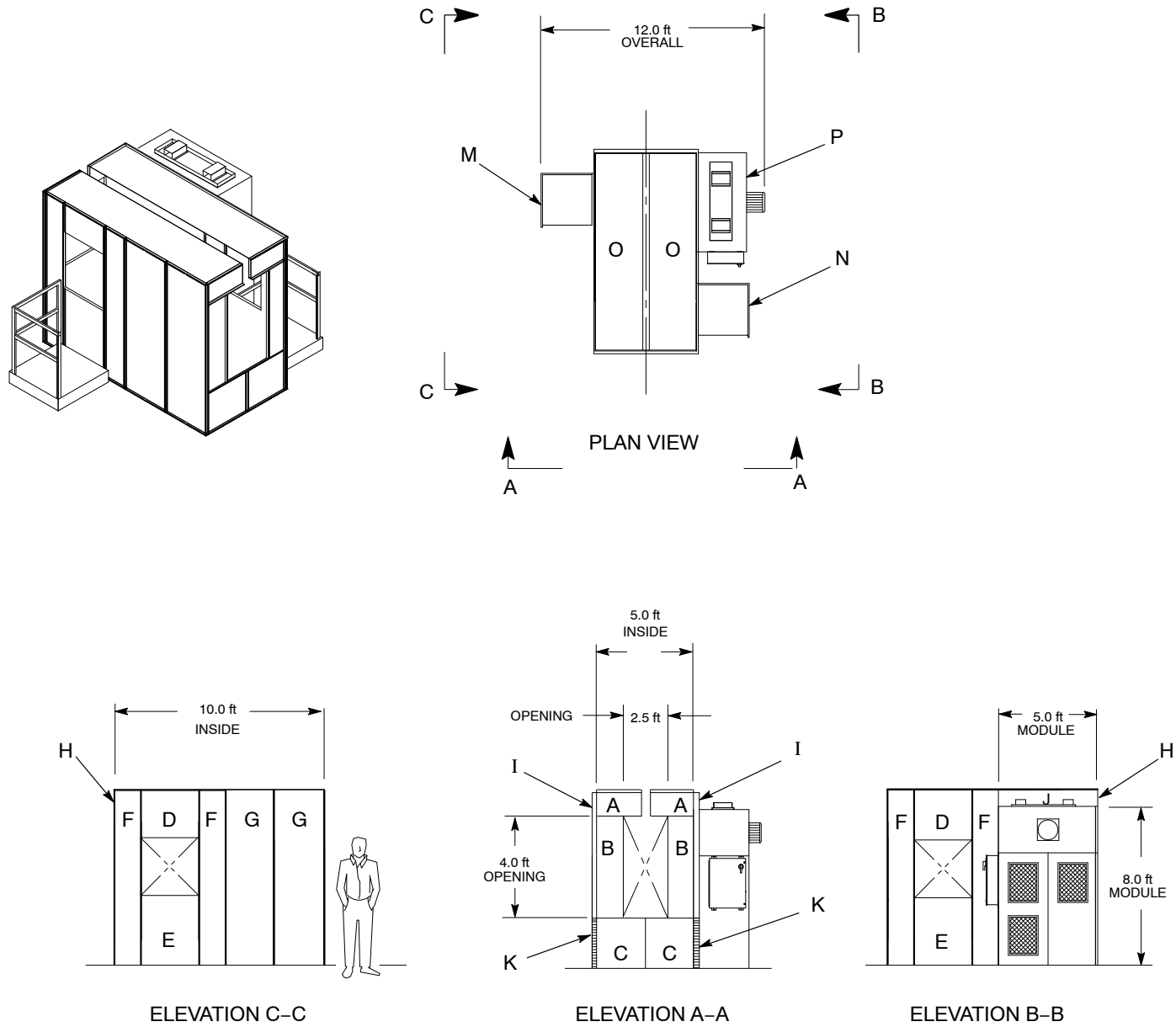
Fig. 4-40 Model CG Booth Assembly

**Model CH**

See Figure 4-41.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	15 x 48	15 x 48	15 x 48	15 x 48	15 x 48	15 x 48	15 x 48	15 x 48	15 x 48	4	
C	Wall panel, in.	36 x 30	42 x 32	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	4	
D	Wall panel, in.	18 x 30	18 x 30	18 x 30	18 x 30	18 x 30	18 x 30	18 x 30	18 x 30	18 x 30	2	
E	Wall panel, in.	30 x 42	30 x 48	30 x 54	30 x 60	30 x 66	30 x 72	30 x 78	30 x 84	30 x 90	2	
F	Wall panel, in.	15 x 96	15 x 102	15 x 108	15 x 114	15 x 60	15 x 63	15 x 66	15 x 69	15 x 72	AR	A
G	Wall panel, in.	30 x 96	30 x 102	30 x 108	30 x 114	30 x 60	30 x 63	30 x 66	30 x 69	30 x 72	AR	B
H	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
I	Bracket, in.	60	60	60	60	60	60	60	60	60	2	
J	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	C
K	Hinge, in.	36	42	48	54	60	66	72	78	84	2	
L	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
M	Left platform, in.	6	12	18	24	30	36	42	48	54	1	D
N	Right platform, in.	6	12	18	24	30	36	42	48	54	1	D
O	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
P	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Eight F panels are used on 10.0–12.0-ft booths. All other booths use four F panels.</p> <p>B: Four G panels are used on 10.0–12.0-ft booths. All other booths use two G panels.</p> <p>C: Two J panels are used on 12.0-ft booths. One J panel is used on 8.5–11.5-ft booths.</p> <p>D: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												





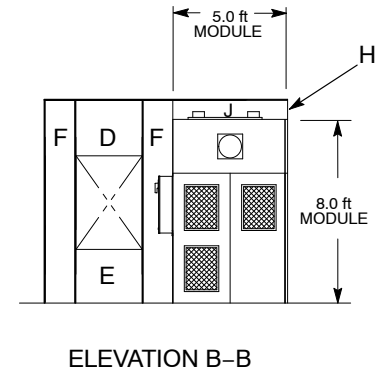
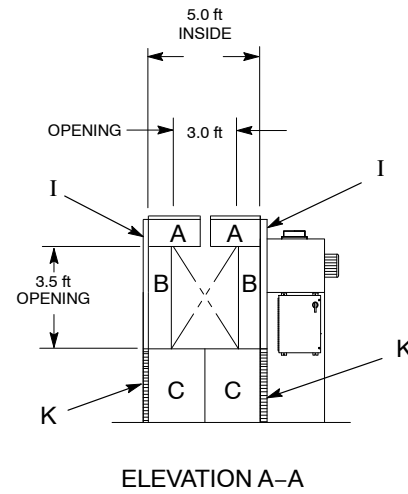
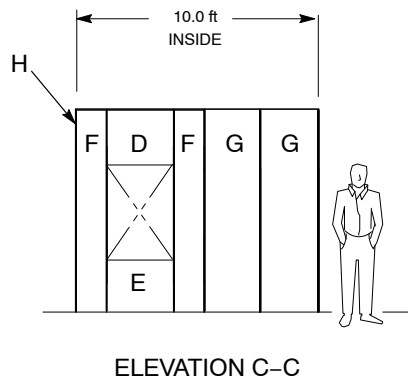
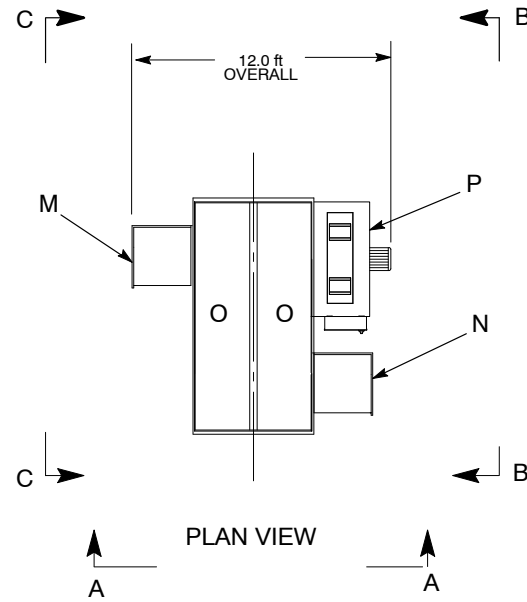
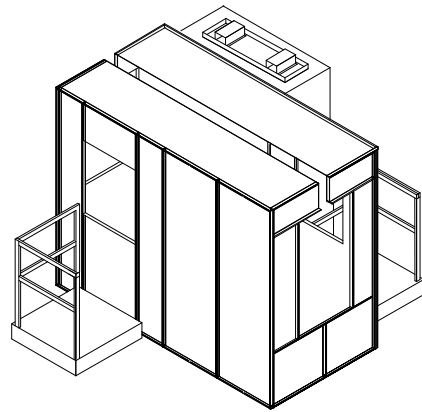
3511028B

Fig. 4-41 Model CH Booth Assembly

See Figure 4-42.

**Model CI**

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	12 x 42	12 x 42	12 x 42	12 x 42	12 x 42	12 x 42	12 x 42	12 x 42	12 x 42	4	
C	Wall panel, in.	42 x 30	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	90 x 30	4	
D	Wall panel, in.	15 x 30	15 x 30	15 x 30	15 x 30	15 x 30	15 x 30	15 x 30	15 x 30	15 x 30	2	
E	Wall panel, in.	30 x 45	30 x 51	30 x 57	30 x 63	30 x 69	30 x 75	30 x 81	30 x 87	30 x 93	2	
F	Wall panel, in.	15 x 96	15 x 102	15 x 108	15 x 114	15 x 60	15 x 63	15 x 66	15 x 69	15 x 72	AR	A
G	Wall panel, in.	30 x 96	30 x 102	30 x 108	30 x 114	30 x 60	30 x 63	30 x 66	30 x 69	30 x 72	AR	B
H	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
I	Bracket, in.	54	54	54	54	54	54	54	54	54	2	
J	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	C
K	Hinge, in.	42	48	54	60	66	72	78	84	90	2	
L	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
M	Left platform, in.	6	12	18	24	30	36	42	48	54	1	D
N	Right platform, in.	6	12	18	24	30	36	42	48	54	1	D
O	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
P	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Eight F panels are used on 10.0–12.0-ft booths. Other booths use four F panels.</p> <p>B: Four G panels are used on 10.0–12.0-ft booths. Other booths use two G panels.</p> <p>C: Two J panels are used on 12.0-ft booths. One J panel is used on 8.5–11.5-ft booths.</p> <p>D: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



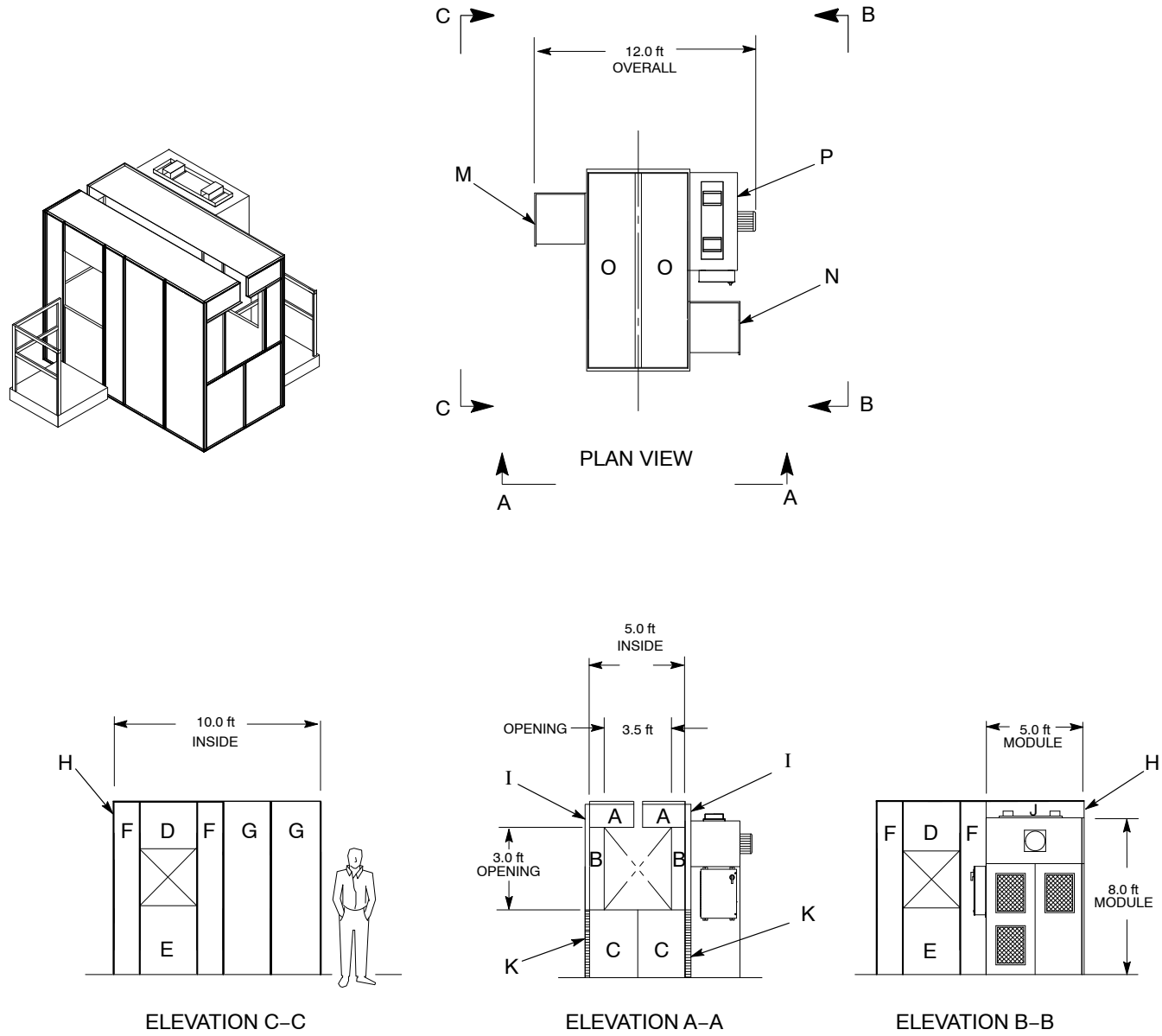
3511029C

Fig. 4-42 Model CI Booth Assembly

**Model CJ**

See Figure 4-43.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	9 x 36	9 x 36	9 x 36	9 x 36	9 x 36	9 x 36	9 x 36	9 x 36	9 x 36	4	
C	Wall panel, in.	48 x 30	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	90 x 30	96 x 30	4	
D	Wall panel, in.	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	2	
E	Wall panel, in.	30 x 48	30 x 54	30 x 60	30 x 66	30 x 72	30 x 78	30 x 84	30 x 90	30 x 96	2	
F	Wall panel, in.	15 x 96	15 x 102	15 x 108	15 x 114	15 x 60	15 x 63	15 x 66	15 x 69	15 x 72	AR	A
G	Wall panel, in.	30 x 96	30 x 102	30 x 108	30 x 114	30 x 60	30 x 63	30 x 66	30 x 69	30 x 72	AR	B
H	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
I	Bracket, in.	48	48	48	48	48	48	48	48	48	2	
J	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	C
K	Hinge, in.	48	54	60	66	72	78	84	90	96	2	
L	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
M	Left platform, in.	12	18	24	30	36	42	48	54	60	1	D
N	Right platform, in.	12	18	24	30	36	42	48	54	60	1	D
O	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
P	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Eight F panels are used on 10.0–12.0-ft booths. All other booths use four F panels.</p> <p>B: Four G panels are used on 10.0–12.0-ft booths. All other booths use two G panels.</p> <p>C: Two J panels are used on 12.0-ft booths. One panel is used on 8.5–11.5-ft booths.</p> <p>D: All operator panels are 36 x 36-in. square. Dimensions listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



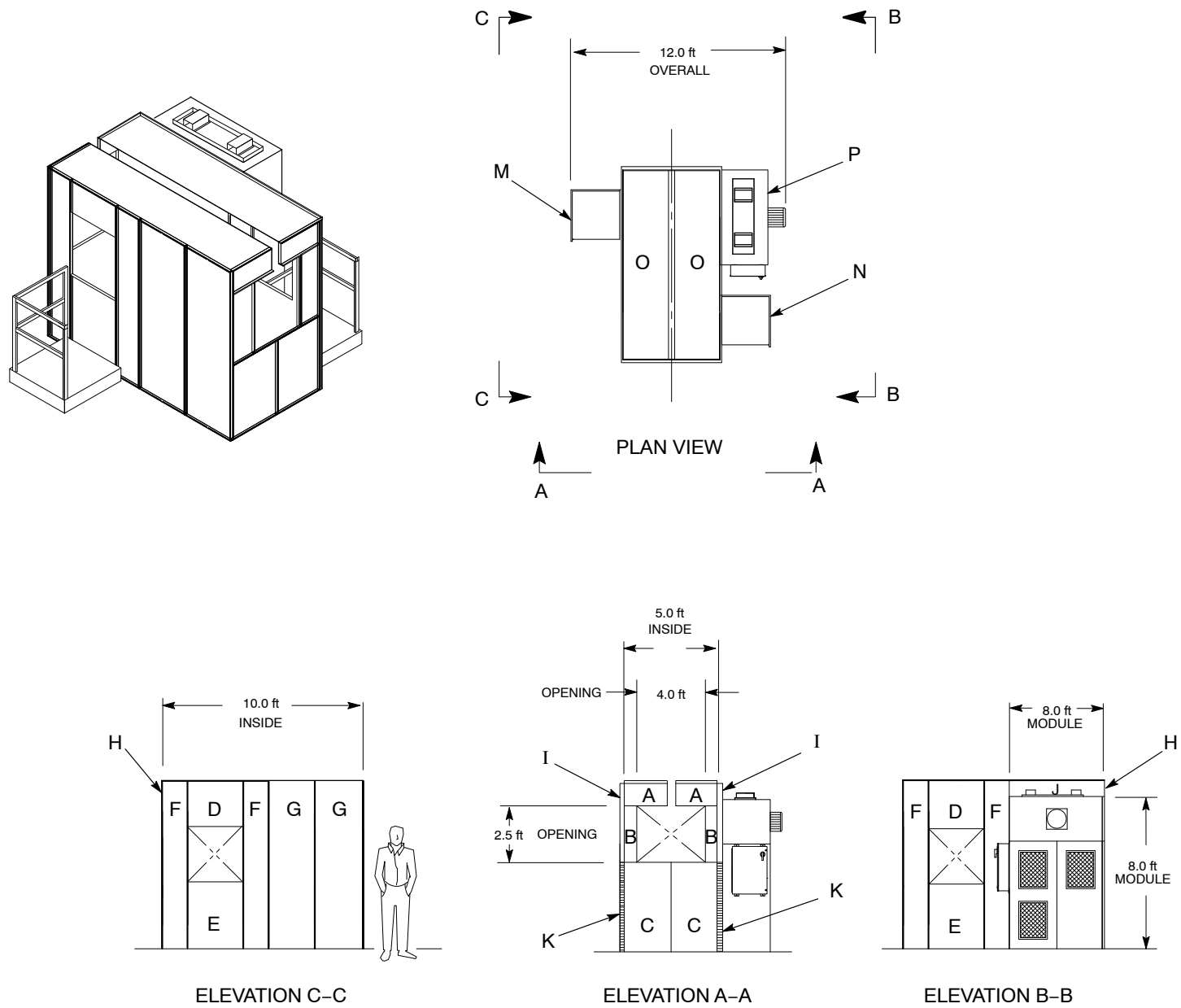
3511030B

Fig. 4-43 Model CJ Booth Assembly

**Model CK**

See Figure 4-44.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	6 x 30	6 x 30	6 x 30	6 x 30	6 x 30	6 x 30	6 x 30	6 x 30	6 x 30	4	
C	Wall panel, in.	54 x 30	60 x 30	66 x 30	72 x 30	78 x 30	84 x 30	90 x 30	96 x 30	102 x 30	4	
D	Wall panel, in.	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	12 x 30	2	
E	Wall panel, in.	30 x 48	30 x 54	30 x 60	30 x 66	30 x 72	30 x 78	30 x 84	30 x 90	30 x 96	2	
F	Wall panel, in.	15 x 96	15 x 102	15 x 108	15 x 114	15 x 60	15 x 63	15 x 66	15 x 69	15 x 72	AR	A
G	Wall panel, in.	30 x 96	30 x 102	30 x 108	30 x 114	30 x 60	30 x 63	30 x 66	30 x 69	30 x 72	AR	B
H	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
I	Bracket, in.	42	42	42	42	42	42	42	42	42	2	
J	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	C
K	Hinge, in.	54	60	66	72	78	84	90	96	102	2	
L	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2	
M	Left platform, in.	12	18	24	30	36	42	48	54	60	1	
N	Right platform, in.	12	18	24	30	36	42	48	54	60	1	
O	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
P	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	1	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	D
<p>NOTE A: Eight F panels are used on 10.0–12.0-ft booths. All other booths use four F panels.</p> <p>B: Four G panels are used on 10.0–12.0-ft booths. All other booths use two G panels.</p> <p>C: Two J panels are used on 12.0-ft booths. One J panel is used on 8.5–11.5-ft booths.</p> <p>D: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>												



3511031B

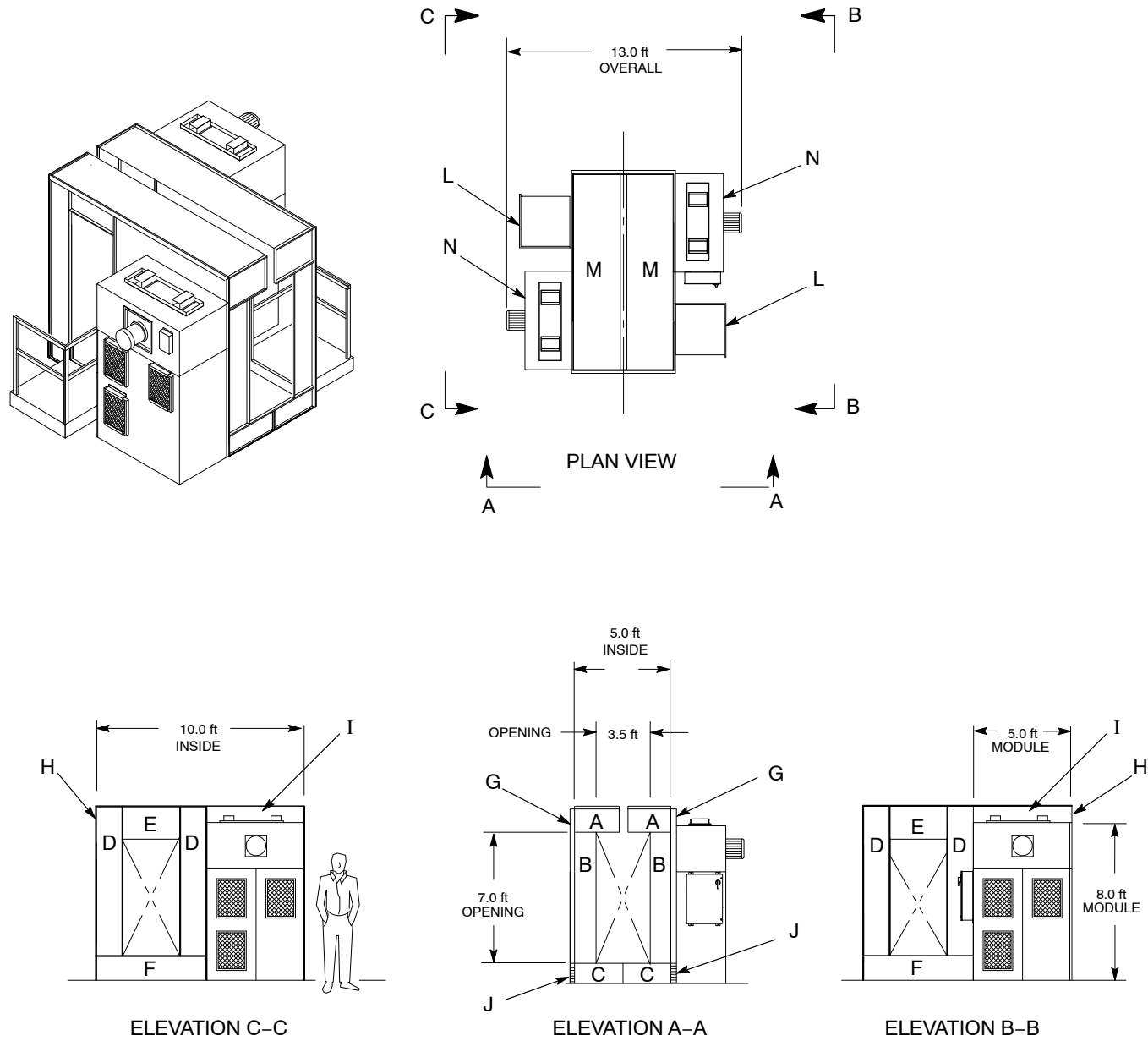
Fig. 4-44 Model CK Booth Assembly

**Model CL**

See Figure 4-45.

Item	Description	Canopy Height, ft								Quantity	Note
		8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	9 x 84	9 x 84	9 x 84	9 x 84	9 x 84	9 x 84	9 x 84	9 x 84	4	
C	Wall panel, in.	6 x 30	12 x 30	18 x 30	24 x 30	30 x 30	36 x 30	42 x 30	48 x 30	4	
D	Wall panel, in.	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	18 x 60	4	
E	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	AR	A
G	Bracket, in.	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	12	96	96	96	96	96	96	96	2	
I	Wall panel, in.	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	90	12	18	24	30	36	42	48	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	
L	Platform, in.	12	18	24	30	36	42	48	54	2	C
M	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	2	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	
<p>NOTE A: Four F panels are used on 11.5–12.0-ft booths. All other booths use two F panels.</p> <p>B: Four I panels are used on 12.0-ft booths. All other booths use two I panels.</p> <p>C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.</p> <p>NS: Not Shown</p> <p>AR: As Required</p>											





3511032C

Fig. 4-45 Model CL Booth Assembly

**Model CM**

See Figure 4-46.

Item	Description	Canopy Height, ft									Quantity	Note
		8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0		
A	Wall panel, in.	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	12 x 27	4	
B	Wall panel, in.	6 x 72	6 x 72	6 x 72	6 x 72	6 x 72	6 x 72	6 x 72	6 x 72	6 x 72	4	
C	Wall panel, in.	12 x 30	18 x 30	24 x 30	30 x 30	36 x 30	42 x 30	48 x 30	54 x 30	60 x 30	4	
D	Wall panel, in.	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	12 x 60	4	
E	Wall panel, in.	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	15 x 72	2	
F	Wall panel, in.	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	27 x 60	30 x 60	AR	A
G	Bracket, in.	96	102	108	114	120	126	132	138	144	2	
H	Bracket, in.	84	84	84	84	84	84	84	84	84	2	
I	Wall panel, in.	—	6 x 60	12 x 60	18 x 60	24 x 60	30 x 60	36 x 60	42 x 60	24 x 60	AR	B
J	Hinge, in.	12	18	24	30	36	42	48	54	60	2	
K	Latch	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1	
L	Platform, in.	12	18	24	30	36	42	48	54	60	2	C
M	Roof panel, in.	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	28.5 x 123	2	
N	Fan/collector, ft	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	8 x 5 x 4	2	
NS	Roof support	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	Universal	1	
NS	Fasteners	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	AR	

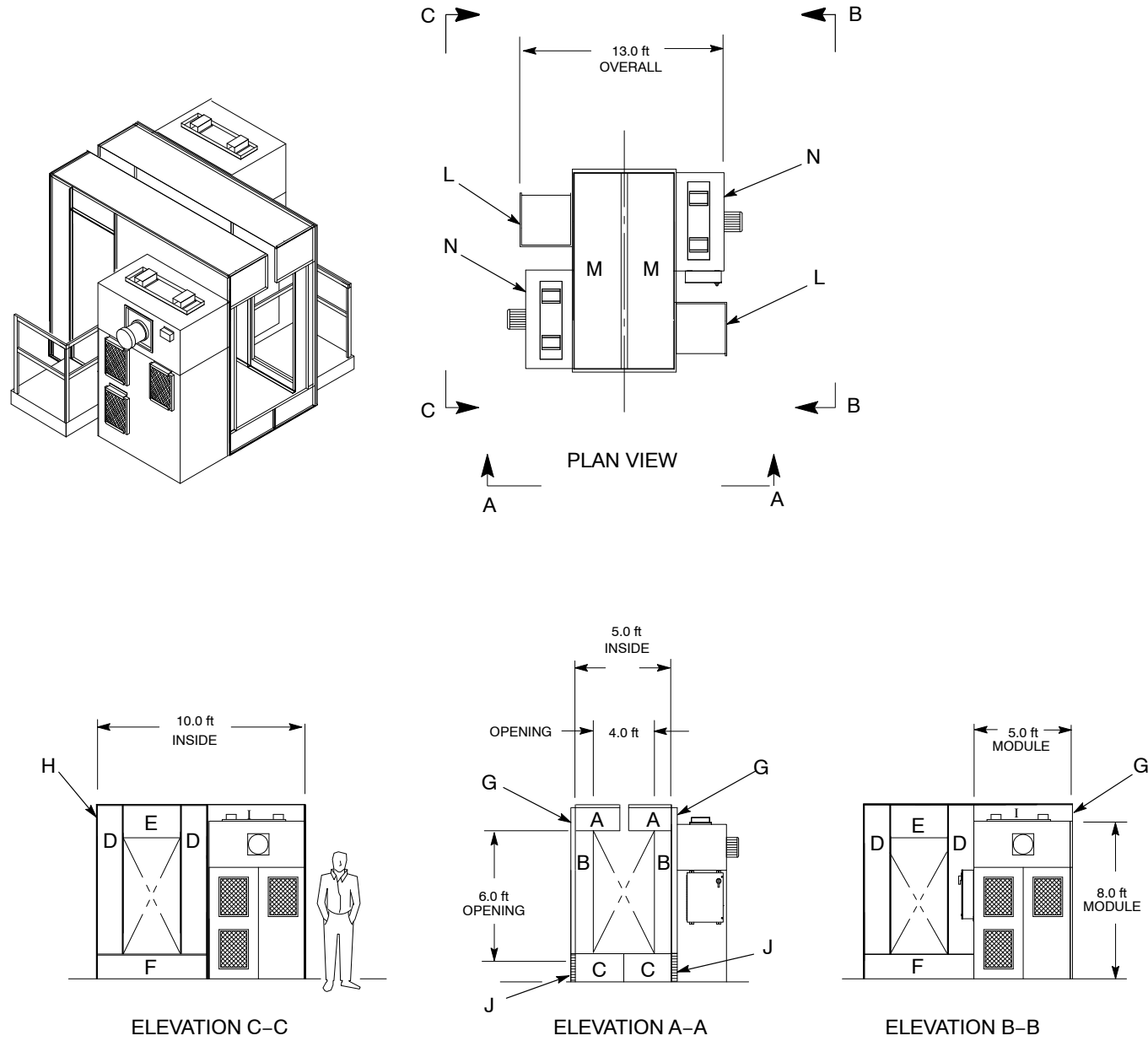
NOTE A: Four F panels are used on 11.0–12.0-ft booths. All other booths use two F panels.

B: Four I panels are used on 12.0-ft booths. Two I panels are used on 8.5–11.5-ft booths.

C: All operator platforms are 36 x 36-in. square. Dimension listed above is platform height.

NS: Not Shown

AR: As Required



3511033B

Fig. 4-46 Model CM Booth Assembly



## *Section 5*

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# ***Operation***

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## Section 5 Operation

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### 1. Introduction

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**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.



**WARNING:** Keep spray gun controllers and/or electrostatic power units outside the booth while spraying powder. Failure to observe this warning will result in a hazardous situation and is a violation of safety codes.



**WARNING:** All conductive equipment in the spray area must be connected to a true earth ground. Ungrounded equipment can become electrostatically charged and generate a spark hot enough to cause ignition upon discharge.

This section explains the basic startup and shutdown procedures for the Versa-Coat booth. Refer to your powder application equipment manuals for additional operating procedures.

---

## **2. Startup**

---

Follow these procedures to start up the Versa-Coat booth.

1. Turn the BLOWDOWN switch to the OFF position.
2. Turn on the electrical power and compressed air supply. Adjust the air supply regulator to 4 bar (60 psi).
3. Press the EXHAUSTER START button(s) to start the exhaust fan(s).
4. Check the final filter differential pressure gauge(s), located above and to the right of the final filters on each module. Pressure should be less than 4.0-in. wc. A higher reading indicates a clogged final filter. If a higher reading is displayed, refer to the *Troubleshooting* section for corrective actions.
5. Check to make sure that air is circulating through the booth filters.
6. Fill the feed hopper  $\frac{2}{3}$  full of clean, dry powder and start the hopper fluidizing air. Adjust the fluidizing air pressure to the level recommended in your hopper manual. Make sure the powder is properly fluidized before spraying.
7. Turn on the spray gun controller. Test spray the items to be coated. Adjust the kV and air flow settings to obtain the desired results.

---

## **3. Shutdown**

---

Follow these procedures to shut down the Versa-Coat booth.

1. Turn off the spray gun controller(s). Ground the gun electrode.
2. Turn the BLOWDOWN switch to the ON position to clean the cartridge filters of oversprayed powder. Wait five minutes then turn off the pulsing.
3. Turn off the exhaust fans by pressing the EXHAUSTER STOP button.
4. Turn the main disconnect switch to the off position.
5. Perform daily preventive maintenance procedures as described in the *Maintenance* section of this manual and in the powder application equipment manuals. Turn on the exhaust fans when cleaning the booth interior.



## 4. Maintenance

The following tables explain the preventive maintenance procedures for your Versa-Coat booth equipment. Refer to your powder application equipment manuals for additional maintenance procedures.

### Daily Maintenance

Refer to Table 5-1 for daily preventive maintenance procedures.

Table 5-1 Daily Maintenance

Equipment	Maintenance Procedure
<b>Booth enclosure</b>	<p>Clean the booth enclosure using the following steps:</p> <ol style="list-style-type: none"> <li>1. Pulse the cartridge filters for five minutes with the exhaust fans on.</li> <li>2. Shut off the pulsing and remove the tray from under the cartridge filters.</li> <li>3. Clean the booth interior with a rubber squeegee or other grounded, non-sparking device.</li> <li>4. Remove collected powder from the booth for reclaim or disposal.</li> </ol>
<b>Powder spray guns</b>	Clean the spray guns by following the instructions in the spray gun manuals. Replace worn parts as necessary. Test resistance as directed in the spray gun manuals.
<b>Powder pumps</b>	Clean the pumps by following the instructions in the pump manuals. Replace worn parts as necessary.
<b>Compressed air</b>	Open the drip leg drain valve and use a clean, white cloth to check for water, oil, or other contaminants. If you find contaminants, correct the problem before resuming spray operations. Check and correct the regulator settings.
<b>Air dryers and filters</b>	Clean and drain the filters. Check the air dryer for proper operation.
<b>Grounds</b>	Check all equipment grounds. Clean and strip all part hangers. Resistance between parts to be sprayed and ground should never be more than one megohm.

**Periodic Maintenance**

Refer to Table 5-2 for periodic preventive maintenance procedures.

Table 5-2 Periodic Maintenance

<b>Equipment</b>	<b>Maintenance Procedure</b>
<b>Electrical connections</b>	Tighten all electrical connections and inspect for loose or broken wires.
<b>Spray guns and electrostatic cables (if used)</b>	Check the spray gun resistor and electrostatic cable resistance with a megohm meter as described in the spray gun manual.
<b>Powder feed tubing</b>	Disconnect the powder feed tubing from the powder pump, and with the booth fans on, blow out the tubing. Replace the tubing if it is worn or there is impact fusion present inside of the tubing.
<b>Cartridge filters</b>	<p>Visually check the cartridge filters for damage. Remove the final filters and check the inside of the fan housing. Signs of powder inside the fan housing indicate a leaking cartridge. Check the cartridge filter gaskets and sealing surfaces.</p> <p>Check the cartridge filter differential pressure gauge. A constant high reading (6-in. wc or greater) after cleaning the cartridge filters indicates worn cartridge filters. Replace the cartridge filters if necessary.</p>
<b>Final filters</b>	<p>With the exhaust fans on, check the differential pressure gauges on the modules.</p> <p>If the pressure drop across the final filters in any one module reaches 4.0-in. wc, that module's exhaust fan will automatically shut down. Power to the pulse valve solenoids and electrostatic power supplies (if connected to the booth control panel) will also disable. A reading of 4.0-in. wc or higher indicates that the final filters are clogged.</p> <p>If the final filters clog, disconnect and lock out the power to the system. Clean or replace the final filters. Check the cartridge filter media and gaskets for damage. Replace the cartridge filters if necessary.</p>
<b>Fan motor</b>	<p>Lubricate the fan motor bearings monthly with one of the following greases: Dolium R (Shell), SRI No. 2 (Chevron), Rykon Premium #2 (Amoco), or Polyrex #2 (Texaco).</p> <p>Shut off the exhaust fans and disconnect and lockout power to the system. Using a grease gun, apply two full strokes of grease to each clean grease fitting. Do not over-grease.</p>

## *Section 6*

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# ***Troubleshooting***

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# Section 6

## Troubleshooting



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

---

### 1. Introduction

---



**WARNING:** Disconnect and lockout electrical power to the system before removing any panels or performing any repair procedures.

This section contains troubleshooting procedures. These procedures cover only the most common problems that you may encounter. If you cannot solve the problem with the information given here, contact your local Nordson representative for help.

Problem		Page
1.	Inadequate or intermittent flow of powder from spray guns; surging or spitting	6-2
2.	Problems with powder coating: uniformity, edge coverage, film build, wrap, penetration in recesses	6-3
3.	Powder escaping from booth openings	6-4
4.	System shuts down or will not start	6-6
5.	Cartridge pulsing will not start	6-6

**2. Troubleshooting Charts**

Use the following charts to isolate and correct common problems with the booth.

Problem	Possible Cause	Corrective Action
<b>1. Inadequate or intermittent flow of powder from spray guns; surging or spitting</b>	Poor powder fluidization in feed hopper	Adjust the fluidizing air pressure. Check for moisture or oil in the air supply. Check the powder supply for contamination or large clumps of powder.
	Powder level in feed hopper low	Add powder to the hopper.
	Powder pump clogged	Disassemble the pump. Clean and inspect the venturi nozzle and throat. Replace if necessary.
	Worn parts	Check the pump mounting O-rings and replace them if damaged.
	Clogged pickup tube or pump air supply lines	Check for obstructions in the pickup tube or air tubing.
	Obstruction in powder feed hose, or hose too long	<ol style="list-style-type: none"> <li>1. Make sure the exhaust fans are on.</li> <li>2. Turn off the electrostatic power and disconnect the powder feed hose from the spray gun.</li> <li>3. Trigger the spray gun and look for smooth powder flow from the feed hose.</li> <li>4. Remove the feed hose at the pump and blow it out with compressed air if flow of powder through the feed hose is restricted.</li> <li>5. Eliminate any kinks, severe bends, pinching, or any cause of impact fusion from the feed hose. Replace the feed hose if impact fusion is restricting flow.</li> <li>6. Reduce the length of the feed hose to 7.6 m (25 ft) maximum, with a vertical rise of no more than 2.75 m (9 ft).</li> </ol>

Problem	Possible Cause	Corrective Action
<b>1. Inadequate or intermittent flow of powder from spray guns; surging or spitting (contd)</b>	Severe tribo-charging in powder feed hose	Contact your Nordson representative for an alternative feed tubing material. Review the problem with the powder coating manufacturer.
	Obstruction in spray gun	Refer to your spray gun manual. Disassemble the spray gun and clean it. Replace any worn parts. Check all clearances when reassembling the spray gun.
	Incorrect flow rate or atomizing air pressure	Adjust the air pressure settings. Maintain the correct flow rate-to-atomizing air pressure ratio. If less than 1.4 bar (20 psi) is needed to deliver the proper flow rate for your application, install a low-flow kit on your powder spray equipment. Refer to your spray equipment manual or contact your Nordson representative for part numbers and ordering information.
	Low kV output	Increase the kV setting. Refer to your spray gun controller manual.
<b>2. Problems with powder coating: uniformity, edge coverage, film build, wrap, penetration in recesses</b>	Poor workpiece ground (greater than one megohm)	Clean the hangers, fixtures and hooks.
	Incorrect spray gun position	Refer to the spray gun manual for suggested spray gun position.
	Incorrect flow rate or atomizing air pressure	Change the flow rate air pressure to increase or decrease powder flow. Change the atomizing air pressure to alter the fan pattern and powder distribution.
	Incorrect voltage setting	Adjust the kV settings as directed in the spray gun manual.

## 2. Troubleshooting Charts

(contd)

Problem	Possible Cause	Corrective Action
<b>2. Problems with powder coating: uniformity, edge coverage, film build, wrap, penetration in recesses</b> (contd)	Incorrect spray gun nozzle for application	Contact your Nordson representative for the proper nozzle for your application.
	Wrong powder for application	Contact your powder supplier or your Nordson representative.
<b>3. Powder escaping from booth openings</b>	Cartridge filter gaskets not sealing properly	<p>Check the differential pressure gauges. A reading approaching 4.0-in. wc means that the final filters are clogging. At 4.0-in. wc, the module exhaust fan will shut down.</p> <p>Remove the cartridges and clean the gaskets and sealing surfaces. Install them, checking the gasket alignment and sealing. Refer to the <i>Repair</i> section for filter replacement instructions.</p>
	Damaged cartridge filter media	<p>Replace the cartridge filters.</p> <p>Clean or replace the final filters.</p>
	Cartridge filters clogged because of	
	<ul style="list-style-type: none"> <li>• Failure to pulse filters</li> </ul>	Pulse the filters for five minutes; repeat if necessary.
	<ul style="list-style-type: none"> <li>• Inadequate pulse pressure</li> </ul>	Increase the manifold air pressure to 4–7 bar (60–100 psi).
	<ul style="list-style-type: none"> <li>• Pulse off timing too long</li> </ul>	Decrease the pulse off time at the timer inside the electrical panel.
	<ul style="list-style-type: none"> <li>• Powder too fine or contaminated</li> </ul>	If using reclaimed powder, reduce the ratio of reclaimed-to-virgin powder. Check powder particle size, if necessary.
	<ul style="list-style-type: none"> <li>• Powder contaminated</li> </ul>	Replace the contaminated powder.



Problem	Possible Cause	Corrective Action
<b>3. Powder escaping from booth openings (contd)</b>	<ul style="list-style-type: none"> <li>Pulse valve or solenoid valve malfunction</li> </ul>	<p>Isolate the problem component and repair as follows:</p> <ul style="list-style-type: none"> <li>The pulse valve diaphragm is ruptured. If you hear a hissing sound inside the fan section, check for constant air flow from the valve. Rebuild or replace the damaged valve. Refer to <i>Pulse Valve Replacement</i> in the <i>Repair</i> section.</li> <li>The pulse valve spring is broken, or the solenoid valve is not triggering the pulse valve. Start pulsing and note any filters not being pulsed. Check the valve air tubing and solenoid wiring; correct if disconnected or failed. Check the continuity across the solenoid terminal (with power off and locked out). If it is shorted open, replace the solenoid. If it is not shorted open, repair or replace the pulse valve.</li> </ul>
	Cross drafts	Check for cross drafts across the booth openings and correct as necessary.
	Parts entering booth are too hot	Cool the parts to 48 °C (120 °F) or below before bringing them into the booth.
	Powder flow exceeds ability of exhaust fans to contain	Reduce the powder flow or the number of guns.
	Booth openings exceed design criteria	Close off or decrease the size of the opening.
	Parts too large, interrupting flow of air through booth	Contact your Nordson representative.
	Exhaust fan rotation reversed	Reverse the rotation of the motor by switching the wiring.

## 2. Troubleshooting Charts

(contd)

Problem	Possible Cause	Corrective Action
<b>4. System shuts down or will not start</b>	Final filter pressure switch(es) (PS108, PS110, PS112, PS114) trips	Clogged final filters are causing a high differential pressure. Check for a powder leak through the cartridge filters and correct it as necessary.  The differential pressure switch setting is incorrect or the switch failed. Adjust the setting or replace the switch.
	Fuse(s) blown	Check for the reason the fuse(s) blew and correct it. Replace the blown fuse(s).
	Fan motor overload shutdown	Correct one of the following possible motor, contactor, fuse or operational problems as needed: <ul style="list-style-type: none"> <li>• Check the exhaust fan for proper rotation direction.</li> <li>• Check for mechanical binding of the motor/fan assembly.</li> <li>• Check for contact corrosion at the motor starters (M108, M110, M112, or M114 in the electrical panel).</li> <li>• Check the overload protectors for failure (OL108, OL110, OL112, or OL114 in the electrical panel).</li> </ul>
	Incorrect, shorted, or open electrical wiring	Check the electrical circuits.
<b>5. Cartridge pulsing will not start</b>	No air supply to pulse manifolds	Check the air supply.
	Solenoid shorted; blows timer board fuse	Call an electrician.
	Timer board malfunction or other electrical problem	Call an electrician.

### 3. Electrical Schematics

See Figures 6-1 and 6-2 for control panel electrical schematics.

#### 3400-cfm Control Panel

See Figure 6-1.

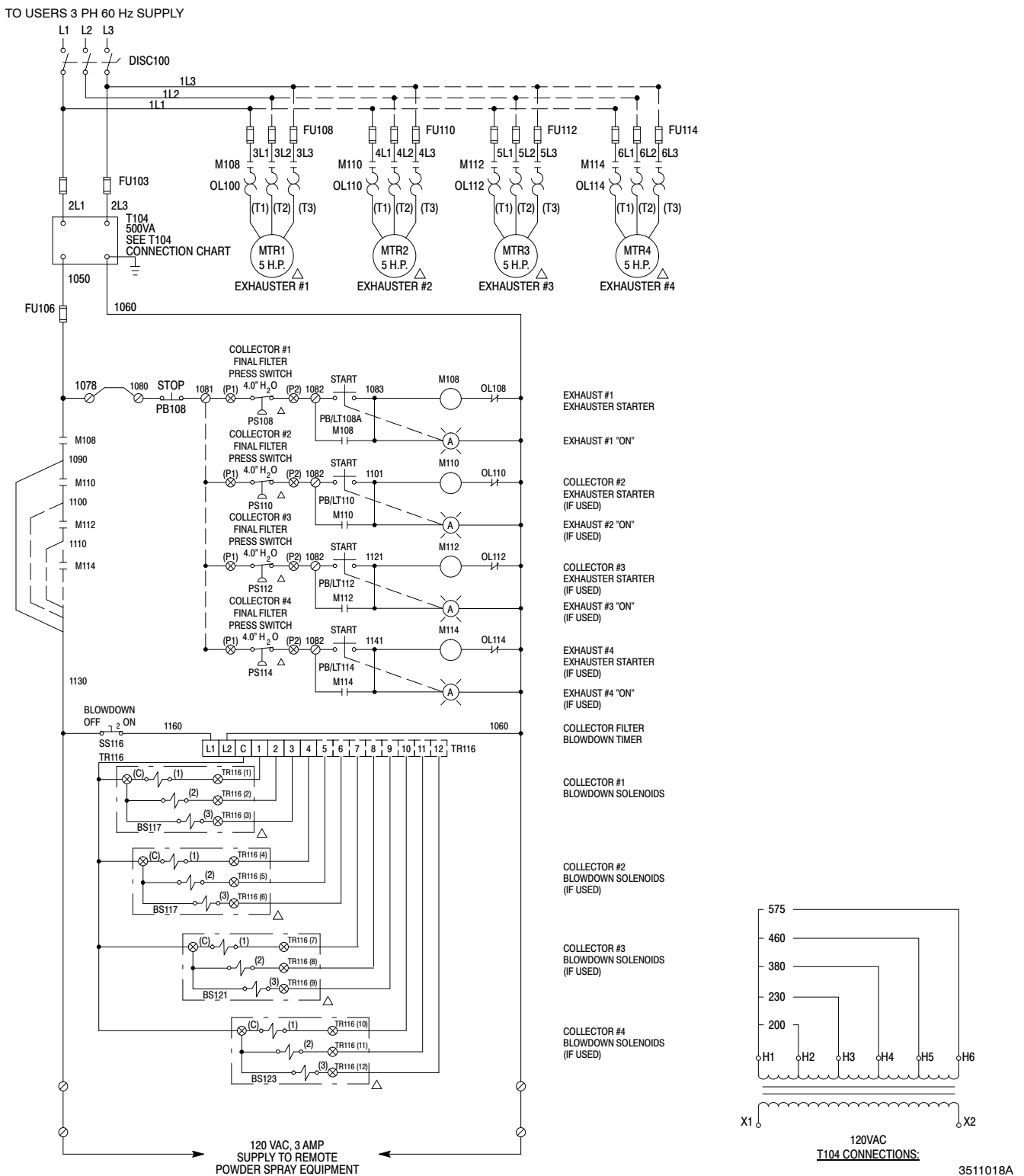
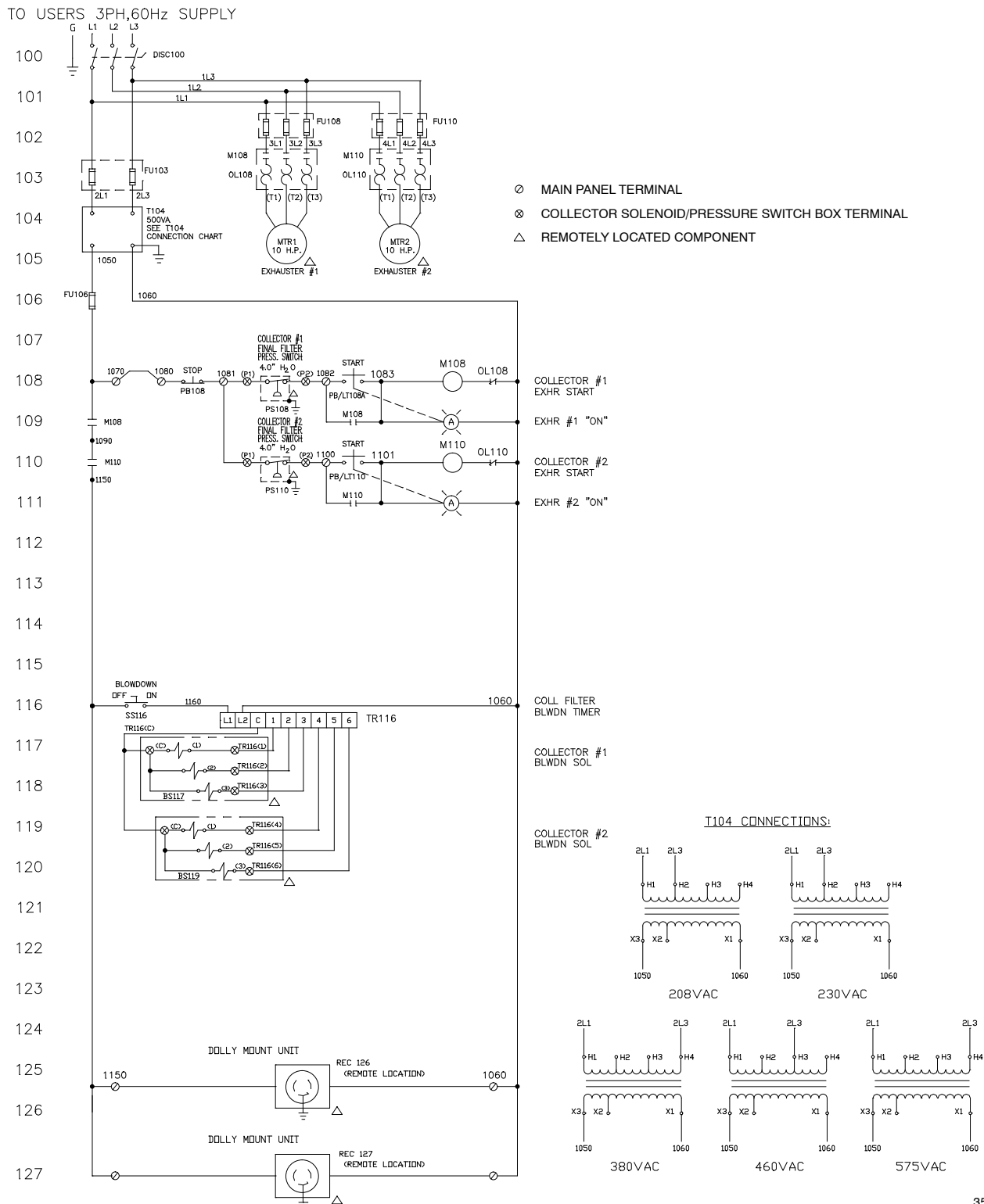


Fig. 6-1 3400-cfm Control Panel Electrical Schematic (Four Starter Version Shown)

## 5100-cfm Control Panel

See Figure 6-2.



3511051B

Fig. 6-2 5100-cfm Control Panel Electrical Schematic (Two-Starter Version Shown)

## *Section 7*

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# ***Repair***

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## Section 7

# Repair

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### 1. Introduction

---



**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.



**WARNING:** Disconnect and lockout electrical power to the system before removing any panels or performing any repair procedures. Shut off the electrostatic equipment and ground the gun electrode.



**WARNING:** System or material pressurized. Relieve system air pressure before disconnecting any air tubing.

This section provides common repair procedures for Versa-Coat booths.

---

## 2. Cartridge Filter Replacement

---



**WARNING:** Wear an OSHA-approved respirator while you are cleaning the booth.



**CAUTION:** Do not use any cartridge filters other than those approved by Nordson Corporation. Using cartridges not designed to Nordson standards could seriously affect the operation and performance of your system.

Follow these steps to replace the cartridge filters.

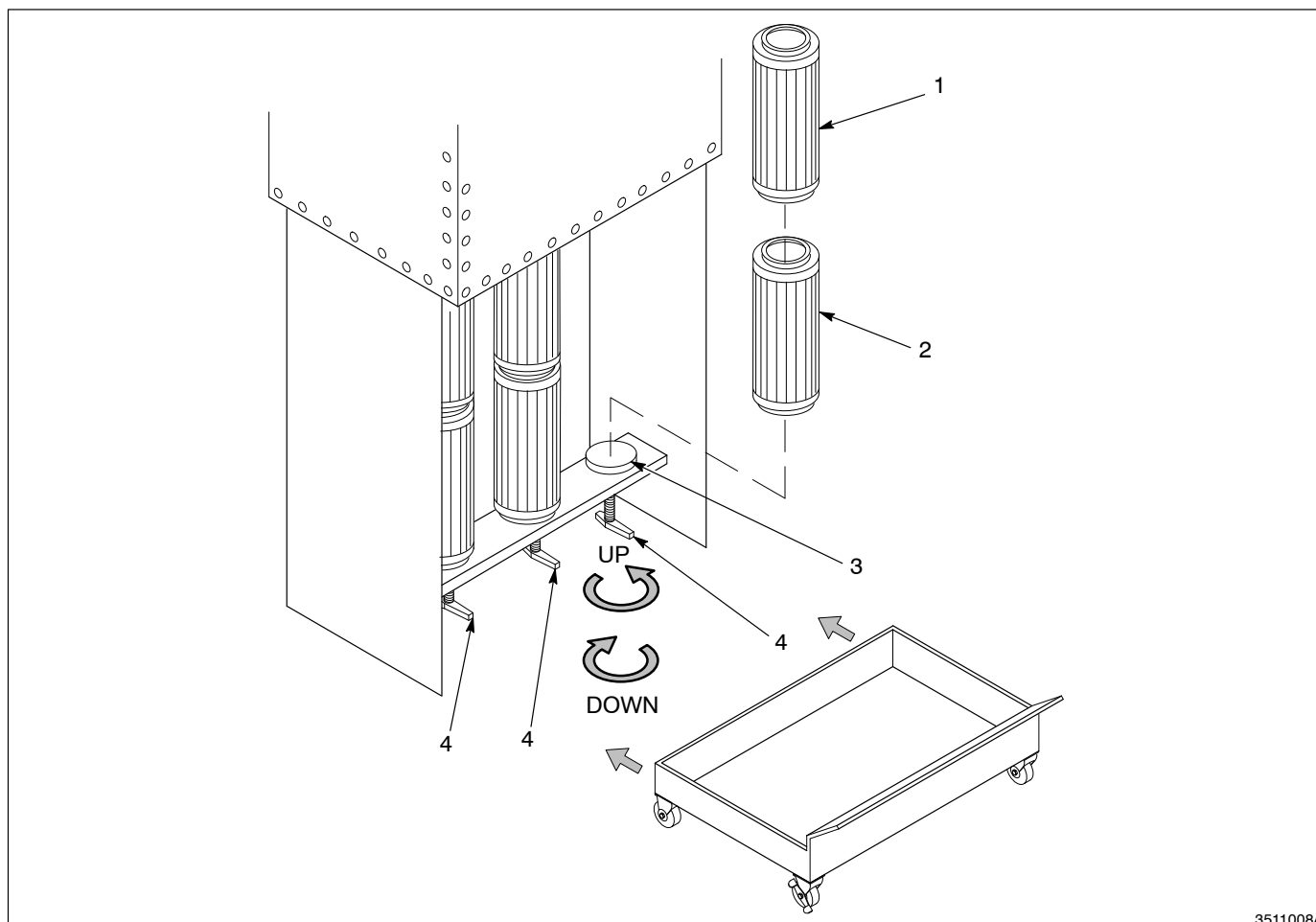
See Figure 7-1.

1. Turn on the exhaust fans. Pulse the cartridge filters for five minutes then shut off the cartridge pulsing.
2. Clean the inside of the booth walls and roof panels. Slide the tray out from under the cartridge filters and sweep up powder on the floor. Dispose of the powder properly or save it for reclaim.
3. Shut off the exhaust fans. Disconnect and lockout electrical power to the system. Shut off the compressed air supply and relieve system pressure.
4. Turn the crank handle (4) until the push plate (3) bottoms out against the support rail. This will lower the cartridges away from the fan housing. Remove the old cartridge filters from the collector module.
5. Clean the push plate and the surface of fan housing which contacts the cartridge gasket. Place a new closed-end cartridge filter (2) on the push plate, with the gasket end up. The push plate should fit into recess at the bottom of the closed-end cartridge.
6. Place a new flow-through cartridge filter (1) on top of the closed-end cartridge filter. Line up the cartridge gaskets. The outside the lip of the flow-through cartridge filter should be up against the alignment pins projecting downward from the fan housing.
7. Press lightly against the cartridges so that the flow-through cartridge filter is against the alignment pins. Rotate the crank handle to press the cartridge filters up against the fan section and to seal the upper gasket against the fan housing.



8. Inspect each cartridge filter for alignment and proper gasket sealing. If sealing is not adequate, tighten the crank handle further. Do not over-tighten, or you might crush the cartridge.

**NOTE:** You should not be able to slide a 0.5-mm (0.020-in.) feeler gauge between the flow-through cartridge gasket and the sealing surface. Replace the cartridges if you cannot obtain a good seal.



3511008A

Fig. 7-1 Cartridge Filter Replacement

1. Flow-through cartridge filter  
2. Closed-end cartridge filter

3. Push plate

4. Crank handles

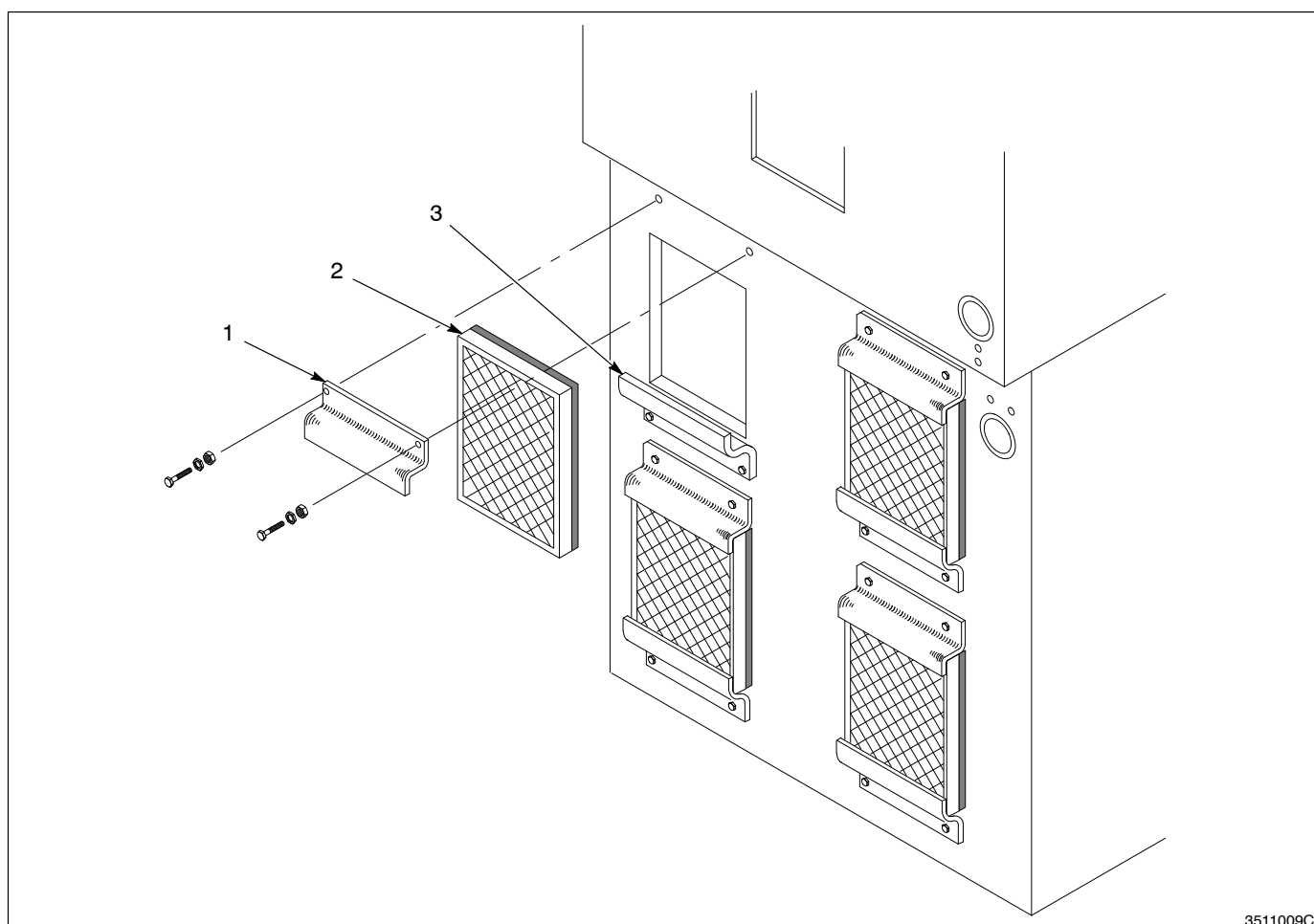
### **3. Final Filter Replacement**

Follow these steps to replace the final filters.

See Figure 7-2.

**NOTE:** 3400-cfm booths have three final filters. 5100-cfm booths have four final filters.

1. Turn off the exhaust fans.
2. Remove the upper Z-bracket (1) and loosen the lower Z-bracket (3).
3. Remove the old final filter (2). Check for powder on the filter and inside the housing. If powder is present, check the cartridge filters for damage or a poor seal which would allow powder to leak into the fan housing.
4. Remove the new final filter from its carton. Inspect the filter media, frame and gasket for damage. Do not use damaged filters.
5. Install a new filter on the lower Z-bracket with the gasket facing the collector module. Be careful not to damage the gasket.
6. Install the upper Z-bracket, washers, and screws. Hand-tighten the screws on both the upper and lower Z-brackets.
7. Check the position of the filter to make sure it seals properly against sheet metal on all four sides. Tighten the Z-bracket screws to compress the filter gasket slightly. Do not over-tighten, as you may crush the filter.



3511009C

Fig. 7-2 Final Filter Replacement

1. Upper Z-bracket

2. Final filter

3. Lower Z-bracket

#### **4. Pulse Valve Replacement**

Follow these steps to replace the pulse valves.

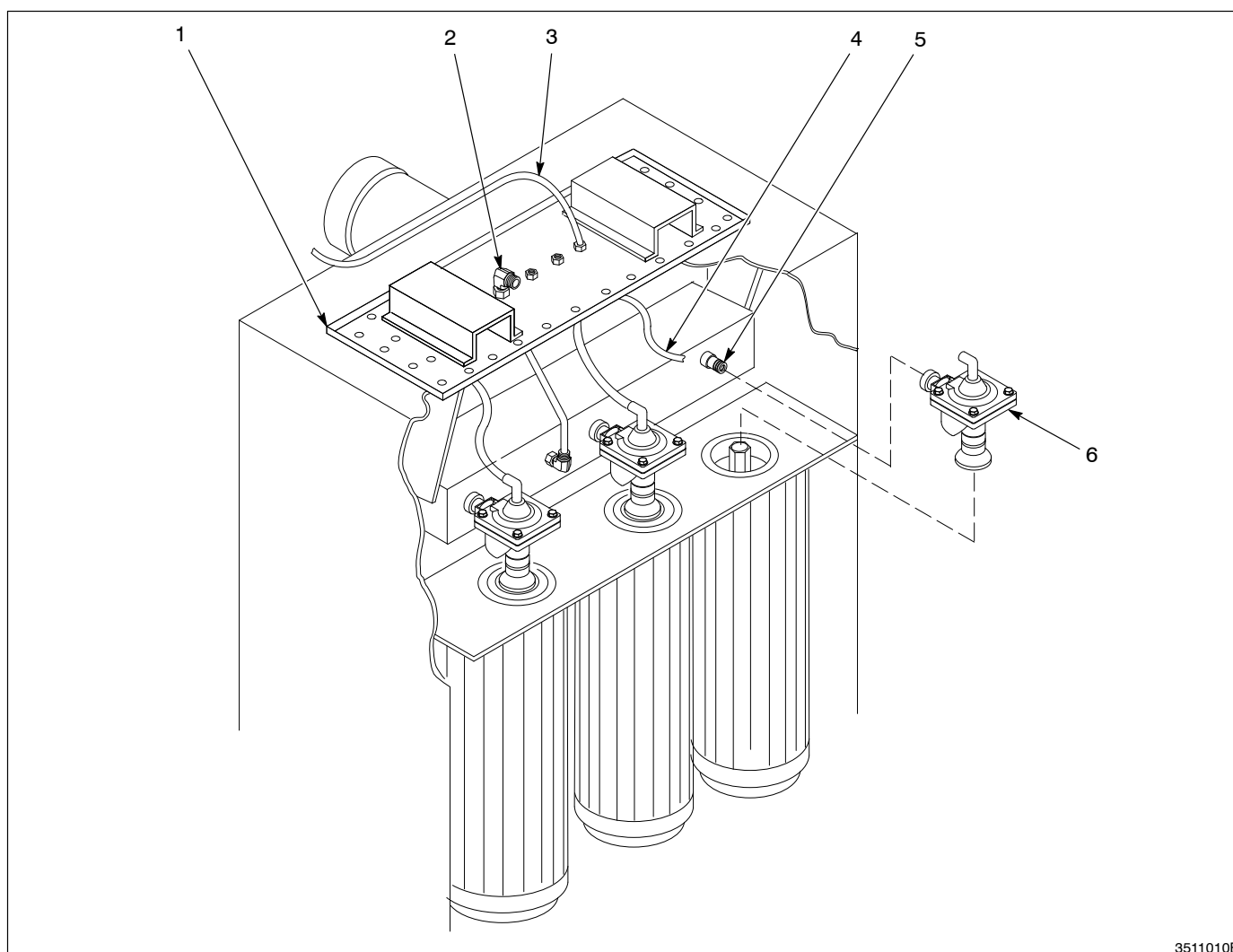
**NOTE:** There are two styles of pulse valves available. The old style has a long, cast tube (in place of a cartridge pulse nozzle) that forces air into the cartridge filters. The new style has a cartridge pulse nozzle that threads into the valve's 1-in. NPT outlet. These two styles are not interchangeable. In order for the pulse valves to line up with the cartridge filters, you must order the same pulse valves that your system is currently using. Refer to the *Parts* section for ordering information for each valve.

See Figure 7-3.

1. Disconnect the 12-mm tubing from the main air supply fitting (2) and 6-mm air tubing (3) from the fittings on the panel.
2. Remove the screws and washers from around the circumference of the valve panel (1).
3. Lift out the valve panel and disconnect the 6-mm air tubing (4) from the pulse valves (6).
4. Unscrew the valves from the manifold nipples (5).
5. Remove the tube fittings from the existing pulse valves. Wrap the fitting threads with PTFE tape and install them on the new pulse valves.

**NOTE:** If replacing new-style valves, remove the cartridge pulse nozzles from the existing pulse valves. Wrap the nozzle threads with PTFE tape and install them on the new pulse valves.

6. Wrap the manifold nipple threads with 2–3 layers of PTFE tape. Screw new pulse valves onto the nipples. Tighten the pulse valves, making sure that the valves are pointing straight down into the cartridge filters.
7. Connect the 6-mm air tubing to the tube fittings on the pulse valves.
8. Install the valve panel in the fan section and secure it with screws and washers. Connect the 12-mm tubing to the main air supply fitting (2) and the 6-mm air tubing to the valve panel manifold and valve fittings.



3511010B

Fig. 7-3 Pulse Valve Replacement (New Style Valve Shown)

- |                            |                    |                    |
|----------------------------|--------------------|--------------------|
| 1. Valve panel             | 3. 6-mm air tubing | 5. Manifold nipple |
| 2. Main air supply fitting | 4. 6-mm air tubing | 6. Pulse valves    |

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## 5. Fan and Motor Replacement

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**WARNING:** Risk of electric shock. Electrical troubleshooting and repair should be done by a qualified electrician.

Follow these steps to replace the fan and motor.

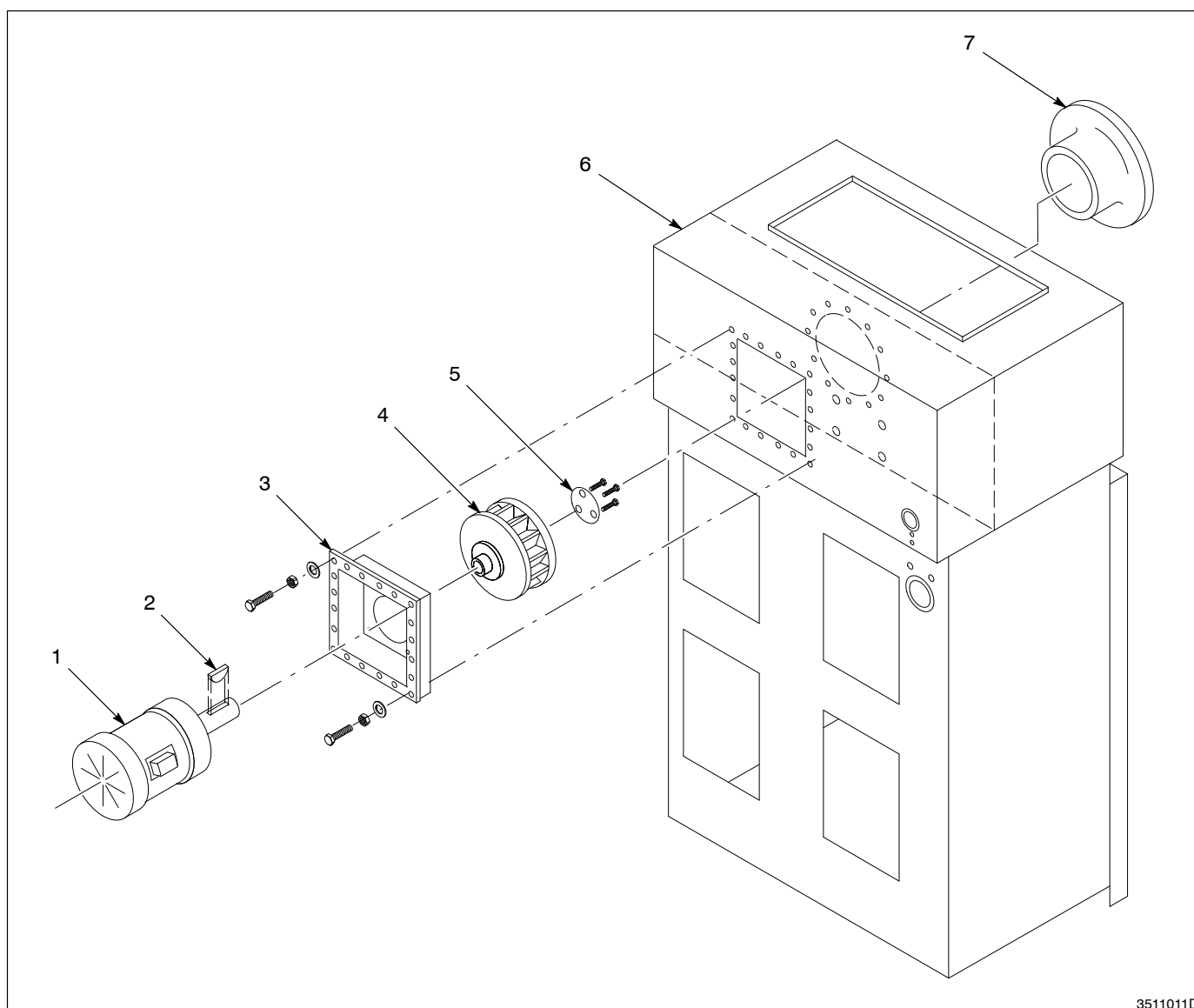
See Figure 7-4.

1. Remove the motor junction box cover. Tag and disconnect the input power wiring from the motor leads. Disconnect the flexible conduit from the junction box.



**WARNING:** Heavy equipment. Use a suitable lifting device or get help. One person cannot safely remove fan/motor assembly.

2. Remove the bolts securing the motor plate (3) to the fan/collector module (6).
3. Pull the motor and fan assembly straight out of the fan/collector module and carefully lower it to the floor. Be careful not to damage the fan wheel (4).
4. To remove the fan wheel from the motor shaft, remove the three set screws and the retainer plate (5) from the center of the open end of the fan wheel. Pull the fan wheel off the motor shaft. Save the shaft key (2) for reuse. The fan wheel must be keyed to the shaft.
5. Remove the four hex head screws, lock washers, and flat washers that secure the motor (1) to the motor plate.
6. Remove either the cartridge filters or pulse valve plate to gain access to the fan inlet cone (7). Remove the screws and washers that secure the fan inlet cone to the fan/collector module housing.
7. Assemble and install the fan/motor assembly and inlet cone by following steps 1–6 in reverse. Tighten the fan wheel set screws to 4.1 N•m (36.0 in.-lb).



3511011D

Fig. 7-4 Fan and Motor Replacement

- 1. Motor
- 2. Shaft key
- 3. Motor plate

- 4. Fan wheel
- 5. Retainer plate

- 6. Fan/collector module
- 7. Fan inlet cone





## *Section 8*

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# ***Parts***

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## Section 8

### Parts

#### 1. Introduction

To order parts, call the Nordson Customer Service Center or your local Nordson representative. Use this five-column parts list, and the accompanying illustration, to describe and locate parts correctly.

#### Using the Illustrated Parts List

Numbers in the Item column correspond to numbers that identify parts in illustrations following each parts list. The code NS (not shown) indicates that a listed part is not illustrated. A dash (—) is used when the part number applies to all parts in the illustration.

The number in the Part column is the Nordson Corporation part number. A series of dashes in this column (- - - - -) means the part cannot be ordered separately.

The Description column gives the part name, as well as its dimensions and other characteristics when appropriate. Indentions show the relationships between assemblies, subassemblies, and parts.

Item	Part	Description	Quantity	Note
—	0000000	Assembly	1	A
1	000000	• Subassembly	2	
2	000000	• • Part	1	

- If you order the assembly, items 1 and 2 will be included.
- If you order item 1, item 2 will be included.
- If you order item 2, you will receive item 2 only.

The number in the Quantity column is the quantity required per unit, assembly, or subassembly. The code AR (As Required) is used if the part number is a bulk item ordered in quantities or if the quantity per assembly depends on the product version or model.

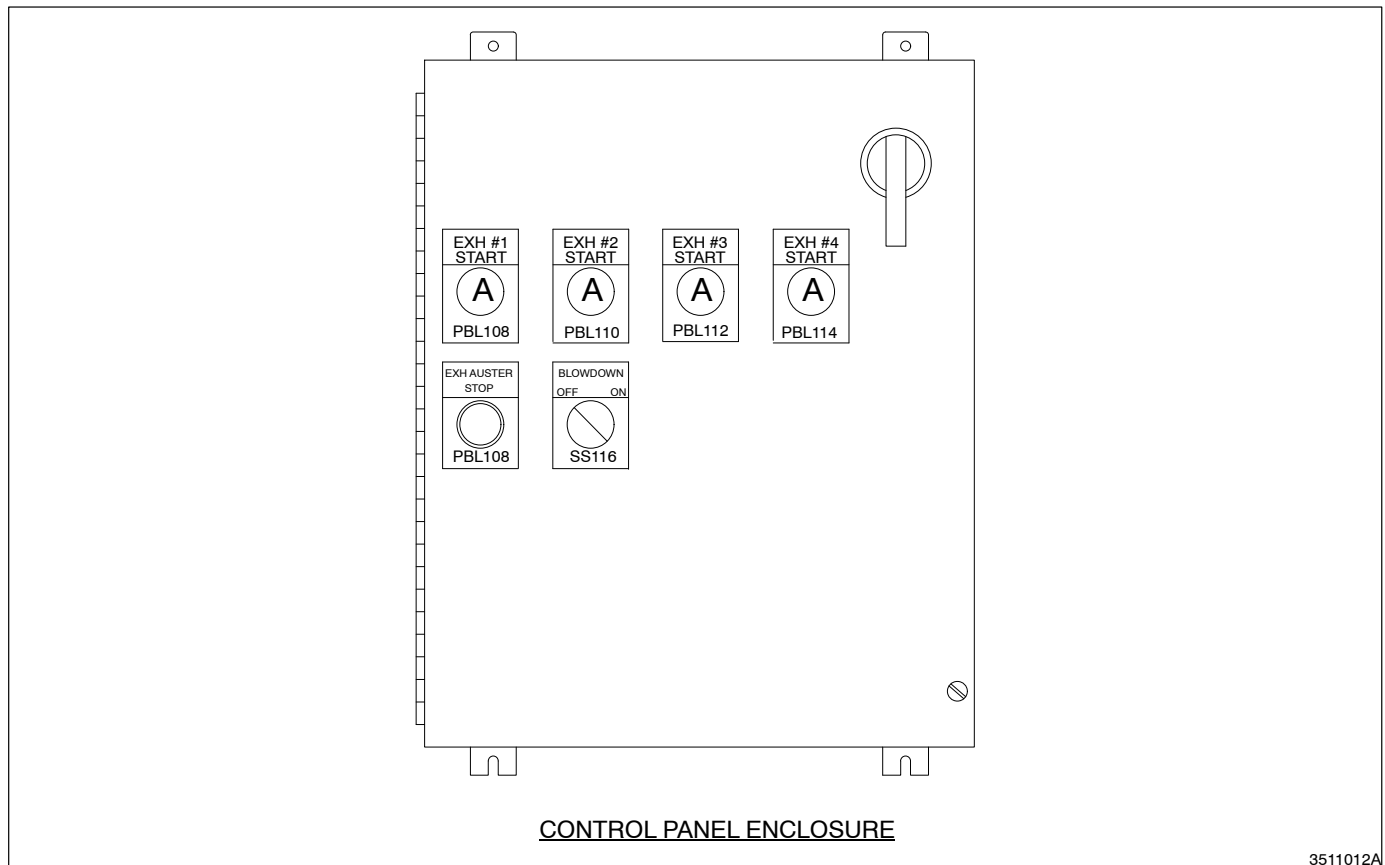
Letters in the Note column refer to notes at the end of each parts list. Notes contain important information about usage and ordering. Special attention should be given to notes.

**2. Control Panels**

See Figure 8-1.

Choose the proper number of starters that your panel will need based on how many fan/collector modules your booth uses.

Part	Description	Note
174742	Panel, control, Versa-Coat, 1 starter, 3400-cfm	
333477	Panel, control, Versa-Coat, 1 starter, 5100-cfm	
174743	Panel, control, Versa-Coat, 2 starters, 3400-cfm	
333478	Panel, control, Versa-Coat, 2 starters, 5100-cfm	
174744	Panel, control, Versa-Coat, 3 starters, 3400-cfm	
176193	Panel, control, Versa-Coat, 4 starters, 3400-cfm	



3511012A

Fig. 8-1 Control Panel (Four Starter Version Shown)

### 3. Control Panel/Solenoid Enclosure Parts

Use the following charts to order replacement parts for the control panel.

#### 3400-cfm Control Panel

Refer to Tables 8-1 and 8-2 for cross references listed in the Part column of the following chart.

See Figure 8-2.

Item	Part	Manufacturer	Description	Quantity
DISC100	OETLNF60	AAB	Disconnect switch	1
DISC100	OETLZX47	AAB	Disconnect handle	1
T104	Refer to Table 8-1	ACME	Transformer	1
M108, M110, M112, M114	C320KGS4	Cutler-Hammer	Auxiliary contact	AR
M108, M110, M112, M114	Refer to Table 8-1	Cutler-Hammer	Contactor	AR
OL108, OL110, OL112, OL114	Refer to Table 8-1	Cutler-Hammer	Overload relay	AR
FU108, FU110, FU112, FU114	R6J30-A3B	Marathon	Fuse block	AR
FU106	BC6031PQ	Bussmann	Fuse block	1
FU103	BC6032PQ	Bussmann	Fuse block	1
FU108, FU110, FU112, FU114	Refer to Table 8-1	Bussmann	Fuse	AR
FU106	FNQ-R-5	Bussmann	Fuse	1
FU103	Refer to Table 8-1	Bussmann	Fuse	2
PB/L T108A, 110, 112, 114	E22TB9X8W	Cutler-Hammer	Illuminated pushbutton	AR
PB108	E22EB2B	Cutler-Hammer	Pushbutton, red	1
SS116	E22XB51W	Cutler-Hammer	Selector switch	1
TB	EF1	E.M.M.	Terminal block	14
PS108, PS110, PS112, PS114	1910-5	Dwyer	Pressure switch	AR
PS108, PS110, PS112, PS114	KQE06-00	SMC	Bulkhead union	AR
PS108, PS110, PS112, PS114	KQE06-02	SMC	Bulkhead connector	AR
PS108, PS110, PS112, PS114	KQL06-01S	SMC	Male elbow	AR
PS108, PS110, PS112, PS114	F28	ALWITCO	Breather vent	AR
BS117, BS119, BS121, BS123	RCA-3D2	Goyen	Pulse solenoid, qty 3	AR
TR116	Refer to Table 8-2	N. C. C.	Pulse timer board	1
BS117, BS119, BS121, BS123	KQH06-01S	SMC	Male connector	AR
AR: As Required. Quantity needed is dependent on controller configuration.				

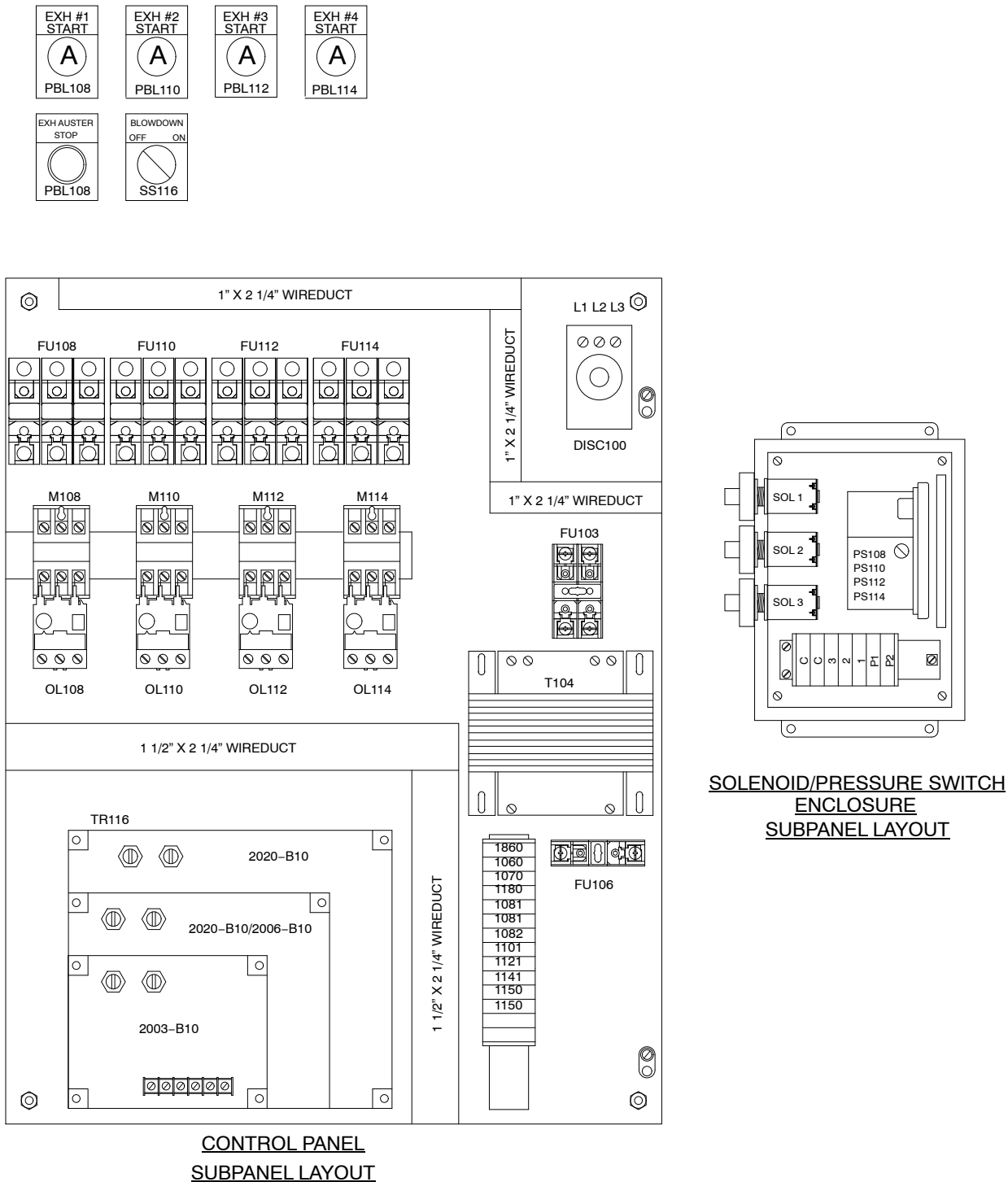
**3400-cfm Control Panel** (contd)

Table 8-1 Electrical Enclosure Parts Cross Reference

Item	208 Vac	230 Vac	380 Vac	460 Vac	575 Vac
FU103	FNQ-R-6	FNQ-R-5	FNQ-R-3	FNQ-R-2 1/2	FNQ-R-2
M108, 110, 112, 114	CE15DNS3AB	CE15DNS3AB	CE15CNS3AB	CE15BNS3AB	CE15ANS3AB
OL108, 110, 112, 114	C316FNA3R	C316FNA3R	C316FNA3P	C316FNA3P	C316FNA3M
FU108, 110, 112, 114	LPJ-30-SP	LPJ-25-SP	LPJ-17.5-SP	LPJ-15-SP	LPJ-12-SP
T104	TA-2-81307	TA-2-81005	TA-2-81307	TA-2-81005	TA-2-81005

Table 8-2 Pulse Timer Board Cross Reference

Item	1 Starter	2 Starters	3 Starters	4 Starters
TR116	DNCT2003B10	DNCT2006B10	DNCT2010B10	DNCT2020B10



3511013A

Fig. 8-2 3400-cfm Control Panel Parts (Four Starter Version Shown)

**5100-cfm Control Panel**

Refer to Tables 8-3 and 8-4 for cross references listed in the Part column of the following chart.

See Figure 8-3.

Item	Part	Manufacturer	Description	Quantity
DISC100	OT100ES	AAB	Disconnect switch	1
DISC100	OHB65J5	AAB	Disconnect handle	1
T104	Refer to Table 8-3	ACME	Transformer	1
M108, M110	C320KGS4	Cutler-Hammer	Auxiliary contact	AR
M108, M110	Refer to Table 8-3	Cutler-Hammer	Contactor	AR
OL108, OL110	Refer to Table 8-3	Cutler-Hammer	Overload relay	AR
FU108, FU110	R6J30A3B	Marathon	Fuse block	AR
FU106	BC6031PQ	Bussmann	Fuse block	1
FU103	BC6032PQ	Bussmann	Fuse block	1
FU108, FU110	Refer to Table 8-3	Bussmann	Fuse	AR
FU106	FNQ-R-5	Bussmann	Fuse	1
FU103	Refer to Table 8-3	Bussmann	Fuse	2
PB/L T108A, 110	E22TB9X8W	Cutler-Hammer	Illuminated pushbutton	AR
PB108	E22EB2B	Cutler-Hammer	Pushbutton, red	1
SS116	E22XB51W	Cutler-Hammer	Selector switch	1
TB	EF1	E.M.M.	Terminal block	14
PS108, PS110	1910-5	Dwyer	Pressure switch	AR
PS108, PS110	KQE06-00	SMC	Bulkhead union	AR
PS108, PS110	KQE06-02	SMC	Bulkhead connector	AR
PS108, PS110	KQL06-01S	SMC	Male elbow	AR
PS108, PS110	F28	ALWITCO	Breather vent	AR
BS117, BS119	RCA-3D2	Goyen	Pulse solenoid, qty 3	AR
TR116	Refer to Table 8-4	N. C. C.	Pulse timer board	1
BS117, BS119	KQH06-01S	SMC	Male connector	AR
AR: As Required. Quantity needed is dependent on controller configuration.				



Table 8-3 Electrical Enclosure Parts Cross Reference

Item	208 Vac	230 Vac	380 Vac	460 Vac	575 Vac
FU103	FNQ-R-6	FNQ-R-5	FNQ-R-3	FNQ-R-2.5	FNQ-R-2
M108, 110	CE15HNS3AB	CE15FNS3AB	CE15ENS3AB	CE15DNS3AB	CE15CNS3AB
OL108, 110	C316KNA3R	C316FNA3T	C316FNA3S	C316FNA3R	C316FNA3Q
FU108, 110	LPJ60SP	LPJ50SP	LPJ30SP	LPJ25SP	LPJ20SP
T104	TA-2-81307	TA-2-81005	TA-2-81307	TA-2-81005	TA-2-81005

Table 8-4 Pulse Timer Board Cross Reference

Item	1 Starter	2 Starters
TR116	DNC-T2003-B10	DNC-T2006-B10

### 5100-cfm Control Panel (contd)



Fig. 8-3 5100-cfm Control Panel Parts (Two-Starter Version Shown)

**4. Fan/Collector Module**

See Figures 8-4 and 8-5.

Item	Part	Description	Quantity	Note
—	176194	Module, fan/collector, 5 hp, Versa-Coat, 3400-cfm	1	
—	333475	Module, fan/collector, 10 hp, Versa-Coat, 5100-cfm	1	
1	-----	• Housing, fan, Versa-Coat	1	
2	188252	• Manifold, air, Versa-Coat	1	
3	981315	• Screw, hex head, $\frac{5}{16}$ -18 x 1.00 in., cap, zinc	130	
4	983150	• Washer, lock, e, split, $\frac{5}{16}$ in., steel, nickel	130	
5	983051	• Washer, flat, e, 0.344 x 0.688 x 0.065 in., zinc	130	
NS	984140	• Nut, hex, $\frac{5}{16}$ -18, steel, zinc	26	
6	981408	• Screw, hex, $\frac{3}{8}$ -16 x 1.25 in., cap, zinc	8	
7	983061	• Washer, flat, e, 0.406 x 0.812 x 0.065 in., zinc	8	
NS	983160	• Washer, lock, e, split, $\frac{3}{8}$ in., steel, nickel	8	
NS	984163	• Nut, hex, $\frac{3}{8}$ -16, steel, zinc	8	
8	972240	• Elbow, male, 12 mm tube x $\frac{1}{2}$ universal	2	
9	971778	• Union, adjustable, #4 SAE, 0.093 in. through hole	7	
10	188251	• Cover, manifold, Versa-Coat	1	
11	900586	• Tubing, polyethylene, 6 x 4 mm, blue	AR	
12	-----	• Nipple, pipe, 1 in. NPT x 2.5 in., sched 40	3	
13	972126	• Elbow, male, 6 mm tube, x $\frac{1}{8}$ universal	3	
14	174824	• Valve, pulse, 1 in. NPT in, cast tube out	3	A
14	174710	• Valve, pulse, 1 in. NPT in, 1 in. NPT out	3	A, B
15	165726	• Nozzle, cartridge pulse	3	B
16	147162	• Filter, 26, high efficiency, flow through	3	C
17	147163	• Filter, 26, high efficiency, closed end	3	C
18	-----	• Screw, hex head, #10-24 x 1.25 in.	3	
19	983123	• Washer, flat, e, 0.219 x 0.500 x 0.049 in., zinc	3	
20	165705	• Plate, pusher, filter	3	

NOTE A: These pulse valves are not interchangeable. Order the pulse valves that look identical to those that are already in your booth.

B: The cartridge pulse nozzle only is used with the 1-in. NPT out pulse valve, part 174710.

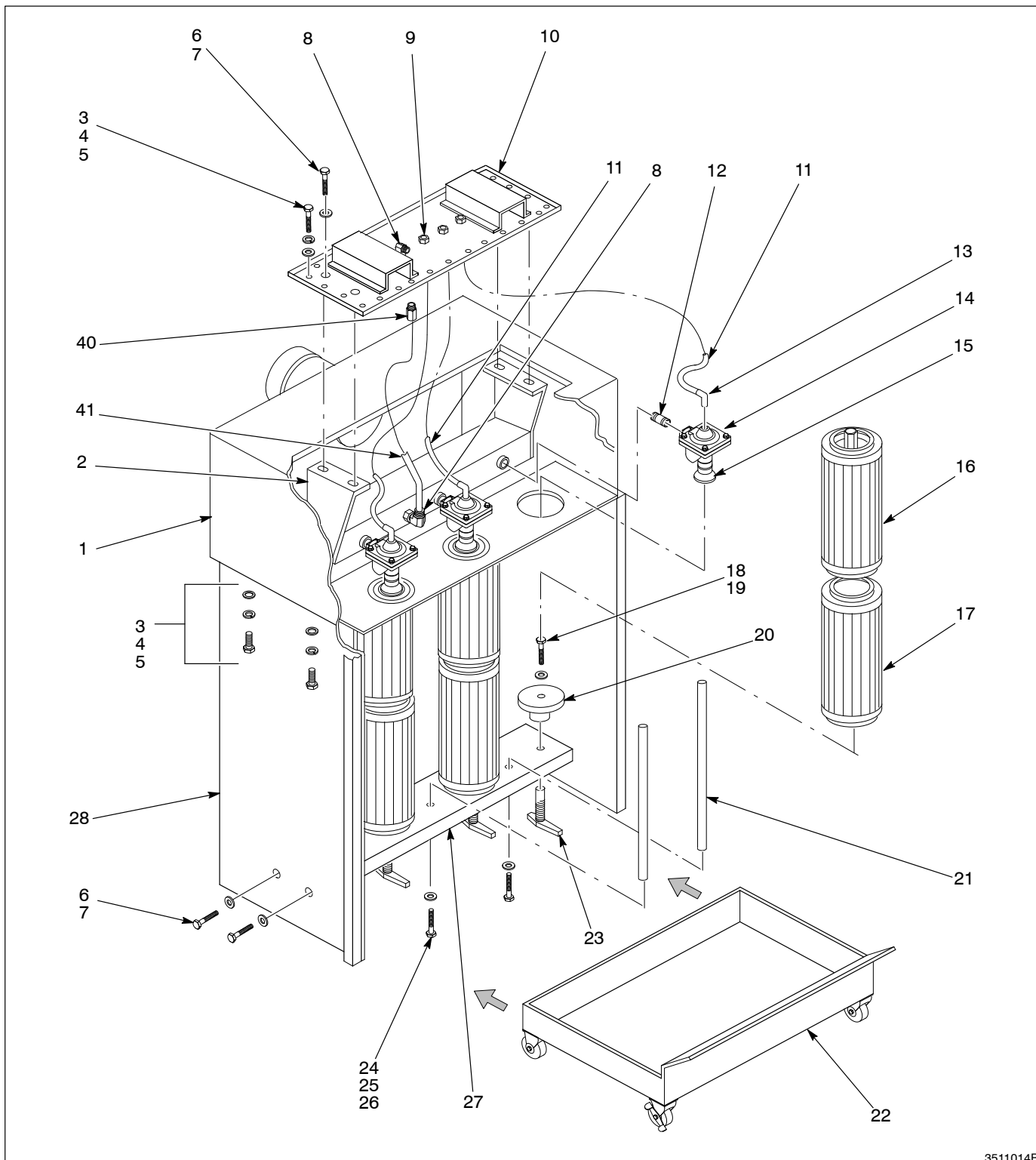
C: Standard cartridge filters. Refer to *Optional Cartridge Filters* for additional filters.

AR: As Required

NS: Not Shown

*Continued on next page*

#### 4. Fan/Collector Module (contd)



3511014B

Fig. 8-4 Fan/Collector Module (Sheet 1 of 2)

Item	Part	Description	Quantity	Note
21	188249	• Spacer, rod, Versa-Coat	2	
22	176246	• Tray, Versa-Coat, with casters	1	
23	165706	• Handle assembly with rod	3	
24	981611	• Screw, hex, 1/2-13 x 1.00 in., cap, zinc	8	
25	983180	• Washer, lock, split, e, 1/2 in., steel, nickel	8	
26	983007	• Washer, flat, e, 0.531 x 1.00 x 0.063 in., zinc	8	
27	188247	• Rail, cartridge mount, Versa-Coat	1	
28	-----	• Housing, cartridge, Versa-Coat	1	
NS	174715	• Sound deadening sheet, 54 x 108 x 1 in.	1	
29	174734	• Motor, fan, 5 hp, 230/460 V 0.3450 rpm	1	D, E
29	333474	• Motor, fan, 208-230/460 TEFC, 10 hp	1	F
30	188253	• Plate, motor mount, Versa-Coat	1	
31	174733	• Wheel, fan, size 1350	1	D
31	333472	• Wheel, fan, size 1500	1	F
32	188254	• Bracket, lift channel, Versa-Coat	2	
33	174732	• Cone, inlet, fan, 72%, size 1350, 1 1/8 in.	1	D
33	333473	• Cone, inlet, fan, 72%, size 1500	1	F
34	176331	• Gauge, minihelic, 0–10 in., 2–5010	1	
35	183988	• Gauge, minihelic, 0–5 in. scale	1	
36	101432	• Filter, final, 500 series	AR	
37	176358	• Clamp, final filter	6	
38	189603	• Box, solenoid enclosure	1	
39	972141	• Connector, male, 6 mm tube x 1/8 in.	3	
40	971106	• Connector, male, 12 mm tube x 1/2 universal	1	
41	900613	• Tubing, polyethylene, 12 x 9.5 mm, blue	AR	
42	333470	• Plate, adapter, 5100 cfm	1	F
NS	244700	• Assembly, air purge, Versa-Coat	1	G
NS	333526	Receptacle, plug, 15 A, 125 V	1	

NOTE D: Use these parts with 3400-cfm booths.

E: Refer to *Optional Motor* for a higher-voltage fan motor.

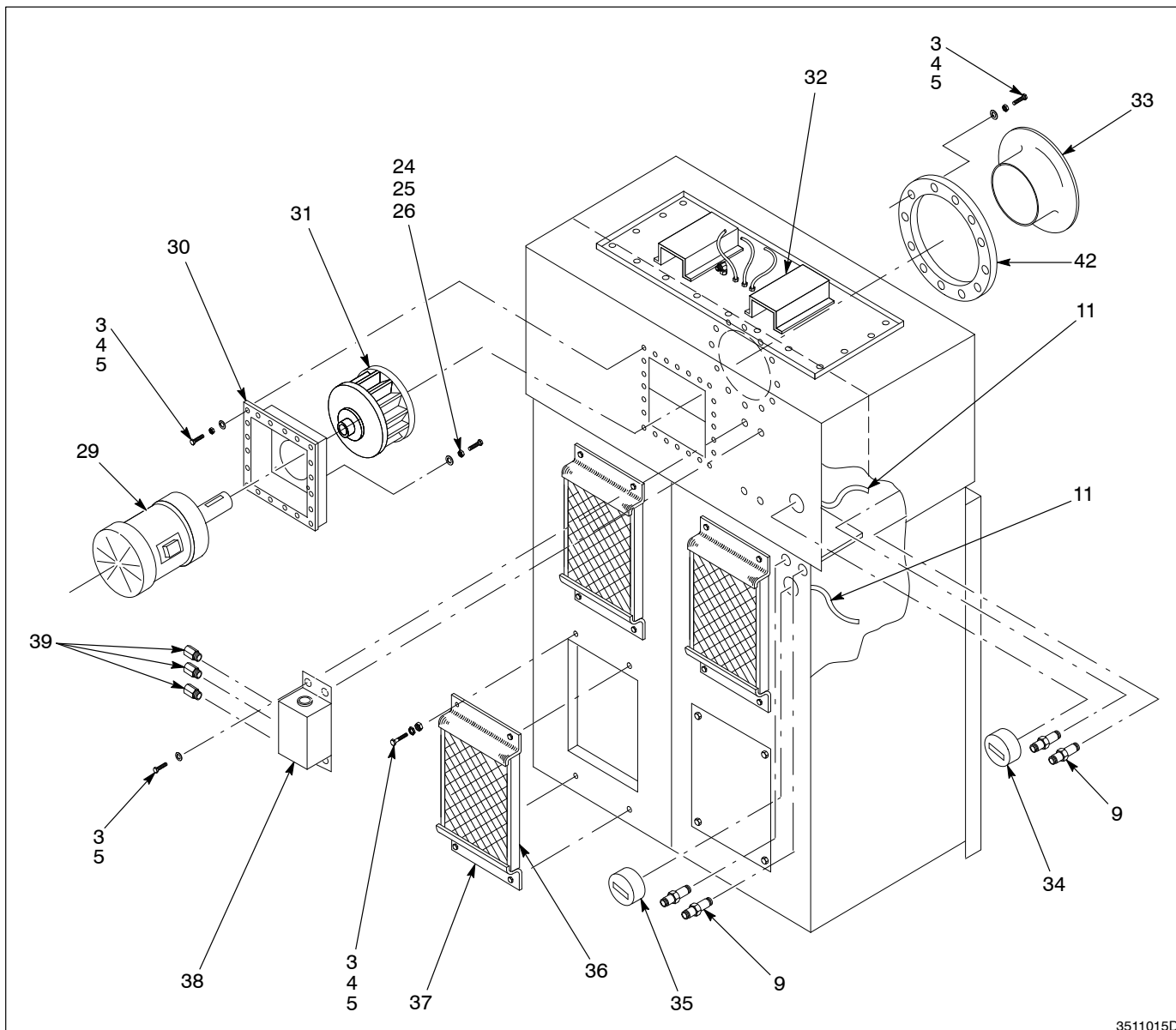
F: Use these parts with 5100-cfm booths.

G: The air purge assembly, part 244700, consists of pneumatic components shipped with the module.

AR: As Required

NS: Not Shown

#### 4. Fan/Collector Module (contd)



3511015D

Fig. 8-5 Fan/Collector Module (Sheet 2 of 2)

**Optional Cartridge Filters**

The following cartridge filters are optional accessories for use with your fan/collector module.

See Figure 8-4.

**NOTE:** Do not mix filter types. Use either six PowderGrid or six heavy duty cartridge filters in each fan/collector module.

Item	Part	Description	Quantity	Note
16	146418	Filter, 26, PowderGrid, flow through	1	
17	146416	Filter, 26, PowderGrid, closed end	1	
16	180773	Filter, 26, heavy duty, flow through	1	
17	180774	Filter, 26, heavy duty, closed end	1	

**Optional Motor**

The following optional motor is available for use in a 3400-cfm fan/collector module.

See Figure 8-5.

Item	Part	Description	Quantity	Note
29	184012	Motor, fan, 5 hp, 575 V/3/60, 4.5 amp, 3450 rpm	1	

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**5. Batch Booth Parts**


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The following parts lists outline the parts that are specific to Versa-Coat batch booths.

**Wall Panels**

Use the following list to order replacement wall panels.

<b>Galvanized Part</b>	<b>Stainless Part</b>	<b>Dimensions</b>
179190	179167	60 x 12 in.
179191	179168	60 x 18 in.
179192	179169	60 x 24 in.
179193	179170	60 x 30 in.
179183	179160	84 x 18 in.
179184	179161	84 x 30 in.
179185	179162	96 x 6 in.
179186	179163	96 x 24 in.
179187	179164	96 x 30 in.
179188	179165	108 x 24 in.
179189	179166	108 x 30 in.
179194	179171	120 x 12 in.
179195	179172	120 x 30 in.

**Roof Panels**

Use the following list to order replacement roof panels.

<b>Galvanized Part</b>	<b>Stainless Part</b>	<b>Dimensions</b>
179196	179173	60 x 30 in.
179197	179174	72 x 30 in.
179198	179175	84 x 30 in.
179199	179176	96 x 30 in.
179200	179177	108 x 30 in.
179201	179178	120 x 30 in.



**Brackets**

Use the following list to order replacement brackets.

Galvanized Part	Stainless Part	Dimensions
340630	340629	30 in.
179203	176322	48 in.
179204	176323	60 in.
179205	176324	72 in.
179206	176325	84 in.

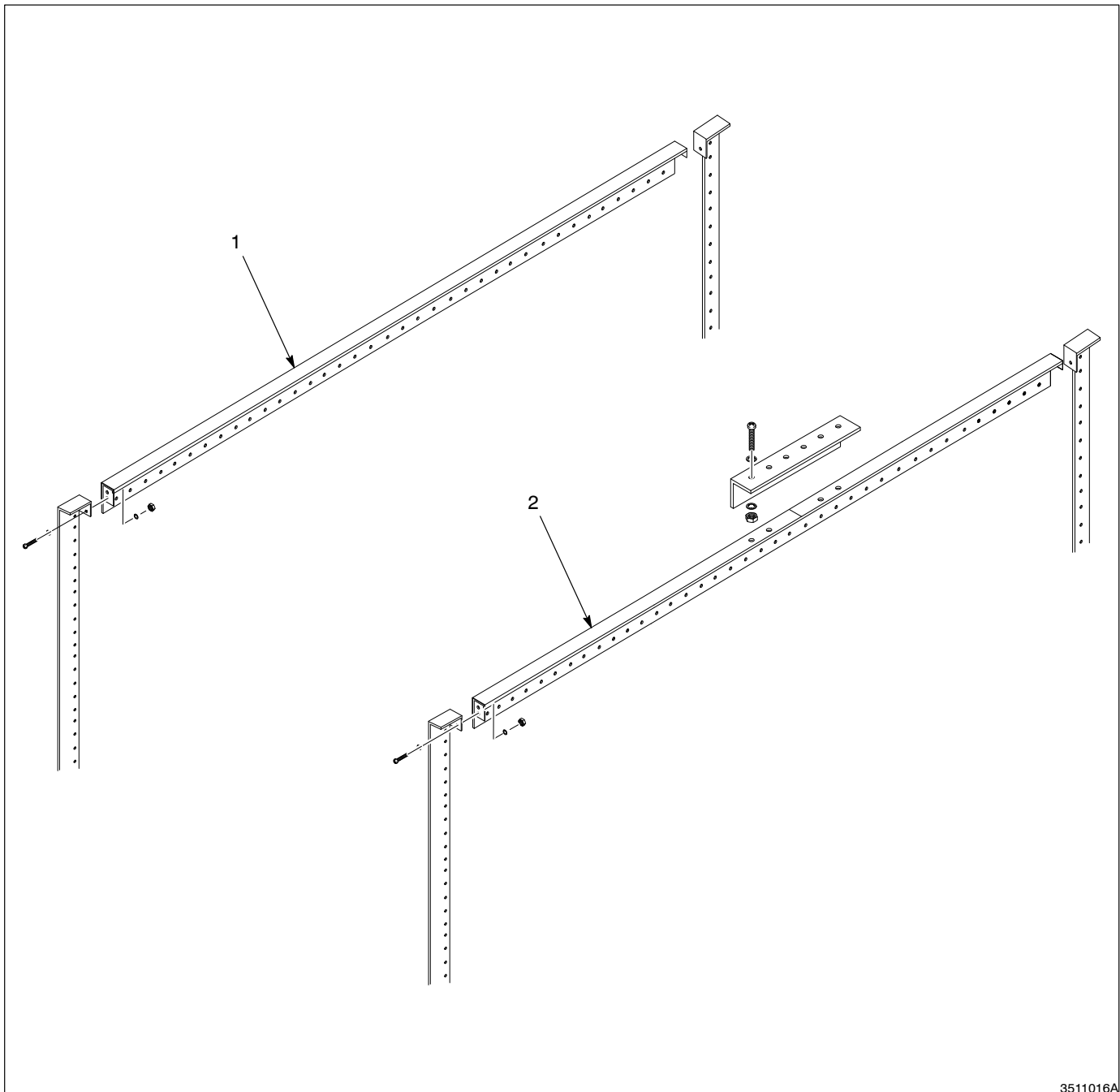
**Roof Supports**

Each batch booth roof support assembly consists of two vertical legs and one horizontal rail.

See Figure 8-6.

Item	Galvanized Part	Stainless Part	Dimensions
1	179207	176316	84 x 108 in.
1	333483	333484	96 x 120 in.
1	333479	333480	96 x 168 in.
1	333481	333482	108 x 144 in.
2	179209	176318	96 x 144 in.
2	179210	176319	96 x 180 in.
2	179211	176320	108 x 169 in.
2	179212	176321	120 x 120 in.
2	179208	176317	120 x 144 in.

**Roof Supports** *(contd)*



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Fig. 8-6 Batch Booth Roof Support Assemblies

## 6. 3400-cfm Conveyor Booth Parts

Contact your Nordson representative to order specific replacement parts for your Versa-Coat conveyor booth. Refer to the *Canopy Assembly* section to note your conveyor booth canopy's model, height, and material. Next, note the part's location, dimensions, and alphabetic code on your booth's assembly drawings and bill of materials.

### Roof Parts

The following parts are used on the various versions of the 3400-cfm Versa-Coat conveyor booths. Each conveyor booth uses two roof panels.

Part	Description	Note
176244	Panel, roof, poly, Versa-Coat, 28.5 x 63.0 in.	A
176245	Panel, roof, poly, Versa-Coat, 28.5 x 123.0 in.	B
174825	Support, roof, universal	B
NOTE A: This roof panel is used with conveyor booths, models CA–CF. B: These parts are used with conveyor booths, models CG–CM.		

## 7. Power Supply Mounting Brackets

The following optional brackets are used to mount an electrostatic power supply to an operator platform handrail, booth wall, or booth opening.

Item	Part	Description	Quantity	Note
NS	184077	Bracket, mounting, door, access, IPS	1	A
NS	184076	Bracket, accessory, IPS/EXP-100	AR	B
NS	174799	Bracket, mounting, IPS, handrail mount	1	C
NS	288828	Bracket, mounting, Sure Coat, rail mount	1	C
NS	288834	Bracket, mounting, Sure Coat, wall mount	1	
NS	288844	Bracket, mounting, Sure Coat, table top	1	
<p>NOTE A: Bracket used on batch booths. Allows operator to see and adjust gun settings from inside the booth.</p> <p>B: Use one bracket, part 184076, to mount a Versa-Spray IPS controller. Use two brackets to mount an EXP-100 electrostatic power unit.</p> <p>C: Bracket used to mount power supply to operator platform handrail.</p> <p>AR: As Required</p> <p>NS: Not Shown</p>				

## 8. Miscellaneous Accessories

Use the following list to order miscellaneous accessories for your Versa-Coat booth.

Part	Description	Note
180786	Squeegee, booth	
180787	Handle, fiberglass, squeegee	
211229	Service kit, caulk, clear, lexel	
224732	Kit, dryer/filter	

# ***Specifications***

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## Section 9 Specifications

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### 1. Introduction

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This section provides the technical information needed to operate the Versa-Coat booths.

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### 2. Operating Environment

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Versa-Coat booths perform best when operated in a proper environment and within certain design conditions. Talk to your Nordson representative if conditions within your plant do not meet these guidelines.

The powder coating system should be located in an area which maintains

- a temperature range of 21–27 °C (70–80 °F) and
- a relative humidity range of 45–55%.

If temperature and humidity in the spray area exceed these ranges, it may be necessary to install air conditioning equipment.

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### 3. Normal Design Conditions

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Make sure that the following design considerations are met before operating your Versa-Coat booth.

#### **Cross Drafts**

Air moving across the batch booth opening should not exceed the following specifications:

**Batch Booths:** 18.3 mpm (60 fpm)

**Conveyor Booths:** 24.4 mpm (80 fpm)

#### **Average Face Velocity**

Average face velocity should be 24.4–30.5 mpm (80–100 fpm) through all openings in the booth enclosure.

#### **Part Temperature**

Part temperature should not exceed 48 °C (120 °F).

## Powder

Nordson powder coating equipment is designed to operate with commercially available powders. The characteristics of a powder coating material can affect system operation. Powder coatings generally have an average particle size of 25–35 microns with no more than 10% of the total being less than 10 microns (fines). When the percentage of fines reaches 10% of the total, blinding or plugging of the cartridge filter media can occur.

## Cartridge Filters

Each fan/collector module uses six cartridge filters. Cartridge filters are considered to be a wear item in a powder coating system. The life expectancy of a cartridge filter is dependent on many variables, including type of powder used; particle size distribution; humidity and temperature in the spray area; number of hours in operation; dew point and cleanliness of the system compressed air supply; frequency of cartridge cleaning; and total pulse air pressure.

Refer to *Optional Cartridge Filters* in the *Parts* section for additional filters available for Versa-Coat booths.

## 4. Compressed Air

The compressed air volume requirement for the batch booth is 5 cfm @ 7 bar (100 psi).

Refer to Table 9-1 for the required components required to achieve the necessary compressed air requirements. An air purge regulator assembly is shipped with the booth. Components not included with the air purge regulator assembly are customer-supplied.

Table 9-1 Compressed Air Requirements

Component	Requirements
<b>Air supply line (customer-supplied)</b>	The air supply line to the booth should be a minimum of 12.7 mm (0.5 in.) ID.
<b>Desiccant-type air dryer (customer-supplied)</b>	The dedicated refrigerated or regenerative desiccant-type air dryer must be capable of a maximum pressure dewpoint of 3 °C (38 °F) @ 7 bar (100 psi).
<b>Shutoff valve (customer-supplied)</b>	Use a shutoff valve with lockout capability ahead of any of the system devices.
<b>Air regulator</b>	Compressed air must be regulated to 4–7 bar (60–100 psi).
<b>Air filter</b>	Use a 0.3-micron coalescent-type compressed air filter to prevent oil and water from contaminating the powder supply and damaging the cartridge filters.



## 5. Workpiece Clearance

The clearances around workpieces inside of the booth should be as follows:

- Top: At least 0.6 m (2 ft); more if the top of the workpiece will also be coated
- Sides: 0.6 m (2 ft) if operator sprays from front of the booth or operator opening
- 1.2 m (4 ft) if operator must enter a batch booth to coat other surfaces

## 6. Primary Electrical Services

Use a fused disconnect switch for the primary electrical service to the booth.

### 3400-cfm Booths

Use the following chart to calculate service requirements for a 3400-cfm booth.

Voltage Ratings							
	208 Vac	230 Vac	380 Vac	460 Vac	575 Vac	X Quantity	= Subtotal
5 hp Motor	17 amps	16 amps	10 amps	8 amps	7 amps		
Transformer	3 amps	3 amps	2 amps	2 amps	1 amp		
Total =							amps

### 5100-cfm Booths

Use the following chart to calculate service requirements for a 5100-cfm booth.

Voltage Ratings							
	208 Vac	230 Vac	380 Vac	460 Vac	575 Vac	X Quantity	= Subtotal
10 hp Motor	32.2 amps	28.0 amps	19.6 amps	14.0 amps	11.0 amps		
Transformer	2.4 amps	2.1 amps	1.3 amps	1.0 amp	0.8 amp		
Total =							amps

