

# **Quick Color Change Plug and Spray**

Customer Product Manual

Part 1609776-02

Issued 05/18

**For parts and technical support, call the Industrial Coating  
Systems Customer Support Center at (800) 433-9319 or  
contact your local Nordson representative.**

This document is subject to change without notice.  
Check <http://emanuals.nordson.com> for the latest version.

---



NORDSON CORPORATION • AMHERST, OHIO • USA

# Table of Contents

<b>Safety</b> .....	<b>1</b>	<b>Operation</b> .....	<b>10</b>
Qualified Personnel .....	1	Color Change Procedure .....	10
Intended Use .....	1	Daily Maintenance .....	11
Regulations and Approvals .....	1	<b>Parts</b> .....	<b>12</b>
Personal Safety .....	2	Using the Illustrated Parts List .....	12
Fire Safety .....	2	Delivery Side .....	13
Grounding .....	3	Supply Side .....	14
Action in the Event of a Malfunction .....	3	Required Powder Hose .....	15
Disposal .....	3	Options .....	15
<b>Description</b> .....	<b>4</b>	Powder Hose and Air Tubing .....	15
Features .....	4	<b>Warranty</b> .....	<b>16</b>
Additional Requirements .....	4		
<b>Specifications</b> .....	<b>5</b>		
Dimensions and Weights .....	5		
<b>Installation</b> .....	<b>6</b>		
Mounting .....	6		
System Connections .....	7		
Supply Side .....	8		
Delivery Side .....	9		

---

## 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:  
<http://www.nordson.com>.

Address all correspondence to:

Nordson Corporation  
Attn: Customer Service  
555 Jackson Street  
Amherst, OH 44001

## Notice

This is a Nordson Corporation publication which is protected by copyright. Original copyright date 2016. No part of this document may be photocopied, reproduced, or translated to another language without the prior written consent of Nordson Corporation. The information contained in this publication is subject to change without notice.

## Trademarks

Nordson and the Nordson logo are registered trademarks of Nordson Corporation.

All other trademarks are the property of their respective owners.





# Quick Color Change Plug and Spray

## 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 Safety Data Sheets (SDS) 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 SDS 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 II 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 Quick Color Change Plug and Spray panel is for use with manual spray to waste venturi pump systems for quick and easy color changes.

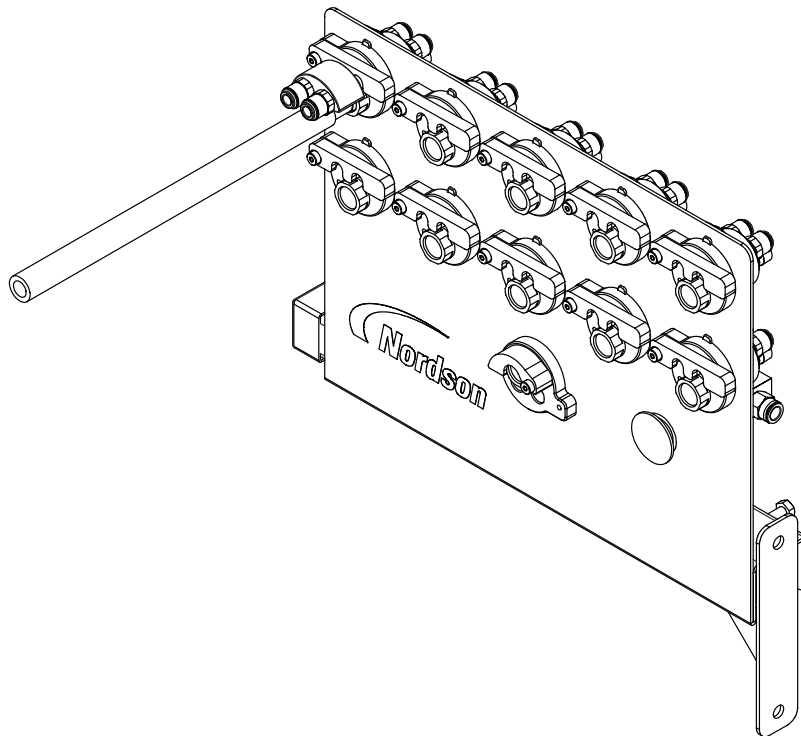
## Features

**NOTE:** All options and accessories such as hoses, tubing, pumps, and hoppers are sold separately.

- Accommodates up to 10 hoppers for 10 different colors per panel
- Quick and easy purge and color change
- Wall or Rail mounting options

## Additional Requirements

- Blue rubber powder hose (non-antistatic) from gun to panel
- Powder supply hose (antistatic) from hopper to panel
- Flow tubing: 8 mm
- Purge tubing: 8 mm



1609471

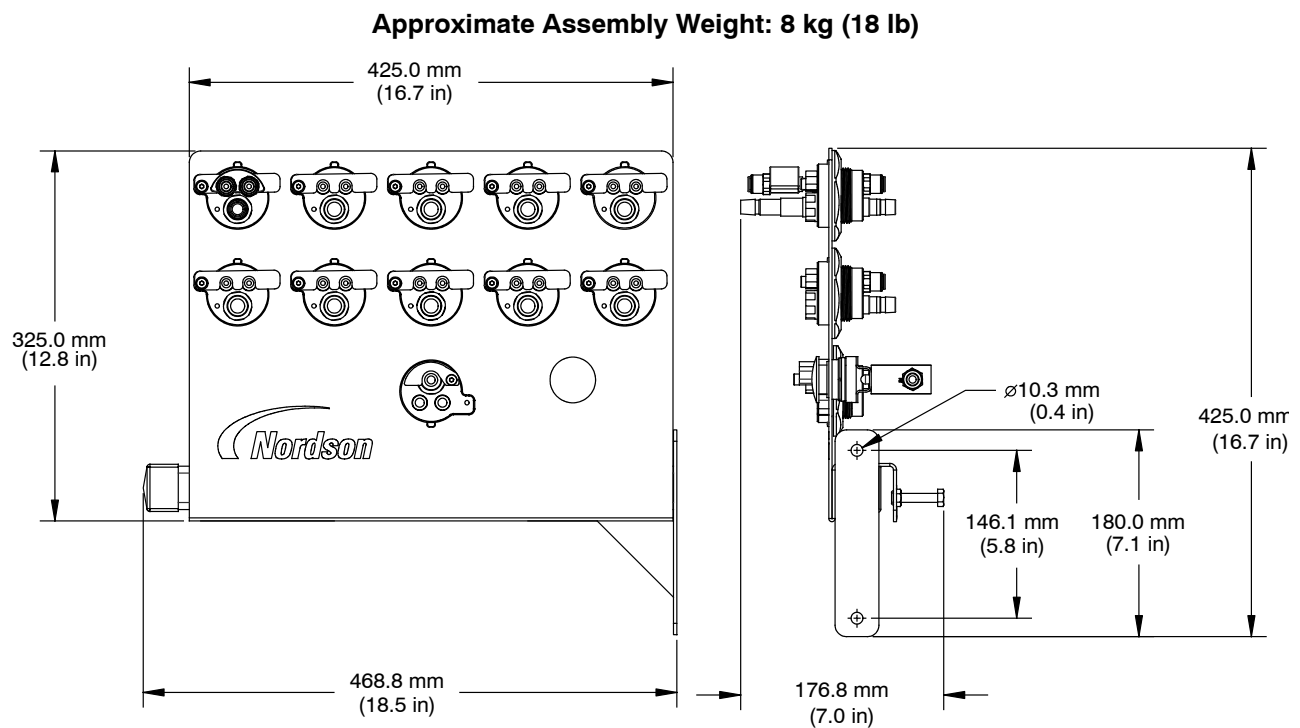
Figure 1 Quick Color Change Plug and Spray (shown with blue rubber powder hose)



## Specifications

Input Air:	6.0- 7.6 bar (87- 110 psi), <5 $\mu$ particulates, dew point <10 °C (50 °F)
Max Relative Humidity:	95% non-condensing
Ambient Temperature Rating:	+15 to +40 °C (59- 104 °F)
Hopper Capacity:	11.3 (25 lb)
	22.7 kg (50 lb)
	36.3 kg (80 lb)
	68.0 kg (150 lb)

## Dimensions and Weights



10015399-01

Figure 2 Dimensions and Weight

## Installation



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

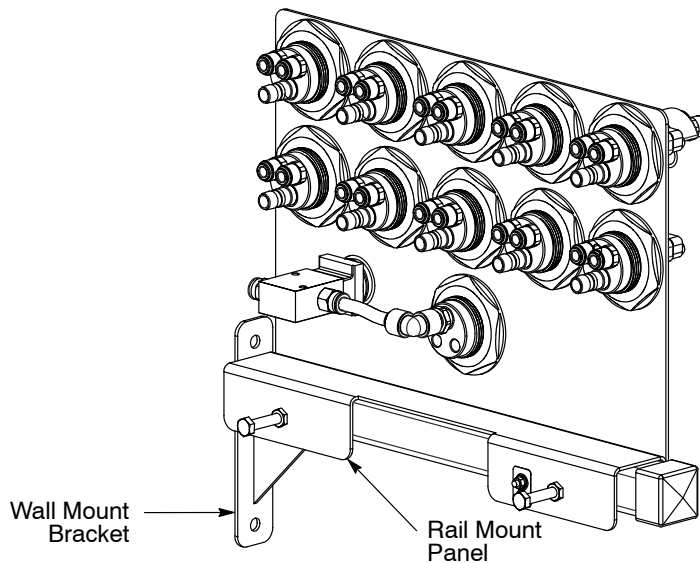


**WARNING:** Power down the system before beginning installation.

**NOTE:** Refer to your controller documentation for controller installation.

## Mounting

See Figure 3. Use the appropriate mounting brackets to install rail or wall mount orientation.



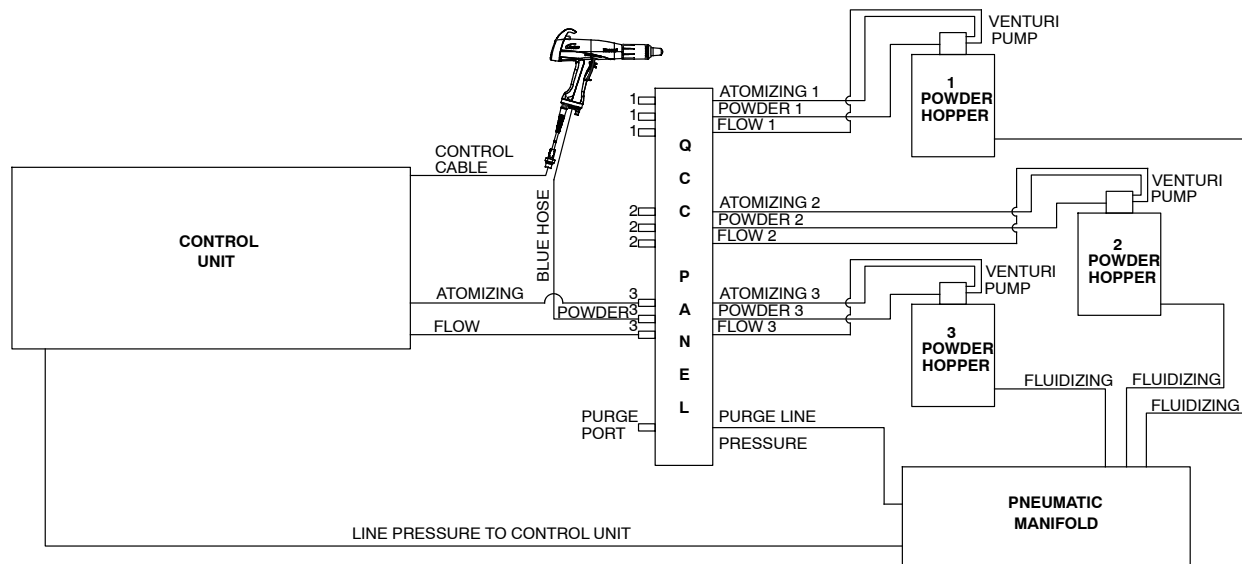
1609471

Figure 3 Mounting Options

## System Connections

Use the schematic in Figure 4 along with *Supply Side* and *Delivery Side* sections to make system connections.

For every hopper in the system, the atomizing air, flow air, and powder supply connections need to be made to a corresponding color port.



10015519-01

Figure 4 System Schematic

## Supply Side

See Figure 5.

1. Connect grounding wire to ground stud.
2. Connect filtered shop air to purge valve.



**CAUTION:** Do not exceed 100 psi (7.0 bar).

3. Make the following connections on the supply side for each color port to be used in the application:

- Atomizing air
- Flow air
- Powder supply hose (antistatic)

**NOTE:** Atomizing and flow air can be connected to either right or left fitting. However, these connections need to match on the delivery side (front of panel).

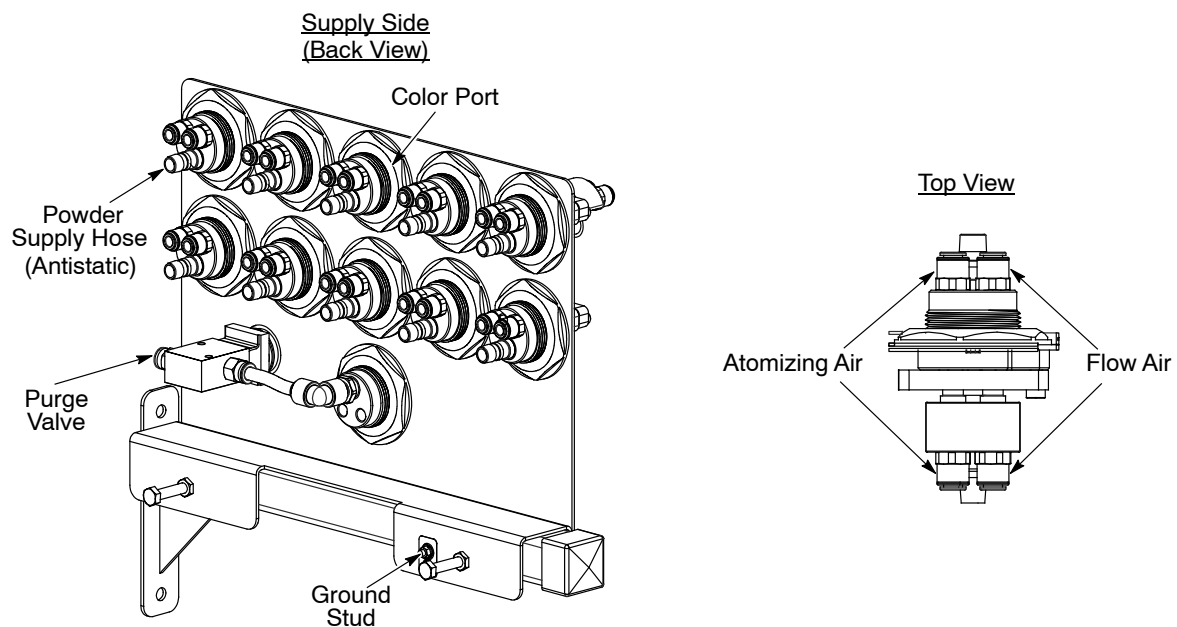


Figure 5 Supply Side Connections

1609471

## Delivery Side

See Figure 6.

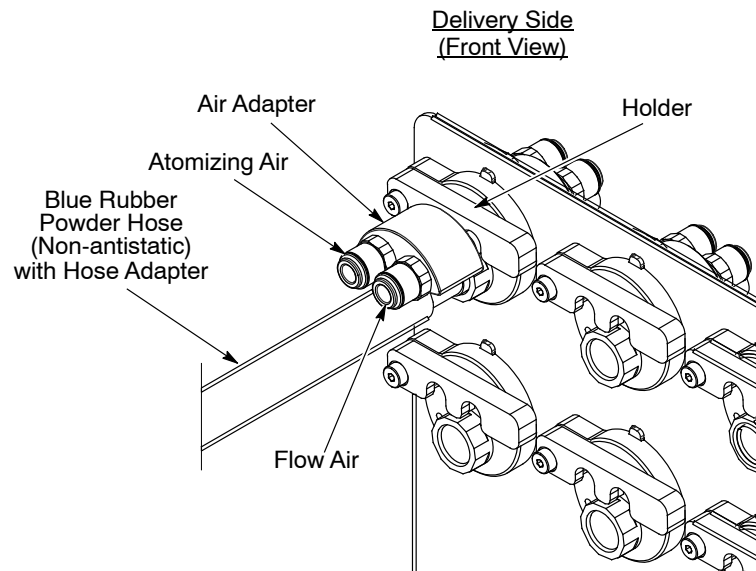
1. Make the following connections on the delivery side to the active color port:

- Atomizing air
- Flow air
- Blue rubber powder hose (non-antistatic) with hose adapter

**NOTE:** Atomizing and flow air can be connected to either right or left fitting. However, these connections need to match on the supply side (back of panel).

2. Verify the holder is in the down position over the air adapter on the active port.

The quick color change plug and spray is now ready for operation.



1609471

Figure 6 Delivery Side Connections

## Operation

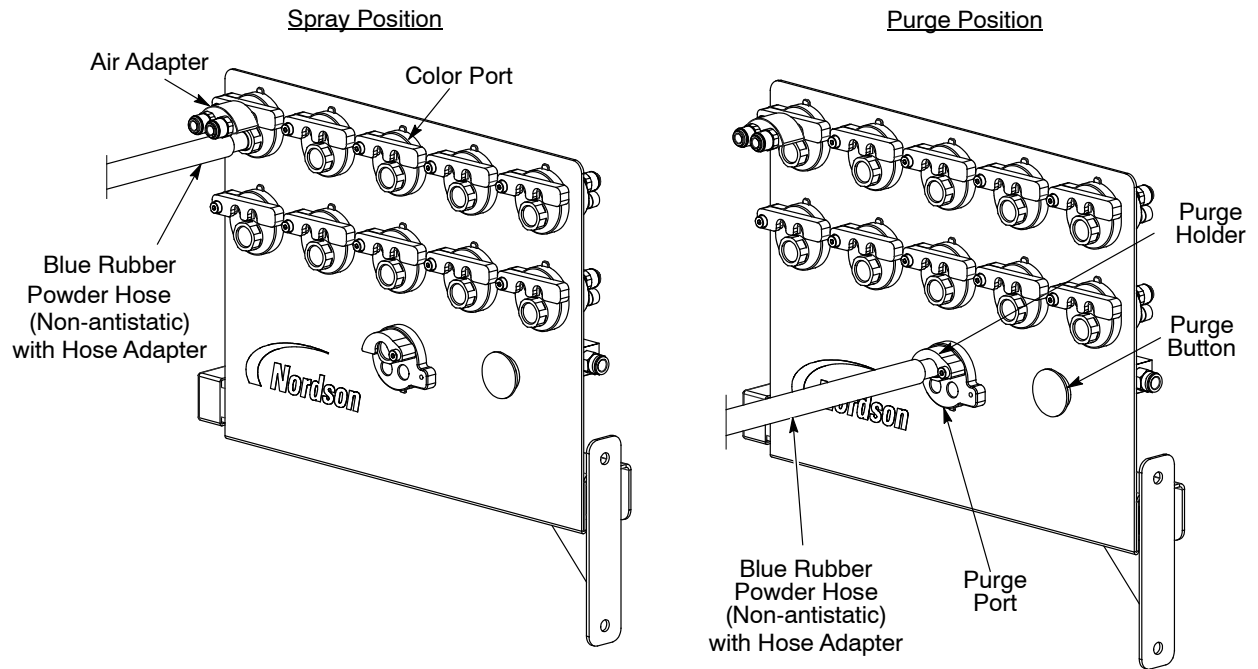


**WARNING:** Allow only qualified personnel to perform the following tasks. Follow the safety instructions in this document and all other related documentation.

### *Color Change Procedure*

See Figure 7.

1. De-trigger spray gun.
2. Turn down atomizing and flow air to 0.
3. Remove the blue rubber powder hose (non-antistatic) with hose adapter from the color port.
4. Rotate the purge holder up and place the blue rubber powder hose with hose adapter into the purge port so the tubing is in the purge position.
5. Lock the tubing in place by lowering the purge holder.
6. Push the purge button to activate purge air. Allow purge air to run until all powder is blown out of spray gun.
7. To end purge, push the purge button again.
8. Unlock the air adapter from the previous color port and install on next color port with the blue rubber powder hose.
9. Secure air adapter into the spraying position by lowering the holder.
10. Adjust the atomizing and flow air. The quick color change plug and spray is now ready for operation.



1609471

Figure 7 Spray and Purge Positions

## Daily Maintenance

Spray down the panel and using low-pressure compressed air.

## Parts

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

### *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.

- 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.

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



**Delivery Side**

See Figure 8.

Item	Part	Description	Quantity	Note
—	1609471	PANEL, Quick Color Change, Plug and Spray	1	
1	1609596	• CONNECTOR, male, 8 mm tube x1/8 BSPT	22	
2	1609586	• CARRIER, atomizing/fluidizing	1	
3	1613219	• KIT, nozzle, panel, QCC plug and spray	2	
4	1609597	• SCREW, shoulder, nylon, 1/4 OD x 3/8-in L, 10-24 threaded, white	10	A
5	1609587	• HOLDER, nozzle, panel, QCC, plug and spray	10	
6	1609779	• KIT, connector, hose, barb, 1/2-in with O-rings	1	
7	1609585	• BARB, hose, color, port	10	A
8	1609600	• SCREW, shoulder, nylon, 1/4 OD x 5/8-in L, 10-24 threaded, white	1	
9	1609589	• HOLDER, hose, purge, port	1	
10	1609588	• PORT, purge, threaded	1	A
NOTE A: Use Loctite® 425 when installing replacement.				
				Continued...

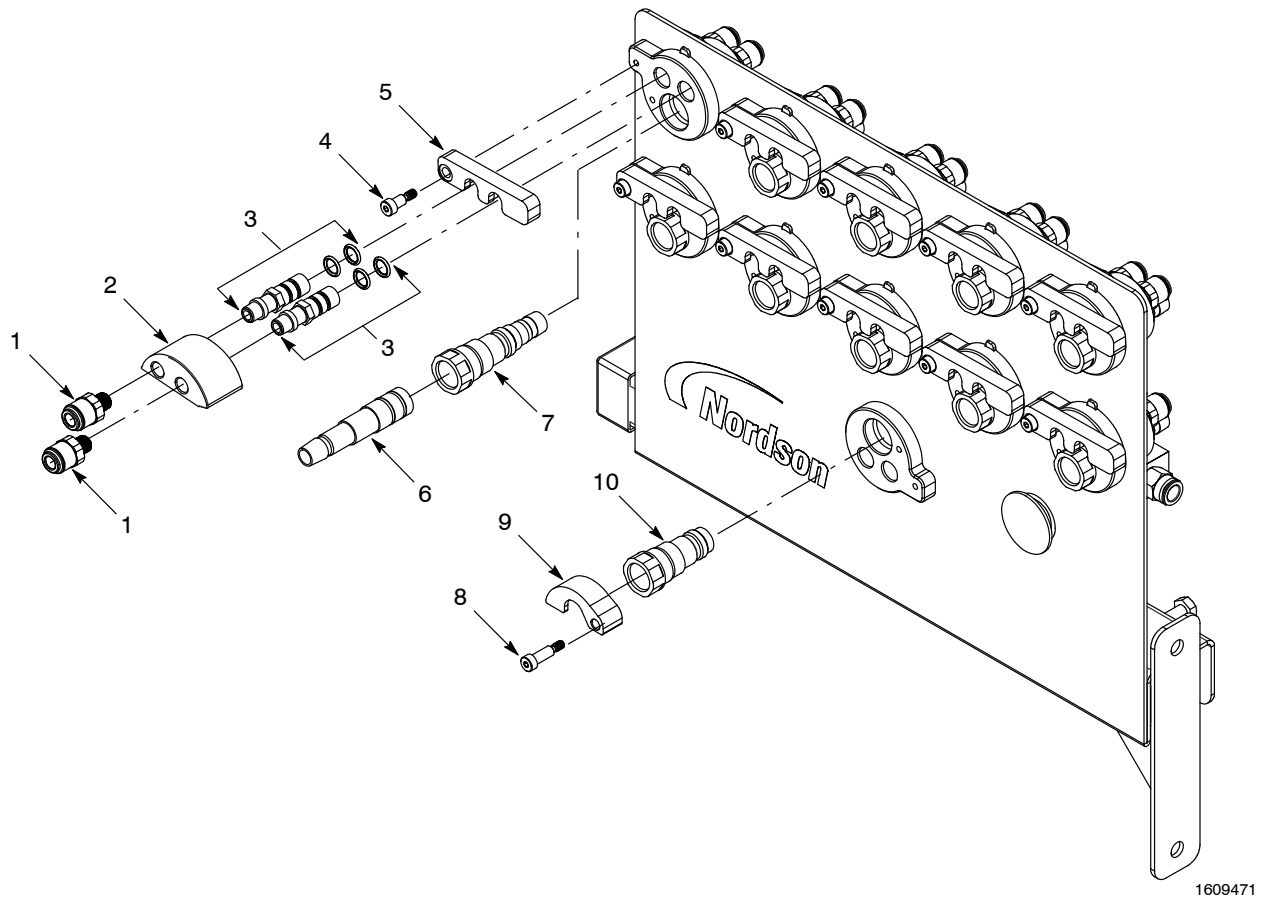
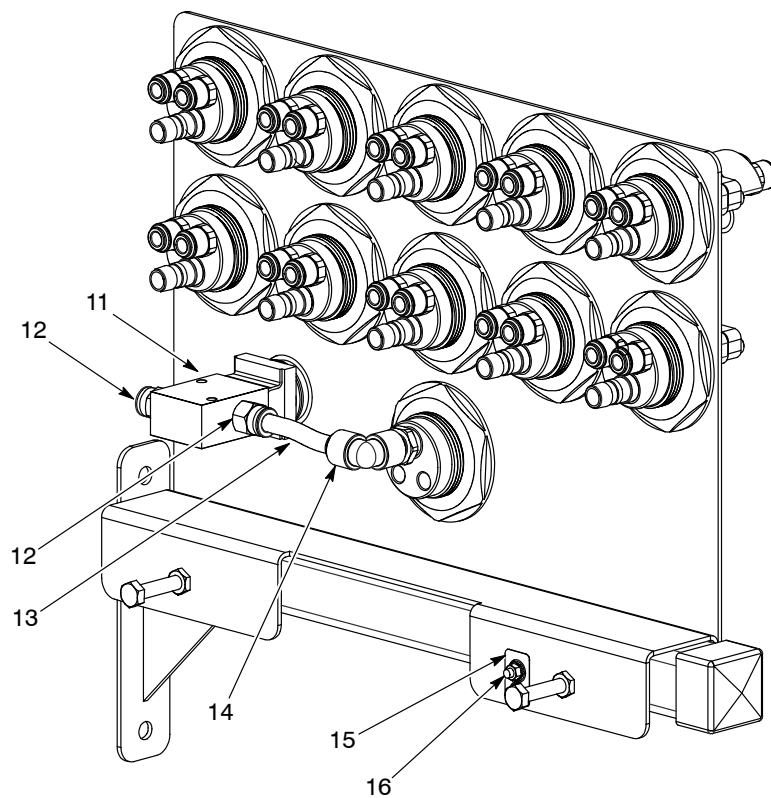


Figure 8 Delivery Side

## Supply Side

See Figure 9.

Item	Part	Description	Quantity	Note
—	1609471	PANEL, Quick Color Change, Plug and Spray	1	
11	1609609	• VALVE, mechanical, 3 port, push button, 1/4-in NPT	1	
12	972841	• CONNECTOR, male, 10 mm T x 1/4 UNI	2	
13	900740	• TUBING, polyurethane, 10/6.5- 7 mm	1	
14	1609601	• CONNECTOR, 90 degree male, 10 mm x 1/4 BSPT, acetal, black	1	
15	240674	• TAG, ground	1	
16	1052143	• NUT, hex, with ext tooth washer, M5, steel, zinc	1	
NS	939110	• CABLETIE, nylon, natural	12	
NS: Not Shown				



1609471

Figure 9 Supply Side

## Required Powder Hose

Part	Description	Quantity	Note
900650	BLUE, tubing, powder 12.7 mm (0.500 x 0.156)	AR	A
NOTE A: Blue tubing used on the delivery side from the Quick Color Change panel to powder spray gun. AR: As Required			

## Options

### Powder Hose and Air Tubing

Powder hose and air tubing must be ordered in increments of one foot.

Part	Description	Note
900618	Air tubing, polyurethane, 8 mm, blue	A
900619	Air tubing, polyurethane, 8 mm, black	A
768176	Tubing, powder, antistatic, 11 mm (0.43 in.) ID	B
768178	Tubing, powder, antistatic, 12.7 mm (0.5 in.) ID	B
900517	Tubing, poly, spiral cut, 0.62 in. ID, dress out	
301841	Strap, Velcro, w/buckle, 25 x 3 cm, dress out	
NOTE A: Minimum order quantity is 50 ft. B: Antistatic tubing used on the supply side from the Quick Color Change panel to the hopper.		

## **Warranty**

For warranty information, go to:

<http://terms.nordson.com/gcos/nordsonics-us.pdf>