

Vantage[®] FCM Booth

Customer Product Manual
Part 1051183A

Issued 6/04

**For parts and technical support, call the Industrial Coating
Systems Customer Support Center at (800) 433-9319 or
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Obsolete

Contact Us

Nordson Corporation welcomes requests for information, comments, and inquiries about its products. General information about Nordson can be found on the Internet using the following address:
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Vantage FCM Booth

Safety

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.

Qualified Personnel

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.

Intended Use

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

Regulations and Approvals

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.

Personal Safety

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.

Fire Safety

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.

Grounding



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.

Grounding inside and around the booth openings must comply with NFPA requirements for Class 2, Division 1 or 2 Hazardous Locations. Refer to 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.
- 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.

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.

Disposal

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

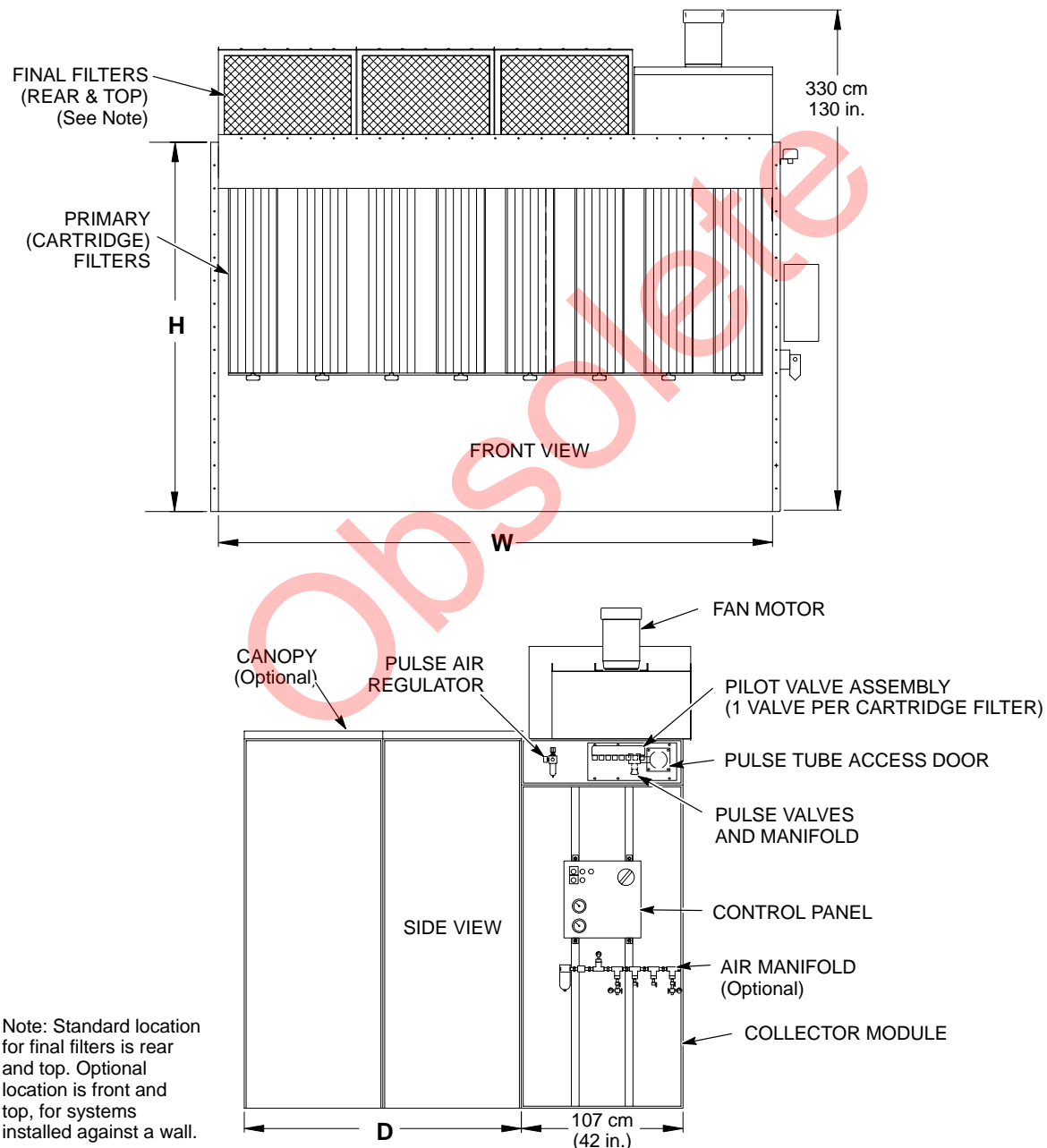
Description

The Vantage FCM Booth is a configurable powder coating booth for spray-to-waste operations. It consists of a collector module and optional canopy.

The collector module consists of a three-sided filter enclosure, fan module, primary and final filters, pulse valves, and controls.

The module is available in three widths and four airflow capacities. Standard modules have the final filters mounted on the rear and top of the module. Modules can also be ordered with the final filters mounted on the front and top.

Optional canopies are available. The booth is assembled in the customer's plant and bolted to the plant floor.



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Figure 1 Vantage FCM Booth Components and Dimensions (9600 CFM Booth Shown)

Versions

See Figure 1 and Table 1. The Vantage FCM Booth collector module is available in three widths and four airflow capacities:

Table 1 Vantage FCM Collector Module Versions and Specifications

Specification	Air Flow (CFM)			
	5300	6400	7200	9600
Filter Enclosure Width (ID, in feet)	6	6	9	12
Number of Primary Filters	4	4	6	8
Number of Final Filters	2	2	4	6
Air Input Port (NPT)	1/2-in.	1/2-in.	1/2-in.	1/2-in.
Air Consumption at 100 psi (SCFM)	15	15	20	25
Fan Motor Horsepower	5	7.5	7.5	10
Fan Motor RPM	1750	1750	1750	1750
Fan Motor Electrical Requirement (Volts/Hz/Amps)	208/60/17 230/60/15 380/60/12 460/50/7.5 575/60/7	208/60/24.5 230/60/22 380/60/16 460/60/11 575/60/9	208/60/32 230/60/27 380/60/18 460/60/14 575/60/11	208/60/46.5 230/60/38 380/60/30 460/60/19 575/60/17
Controls Electrical Requirement (Volts/Hz/Amps)	110/60/10	110/60/10	110/60/10	110/60/10

Optional Canopy Sizes

See Figure 1 and Table 2. The Vantage FCM Booth canopies are available in eight different sizes and are matched to one of the four collector modules:

Table 2 Optional Canopy Sizes (Inside Dimensions)

Collector Module	Canopy Size	
	W x H x D (feet)	W x H x D (meters)
5300	6 x 8 x 6	1.8 x 2.4 x 1.8
5300	6 x 8 x 9	1.8 x 2.4 x 2.7
6400	8 x 8 x 6	2.4 x 2.4 x 1.8
6400	8 x 8 x 9	2.4 x 2.4 x 2.7
7200	9 x 8 x 6	2.7 x 2.4 x 1.8
7200	9 x 8 x 9	2.7 x 2.4 x 2.7
9600	12 x 8 x 6	3.7 x 2.4 x 1.8
9600	12 x 8 x 9	3.7 x 2.4 x 2.7

Installation



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

Delivery

Perform the following tasks when the booth is delivered.

- Take inventory of all equipment. Make sure that you have all of the materials listed on the packing slip.
- Inspect each component for damage. Document any damage that you find and report it to both the carrier and your Nordson representative.
- Clear the area of all obstructions.
- Provide a secured, indoor storage area for equipment.
- Clear the route from the delivery site to the installation site. Make sure that there is sufficient clearance for all equipment.

Preparation

Perform the following tasks before installing the booth.

- Obtain any necessary local or state permits.
NOTE: Compliance with local, state, and national codes including NFPA Bulletin 33 and buyer's insurance is the responsibility of the buyer.
- Make sure that the installation area has a level, class-B floor.
- Make any building alterations to meet local, state, and national codes in the powder coating room.
- Install sprinkler heads as required by your insurance carrier or local, state, and national codes.
- Make sure that you have sufficient electrical service and compressed air available for both installation and operation at the installation site.

- Locate the booth in a proper environment. If temperature and humidity in the spray room exceed the following ranges, you should install air conditioning equipment.

Temperature 21-27 °C (70-80 °F)

Humidity 45-55% RH

- If applicable, install the conveyor. The conveyor and its hangers must be built and tested at the site before the booth is assembled.
- Provide trash bins and off-site disposal for refuse, skids, and crating.

Clearances

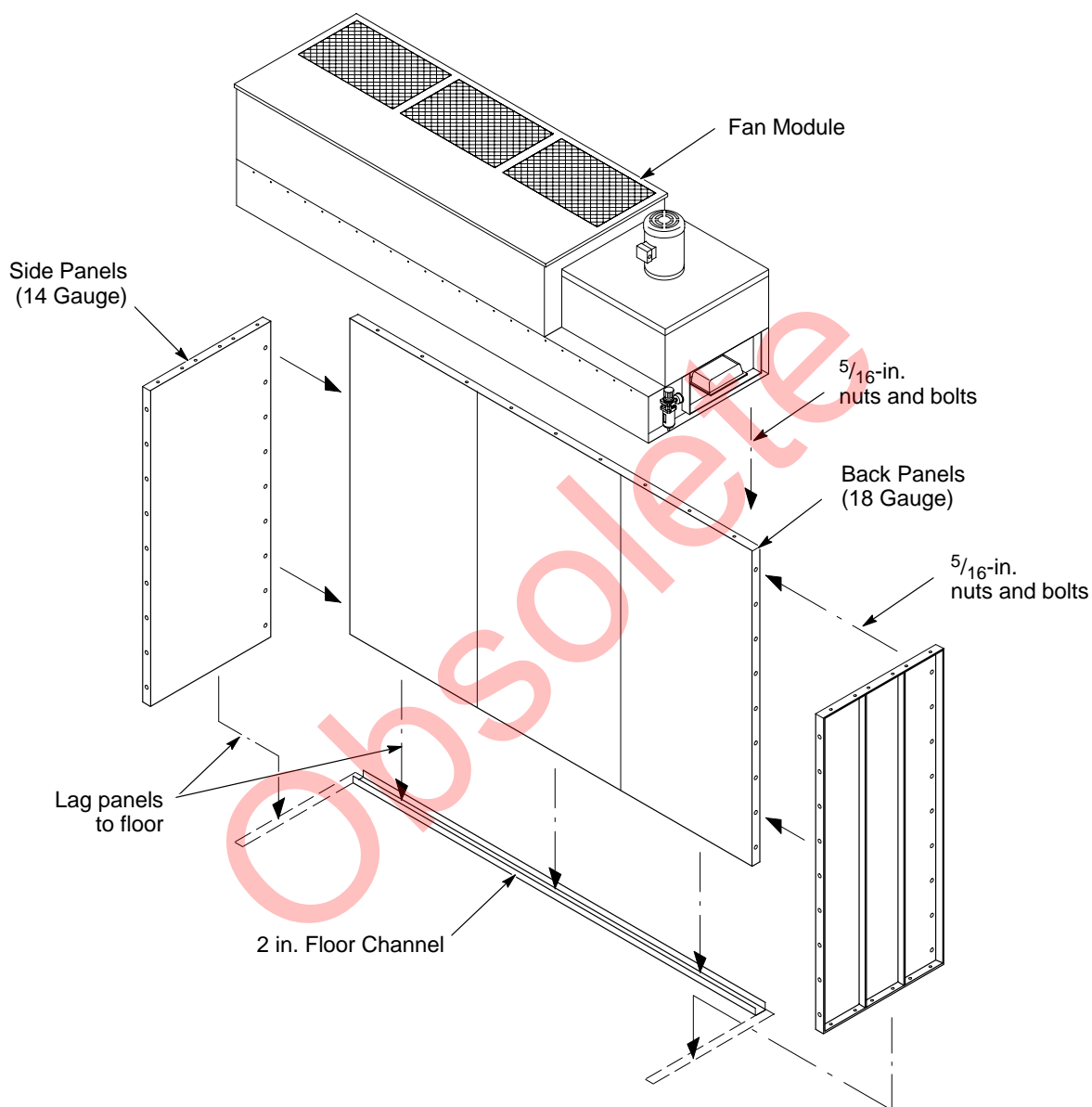
The installation area should have ample floor space for coating operations and service. There must be at least 1-m (3-ft) clearance between the final filters and any wall, roof, or other object to allow free air flow.

Mechanical Assembly

1. See Figure 2. Mark out the booth position on the floor.
2. Lay the 2-in. floor channel (6-, 9-, or 12-ft long) along the position of the back wall of the filter enclosure.
3. Assemble the filter enclosure side panels (42-in. wide, 14 gauge, with stiffeners) and back panels (36-in. wide, 18 gauge) with $\frac{5}{16}$ -in. nuts and bolts. Hand-tighten the fasteners.
4. Make sure the panels are straight, that the side panels are square with the back panels, and that the enclosure is sitting solidly on the floor in the correct position. Use shims if necessary.
5. Tighten the panel fasteners, then lag the enclosure to the floor to provide a stable base for the fan module.
6. Using an appropriate lifting device, carefully raise the fan module onto the filter enclosure. Attach the module to the enclosure with $\frac{5}{16}$ -in. nuts and bolts and tighten them securely. Do not remove the lifting device until assembly is complete.
7. See Figure 3. Mount the control panel, pilot valve assembly, and regulator on the appropriate side of the enclosure.

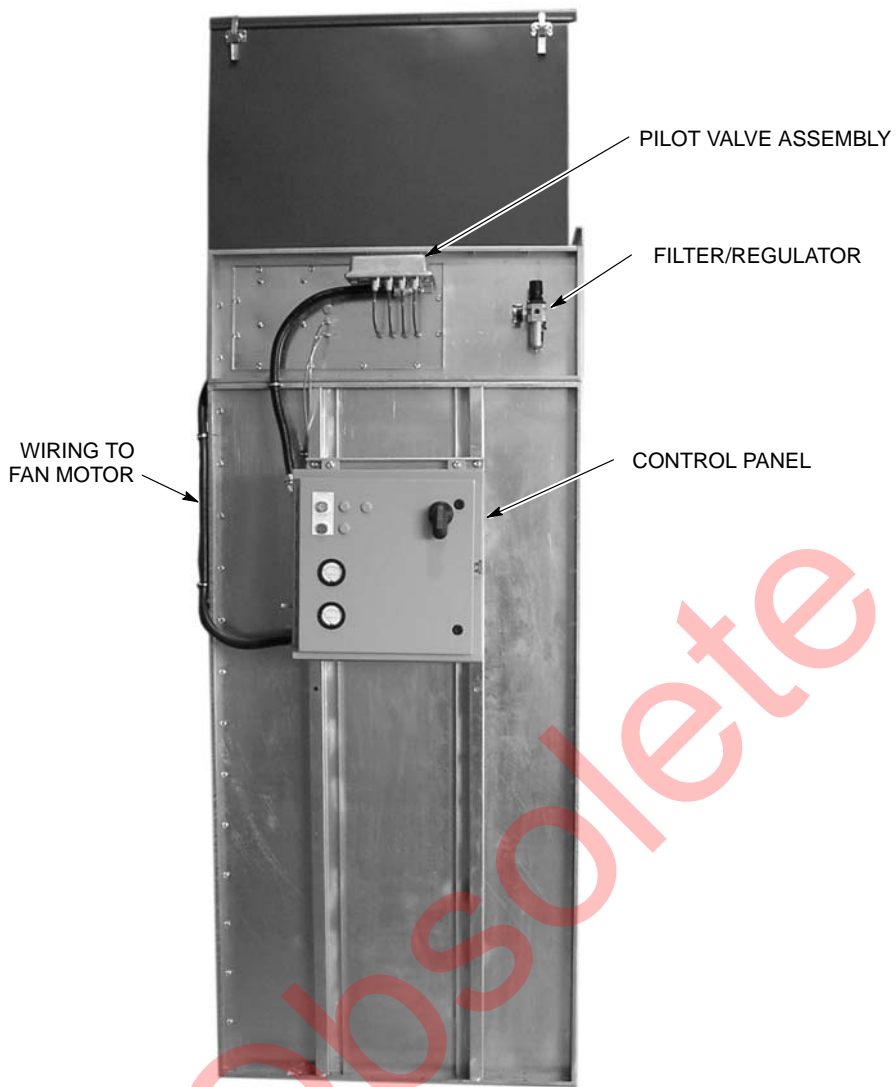
Mechanical Assembly (contd)

8. See Figure 7. Install the cartridge filter rods and filters as described in *Cartridge Filter Installation*. Attach the retainers to the bottom of the filters.
9. Attach canopy panels to the filter enclosure. Refer to Figures 4, 5, and 6 for canopy mounting hole patterns.



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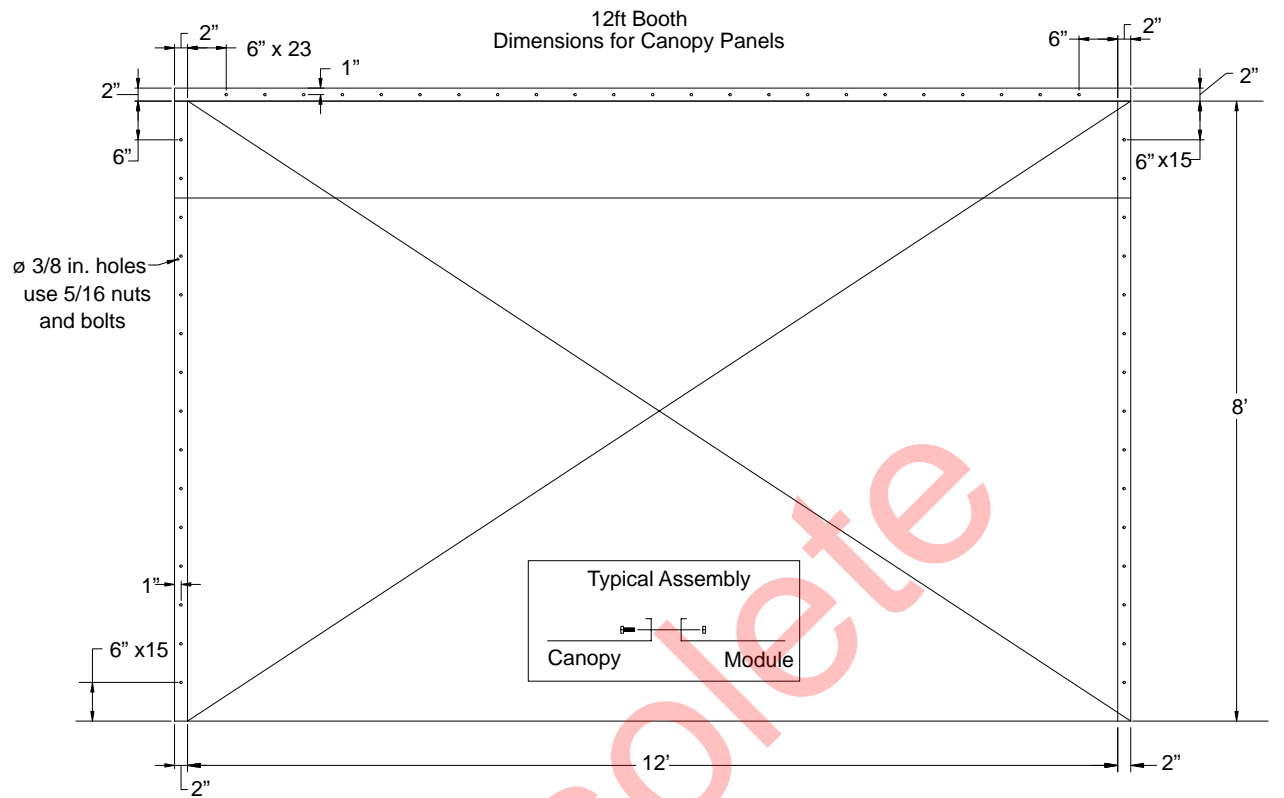
Figure 2 Booth Assembly



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Figure 3 Control Panel, Pilot Valve Assembly, and Filter/Regulator Installation (Left-Hand Orientation Shown)

Module to Canopy Mounting Dimensions



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Figure 4 12-Foot Module to Canopy Mounting Dimensions

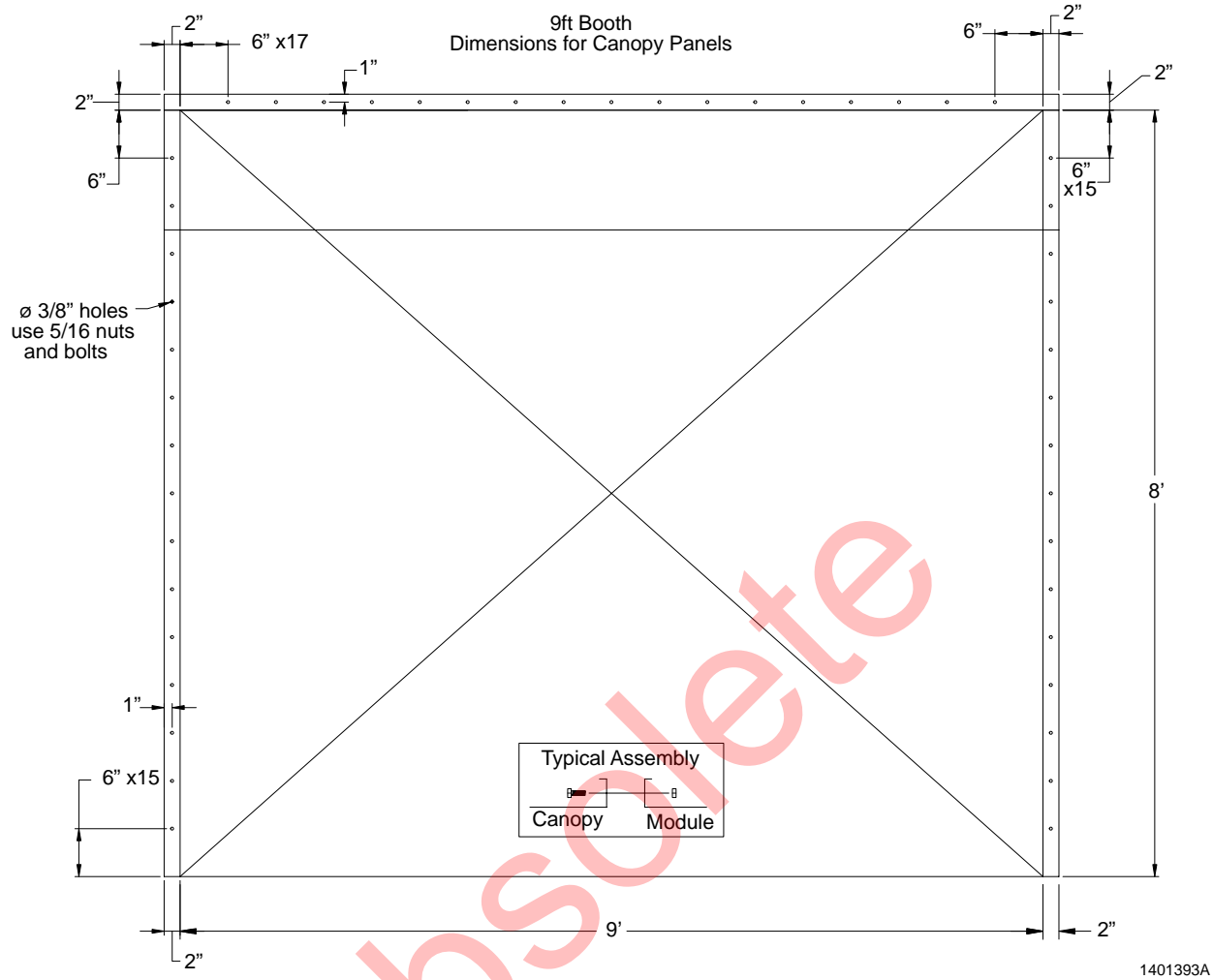
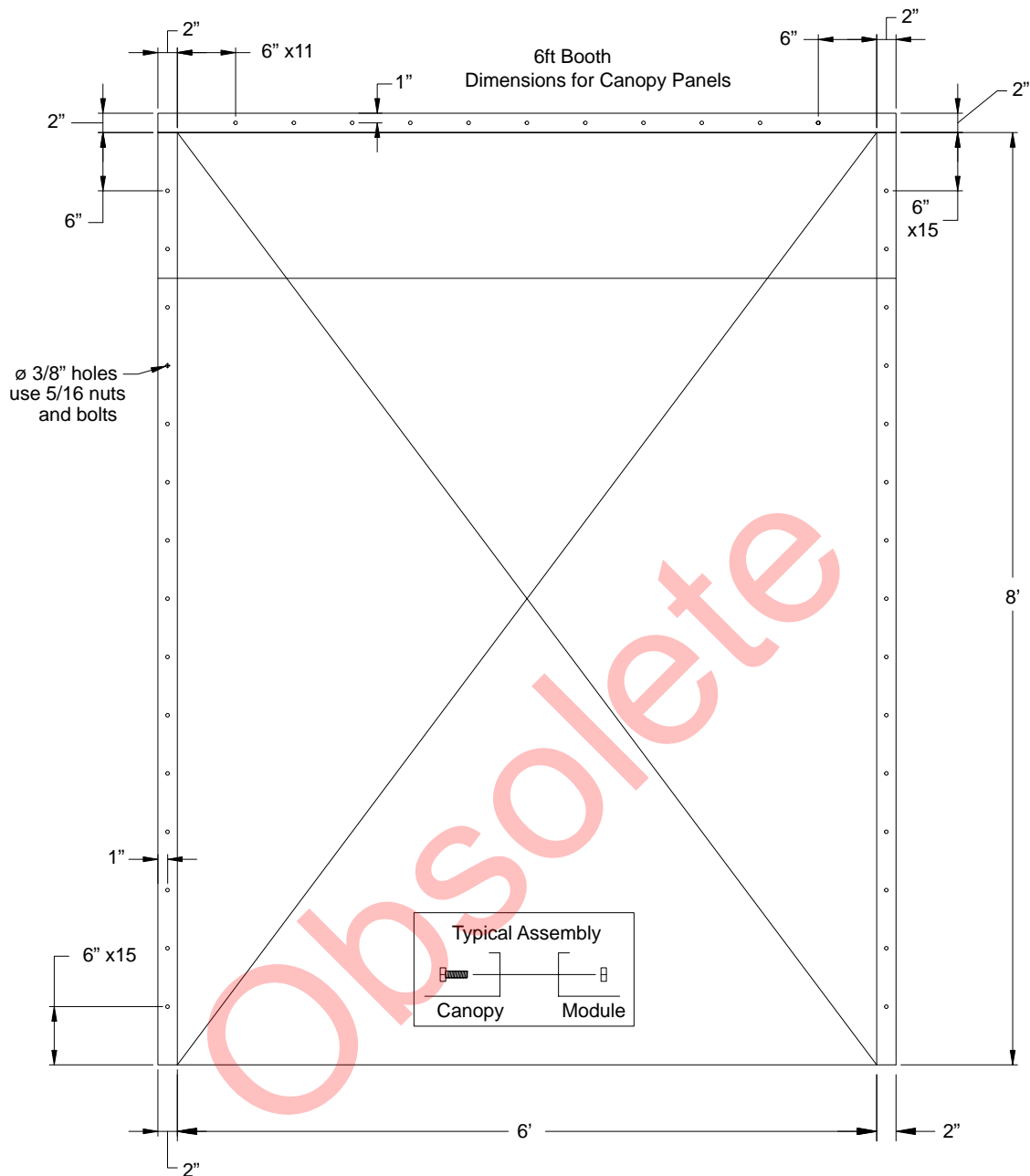


Figure 5 9-Foot Module to Canopy Mounting Dimensions



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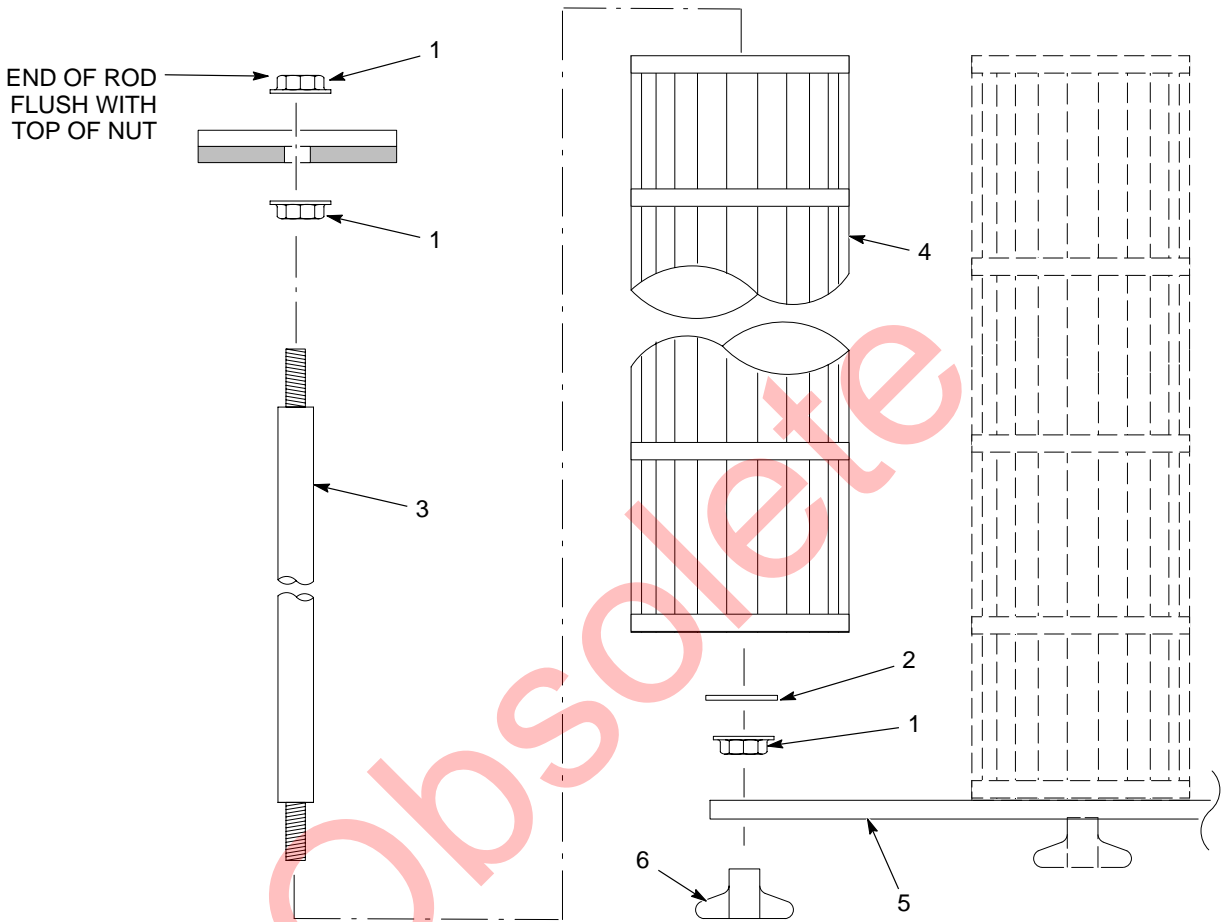
Figure 6 6-Foot Module to Canopy Mounting Dimensions

Cartridge Filter Installation

See Figure 7.

1. Install the filter rods (3) through the spigot and secure them with the flanged nuts (1), so that the end of the rod is flush with the top of the upper nut.
2. Install the cartridge filters (4) on the rods, open end first. Align the filter so the end of the filter rod slides through the mounting hole in the closed end of the filter.

3. Secure the filter with the $\frac{3}{8}$ -in. washer (2) and flanged nuts (1). Tighten the nuts to compress the filter gaskets at the open ends. Do not overtighten the nuts or you may damage the filter.
4. Once all filters are installed, install the filter retainer strip(s) (5) over the ends of the filter rods and install the $\frac{3}{8}$ -in. wing nuts (6).



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Figure 7 Cartridge Filter Installation

- | | | |
|------------------------------------|-------------------------------|---------------------------------|
| 1. $\frac{3}{8}$ -in. flanged nuts | 3. Filter rods | 5. Filter retainer strip(s) |
| 2. $\frac{3}{8}$ -in. washer | 4. Cartridge filters (48 in.) | 6. $\frac{3}{8}$ -in. wing nuts |

Compressed Air Connection

Compressed air requirements:

Pressure: 4-7 bar (60-100 psi)

Air Quality: Air must be clean and dry. A dedicated, refrigerated or regenerative-desiccant air dryer that can produce a 3 °C (38 °F) or lower dewpoint at 7 bar (100 psi) is recommended.

Install a shutoff valve and drop leg with drain valve ahead of the filter/regulator.

See Figure 3. Connect the compressed air supply to the filter/regulator.

Electrical Connections



WARNING: All phases of installation must comply with all federal, state, and local codes. All work that is located in Class 2, Divisions 1 and 2 hazardous locations must comply with NFPA code 33, and NFPA code 70 (especially articles 500, 502, and 516, latest editions).

The booth requires both 3 phase power for the fan motor at the voltage specified in the purchase order, and 120 volt single phase power for the other booth devices and controls.

Use Figure 9 to make your electrical connections.

- Install a fused, locking disconnect switch, wired in accordance with National Electric Code NFPA-70, in the main electrical line supplying power to the control panel. You must be able to disconnect and lock out power to the booth control panel.

- Use dust-tight strain reliefs or conduit connectors to bring power into the the booth control panel.
- As required, connect the pre-wired motor conduit to the control panel and/or motor junction box. Connect the conduit wiring to the control panel or motor leads. If necessary, refer to the wiring diagram on the motor junction box.

NOTE: The fan motor must rotate in the correct direction to draw air through the cartridge filters. To change fan direction, reverse any two motor wires at the motor starter in the control panel.

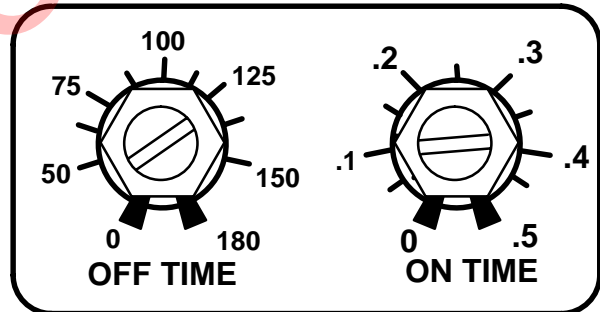
- As required, connect the pre-wired pilot valve conduit to the control panel and/or pilot valve assembly.

Pulse Valve Timer Settings

See Figure 8. Locate the sequential timer board on the inside door of the electrical panel.

PULSE DURATION (ON TIME): Time pulse valves are open. Factory set to 0.1 second. Normally, this setting does not have to be changed.

PULSE FREQUENCY (OFF TIME): Time between pulses. Set as desired. This setting is dependent on the volume of powder being sprayed and the static pressure reading on the cartridge filters. A lower setting results in more frequent pulsing and higher air consumption.



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Figure 8 Pulse Valve Timer Settings

Electrical Schematic

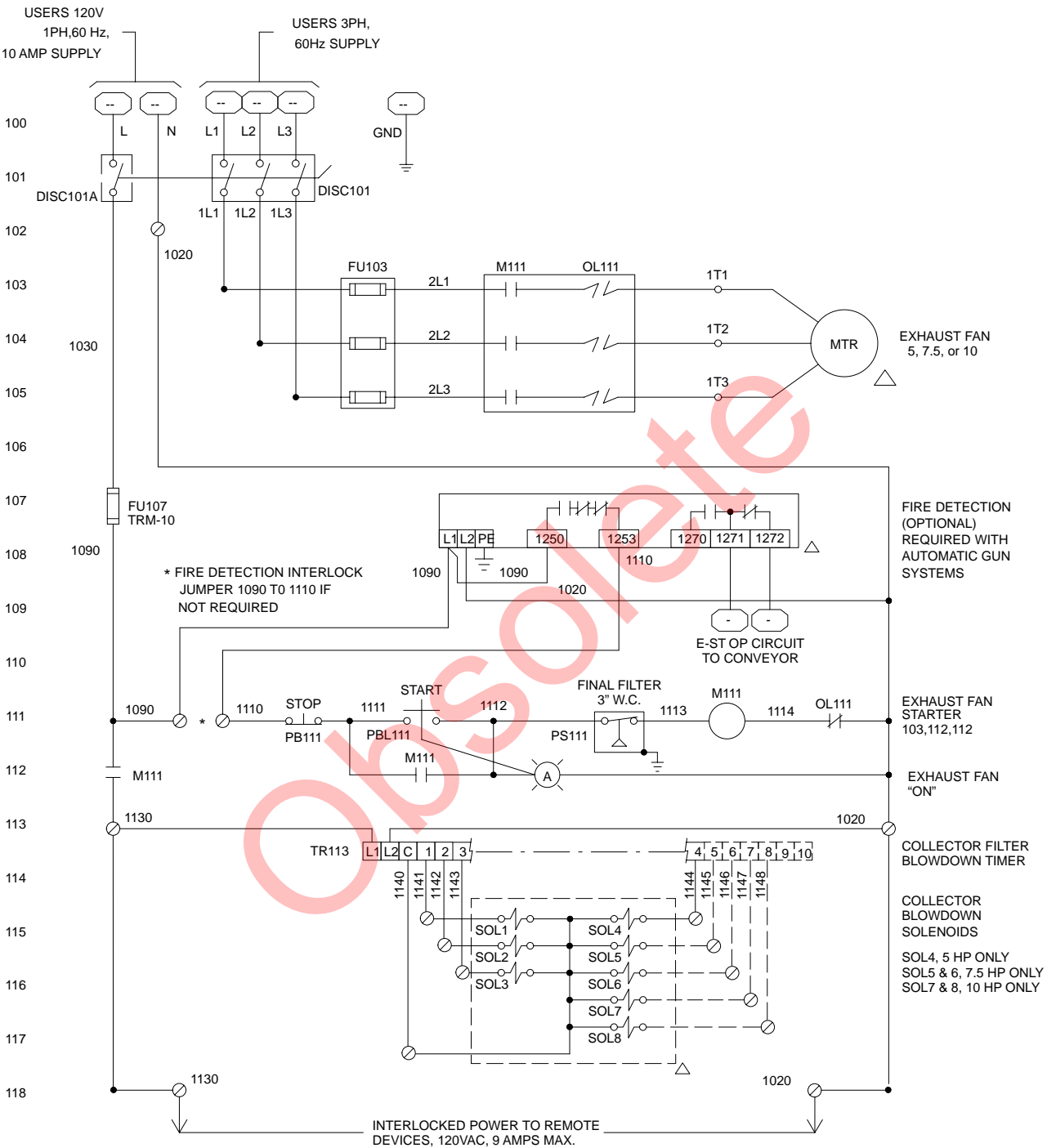


Figure 9 Control Panel Electrical Schematic

Operation



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

Startup

1. Turn on the compressed air supply. Adjust the system air pressure to 5.5 bar (80 psi).
2. Turn on the control panel disconnect switch.
3. Turn on the exhaust fan by pressing the FAN START (1) button.
4. Set the pulse-valve air pressure to 1.7 bar (25 psi). Adjust as required to efficiently clean the cartridge filters.
5. Check the cartridge filter differential pressure gauge on the control panel. The pressure should be less than 4.0-in. w.c. If it is higher, increase the filter pulsing frequency or air pressure.

NOTE: The final filter pressure switch will shut down the exhaust fan if the final filter differential pressure reaches 3.0 in. w.c. If this happens, the final filters are clogging. Refer to Troubleshooting to correct this problem.

6. Check the level of the powder in the feed hopper. Fill feed hoppers no more than $\frac{2}{3}$ full to leave room for expansion when fluidizing air is turned on.
7. Turn on the feed hopper fluidizing air.
8. Check all equipment ground connections.
9. During production, make sure the sprayed powder is not escaping from the booth. If this happens, check the cartridge filter differential pressure. Increase pulsing frequency or pressure.

Shutdown

1. Blow the powder off the canopy walls.
2. Vacuum the waste powder off the floor.
3. Clean your powder application equipment.
4. Shut off the exhaust fan.
5. Turn off the control panel disconnect switch.

Troubleshooting



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

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	Possible Cause	Corrective Action
1. Powder escaping from booth openings	Cartridge filters clogged because	
	• Inadequate pulse pressure	Increase the pulse air pressure.
	• Pulse off timing too long	Decrease the pulse off time.
	• Powder too fine or contaminated	If using reclaimed powder, reduce the ratio of reclaimed-to-virgin powder. Check powder particle size, if necessary.
	• Powder contaminated	Replace the contaminated powder.
	• Pulse valve or solenoid valve malfunction	Isolate the problem component and repair as follows: <ul style="list-style-type: none"> • The pulse valve diaphragm is ruptured. If you hear a hissing sound inside the fan housing, check for constant air flow from the valve. Rebuild or replace the damaged valve. • The pulse valve spring is broken, or the solenoid valve is not triggering the pulse valve. If a cartridge filter is not being pulsed, check the valve pilot 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 the solenoid valve is good, replace the pulse valve.
	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.
Continued...		

Problem	Possible Cause	Corrective Action
1. Powder escaping from booth openings (contd)	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. Exhaust fan shuts down, will not restart	Final filters are clogged	Check final filter differential pressure gauge. If over 3-in. w.c., check cartridge filter media and gaskets for damage. Replace damaged filters.
	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"> • Check the exhaust fan for proper rotation direction. • Check for mechanical binding of the motor/fan assembly. • Check for contact corrosion at the motor starter in the control panel. • Check the overload protector in the control panel.
3. Cartridge pulsing will not start	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.

Parts

To order parts, call the Nordson Finishing Customer Support Center at (800) 433-9319 or your local Nordson representative.

Replacement Parts

Part	Description	Note
1014960	Reverse pulse valve	
1042591	Cartridge filter, 48 in.	
1042595	Filter rod	
1032826	Final filter (35.5 x 20.5 x 5.5)	A
1066540	Final filter (35.5 x 23.5 x 11.5)	A
1042596	Final filter (35.5 x 20.5 x 8.5)	A
1042655	Inlet cone (5300 CFM, 5 HP motor)	
1042656	Inlet cone (6400/7200 CFM, 7.5 HP motor)	
1014952	Inlet cone (9600 CFM, 10 HP motor)	
1042653	Fan wheel (5300 CFM, 5 HP motor)	
1042654	Fan wheel (6400/7200 CFM, 7.5 HP motor)	
1014950	Fan wheel, (9600 CFM, 10 HP motor)	
1042592	Pulse valve assembly (4 valves)	
1042593	Pulse valve assembly (6 valves)	
1042594	Pulse valve assembly (8 valves)	
NOTE A: Measure your existing final filters before ordering replacements.		

Final Filters by Model

Booth Model	Final Filter P/N	Filter Size (LxWxD)	Quantity per Booth
VTG-5300c	1032826	35.5 x 20.5 x 5.5	2
VTG-6400c	1032826	35.5 x 20.5 x 5.5	2
VTG-7200c	1066540	35.5 x 23.5 x 11.5	3
VTG-8500c	1066540	35.5 x 23.5 x 11.5	3
VTG-9600c	1066540	35.5 x 23.5 x 11.5	4
VTG-10600c	1032826	35.5 x 20.5 x 5.5	4
VTG-12800c	1032826	35.5 x 20.5 x 5.5	4
NOTE: Some older batch booths used 1042596 (35.5 x 20.5 x 8.5) filters. Always measure your filters before ordering replacements.			

Fan Motors

HP	208V	230/460V	380V	575V
5	1043155	1043155	-	1043156
7.5	1043157	1043157	-	1043158
10	1022543	1014957	1022544	1014958

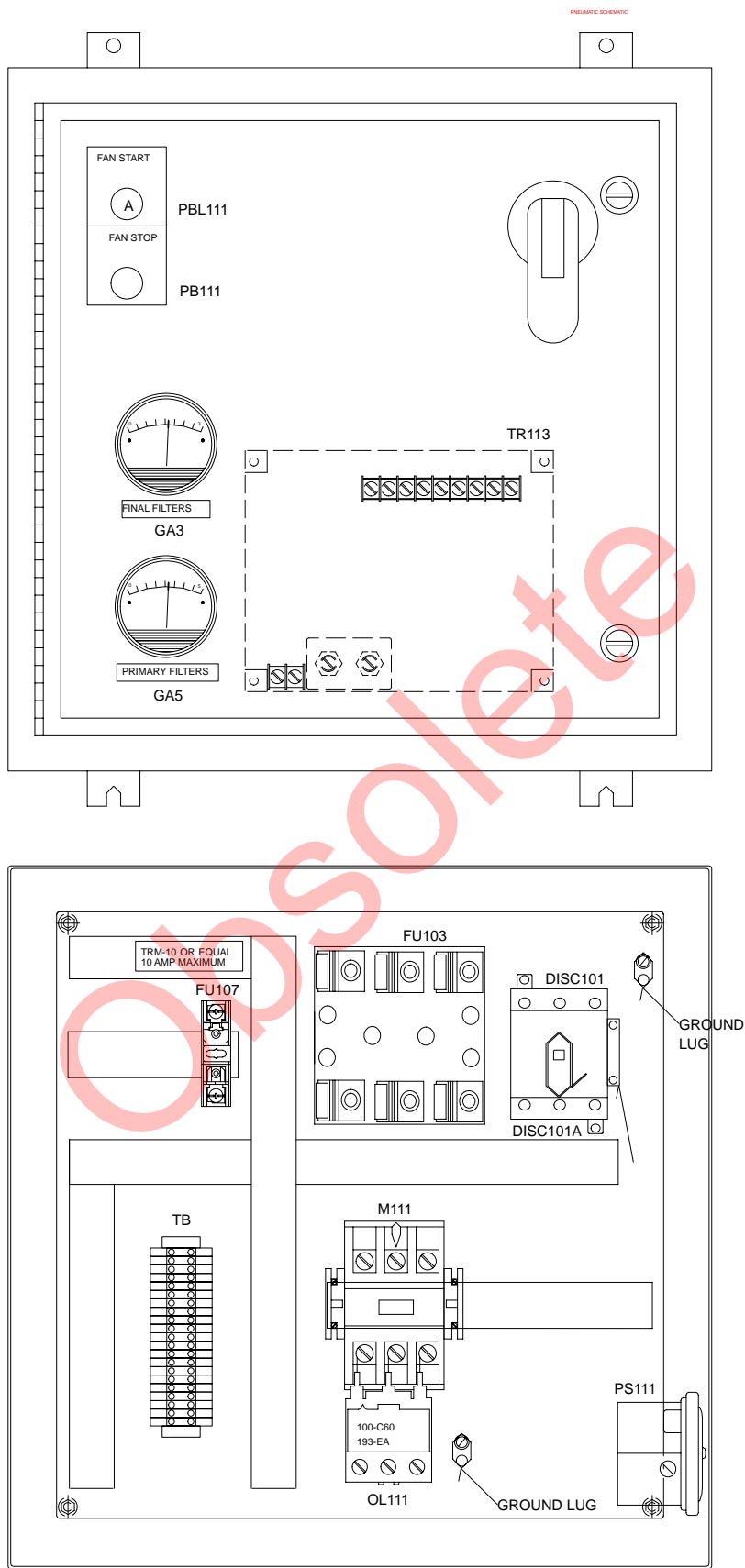
Control Panel Parts

See Figure 10.

ITEM	QTY	DESCRIPTION	PART NO.	MFG.
	1	ENCLOSURE		
	1	SUB-PANEL		
DISC101	1	DISCONNECT, NON-FUSED	SEE CHART	ABB
DISC101	1	DISCONNECT, HANDLE	OXZS49	ABB
DISC101	1	DISCONNECT, EXTENDED SHAFT	OHB80J6	ABB
DISC101A	1	AUX. CONTACT, DISCONNECT	OA1G10	ABB
M111	1	CONTACTOR, MOTOR	SEE CHART	ALLEN BRADLEY
OL111	1	OVERLOAD, MOTOR	SEE CHART	ALLEN BRADLEY
M111	1	CONTACT, AUXILIARY	100-SA10	ALLEN BRADLEY
FU103	3	FUSE, J TYPE, TIME DELAY	SEE CHART	GOULD
FU103	1	FUSEBLOCK	SEE CHART	MARATHON
FU107	1	FUSE, CONTROL	TRM10	GOULD
FU107	1	FUSEBLOCK	USM1	GOULD
PBL111	1	PUSHBUTTON HEAD, ILLUM., AMBER, L.E.D.	ZB4 BW353	TELEMECANIQUE
PBL111	1	PUSHBUTTON, BASE	ZB4 BZ009	TELEMECANIQUE
PBL111	1	LIGHT MODULE, LED, AMBER, 120V	ZBVG5	TELEMECANIQUE
PBL111	1	CONTACT BLOCK, NO	ZBE101	TELEMECANIQUE
PB111	1	PUSHBUTTON, HEAD, RED	ZB4BA9	TELEMECANIQUE
PB111	1	PUSHBUTTON, BASE	ZB4BZ102	TELEMECANIQUE
PB111	1	CONTACT BLOCK, NC	ZBE102	TELEMECANIQUE
	1	NAMEPLATE, WHITE	-----	
	3	COVER, HOLE	A-SPBG	HOFFMAN
TB, FU107, OPTIONS	A/R	DIN RAIL	199DR1	ALLEN BRADLEY
TB	25	TERMINALS	57.504.0055.6	WEILAND
TR113	1	TIMER BOARD	DNC-T2006-B10	NCC
TR113	1	TIMER BOARD (9600 CFM BOOTH ONLY)	DNC-T2010-B10	NCC
GA5	1	MINIHELIC GAGE 0-5 IN. W.C.	2-5005	DWYER
GA3	1	MINIHELIC GAGE 0-3 IN. W.C.	2-5003	DWYER
PS111	1	PRESSURE SWITCH	1910-5	DWYER
PS111, GA5, GA10	2	BULKHEAD UNION, 6MM	KQ2E06-00	SMC
PS111	1	MALE CONNECTOR, 6MM x 1/8NPT	KQ2H06-01S	SMC
ATM1	1	BREATHING VENT	AN203-KMB	SMC
PS111, GA5	1	PLUG-IN "Y", 6MM	KQ2U06-99	SMC
PS111, GA5, GA10	A/R	TUBING, 6MM		

EXHAUSTER REF. CHART					
SIZE	ITEM	208V	230V	460V	575V
5 HP	FLA	15	15.2	7.6	6.1
	FU103	AJT 25	AJT 25	AJT 15	AJT 12
	FU103	6J30A3B	6J60A3B	6J30A3B	6J30A3B
	M111	A16-30-10-84	A16-30-10-84	A9-30-10-84	A9-30-10-84
	OL111	TA25DU19	TA25DU19	TA25DU8.5	TA25DU6.5
7.5 HP	FLA	24.2	22	11	8.2
	FU103	AJT 45	AJT 40	AJT 20	AJT 15
	FU103	6J100A3B	6J100A3B	6J60A3B	6J30A3B
	M111	A26-30-10-84	A26-30-10-84	A12-30-10-84	A9-30-10-84
	OL111	TA25DU25	TA25DU25	TA25DU14	TA25DU11
10 HP	FLA	32.2	28	14	11
	FU103	AJT 60	AJT 50	AJT 25	AJT 20
	FU103	6J60A3B	6J60A3B	6J30A3B	6J30A3B
	M111	A40-30-10-84	A30-30-10-84	A16-30-10-84	A12-30-10-84
	OL111	TA42DU42	TA25DU32	TA25DU19	TA25DU14

DISCONNECT (DISC101) REF. CHART	
TOTAL SYSTEM CURRENT	DISCONNECT
0.0A - 34.0A	OT45E3
34.1A - 51.0A	OT63E3
51.1A - 86.9A	OT100E3



1401397A

Figure 10 Control Panel Parts

Obsolete