

Spray Pressure Control Manifold



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

Introduction

The spray pressure control (SPC) manifold is part of the Nordson Spray Pressure Control system. The manifold houses a fixed orifice (restrictor) that reduces pressure fluctuations in the fluid system. A T-filter is mounted on the manifold upstream from the orifice to prevent contaminants from blocking it.





Installation

Recommended Circuit for Spray Pressure Control

See Figure 2 for a typical dual spray gun system using Spray Pressure Control. Review this recommended plumbing circuit before installing any parts into the system. Additional customer-supplied parts may be required.



Figure 2 Recommended Circuit for Spray Pressure Control

1. Nordson EP Pump

- 2. Two-way ball valve
- 3. Heater

- 6. Spray gun
- 7. SPC manifold assembly

5. Pressure-reducing regulator

- 8. Back pressure regulator
- 9. Two-way ball valve
- 10. Three-way ball valve (drain)

4. Filter

Installation



WARNING: Relieve system fluid pressure before installing the SPC manifold. Failure to observe this warning may cause personal injury or equipment damage.

NOTE: Restrictors are not included with the SPC manifold, as they are application-specific. Refer to Restrictors on page 6 for a list of available restrictors.

- 1. See Figure 3. Install the manifold with the drain nipple (3) pointing down.
- 2. Connect a fluid line from the spray gun output to the 1/2-20 JIC inlet connector (9).
- 3. Connect a fluid line from the 1/2–20 JIC outlet connector (8) to the fluid return line to the pump.
- 4. After you have installed the manifold, flush the fluid delivery system to remove any contaminants from the system.
- 5. Remove the restrictor holder (4), install a restrictor and seal (4A), then install the holder back in the manifold. See Figure 5 for restrictor installation.



Figure 3 Installation (item numbers match item numbers in parts list)

4. Restrictor holder

- 6. Nipple 3/8 in. NPT
- 4A. Restrictor and seal
- 8. Connector 1/2-20 JIC
- 9. Connector 1/2-20 JIC

NOTE: Refer to Page 6 for restrictors.

Parts

Spray Pressure Control Manifold Parts

See Figure 4.

ltem	Part	Description	Quantity	Note			
—	149230	MANIFOLD, circulation assembly	1				
1	179300	FILTER, liquid, 1/4 in. NPT, stainless steel, T-type					
1A	179367	GASKET, filter, liquid, stainless steel, Type-TF	1	А			
2	973971	NIPPLE, hex, 3/8 x 1/4 x 1.406 in., stainless steel	1				
3		BLOCK, orifice	1				
4	169623	HOLDER, restrictor, mini-insert	1	В			
5	973059	• NIPPLE, hex, 3/8 x 3/8 x 1.45 in., stainless steel	1				
6	973048	NIPPLE, extra heavy, 3/8 x 2.0 in., stainless steel	1				
7	247673	VALVE, ball, 3-way, stainless steel	1				
8	972099	 CONNECTOR, male, 37, 1/2–20 x 3/8 in. NPT, stainless steel 	1				
9	972029	 CONNECTOR, male, 37, 1/2–20 x 1/4 in., stainless steel 	1				
10	169636	FILTER ELEMENT, 230 micron	1	А			
NOTE: A. Included in T-Filter Cleaning Kit, part 1052901. B. The restrictor holder does not include a restrictor or O-rings. Refer to Restrictors on page 6 to select the							

3. The restrictor holder does not include a restrictor or O-rings. Refer to Restrictors on page 6 to select tr appropriate restrictor for your application and to order restrictor holder O-rings and backup ring.



Figure 4 SPC Manifold Parts

Restrictors for SPC Manifolds

Restrictors are not included with the SPC manifold. Select the appropriate restrictor for your application.

Restrictor Part Number	Orifice Size	Flow Rate (gpm) H20 @500 psi
122528	0.008	0.032
1064275	0.010	0.055
1007724	0.0112	0.06
1007725	0.0135	0.09
122501	0.014	0.1
122346	0.020	0.2
122345	0.032	0.5
122517	0.044	0.95

NOTE: See Figure 5. A seal (item 5) is included with all restrictors.

Restrictor Acessory Group

See Figure 5. This kit contains a restrictor, restrictor seal, and the restrictor holder O-rings and backup ring. Use this list to order replacement restrictor seals (all restrictors include the listed seal), and the restrictor holder O-rings and backup ring.

ltem	Part	Part	Description	Quantity	Note
—	1607059	—	ACCESSORY group, MI, M4, 0.008	1	
	—	179366	ACCESSORY group, MI, M4, 0.010	1	
1	945046	945046	O-RING, Viton, black, 5/16-in. tube	1	
2	954028	954028	• BACK-UP RING, single, 5/16 x 7/16 in.	1	
3	940113	940113	• O-RING, Viton, black, 0.313 x 0.438 in.	1	
4	—	1064275	RESTRICTOR, MI, M4, 0.010 in. orifice	1	
4A		121709	• • SEAL, ring, M4	1	
4	1080137	—	RESTRICTOR, MI, M4, fixed orifice 0.008 in.	1	
4A	121709	—	• • SEAL, ring, M4	1	



Figure 5 Restrictor Accessory Group

Issued 02/23

Original copyright date 1993. MEG, Nordson, and the Nordson logo are registered trademarks of Nordson Corporation.

All other trademarks are the property of their respective owners.