

Inline Powder Pump



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

Description

The inline powder pump is used in powder feed centers to draw powder from a bulk container, atomize the powder stream, and transfer it to a powder spray gun. Either 11-mm or $\frac{1}{2}$ -in. powder feed hose can be used.

Pump Removal



WARNING: Shut down the powder feed center, relieve system air pressure, and lock out the air supply before performing the following tasks. Failure to observe this warning may result in personal injury.

See Figure 1.

1. Shut down the powder feed center, relieve powder feed center air pressure, and lock out the system air supply.
2. Move the clamping handles (7) to the down position.
3. Lift the feed hose manifold (2) off the pumps. Be careful not to damage the pump venturi throats (3).
4. Disconnect the air tubing from the flow rate (5) and atomizing air (4) fittings.
5. Pull the pump (6) off the manifold block (8) with a slight twisting motion.

Pump Installation

See Figure 1.

NOTE: For best results, the powder feed hose (1) should be no longer than 10.7 meters (35 feet) and rise vertically over its length no more than 3.7 meters (12 feet).

1. Push the pump (6) into the manifold block (8) until the pump body bottoms out against the block.
2. Connect the flow rate and atomizing air tubing to the flow rate (5) and atomizing air (4) fittings.
3. Install the feed hose manifold (2) onto the pump venturi throats (3).
4. Move the clamping handles (7) to the up position.

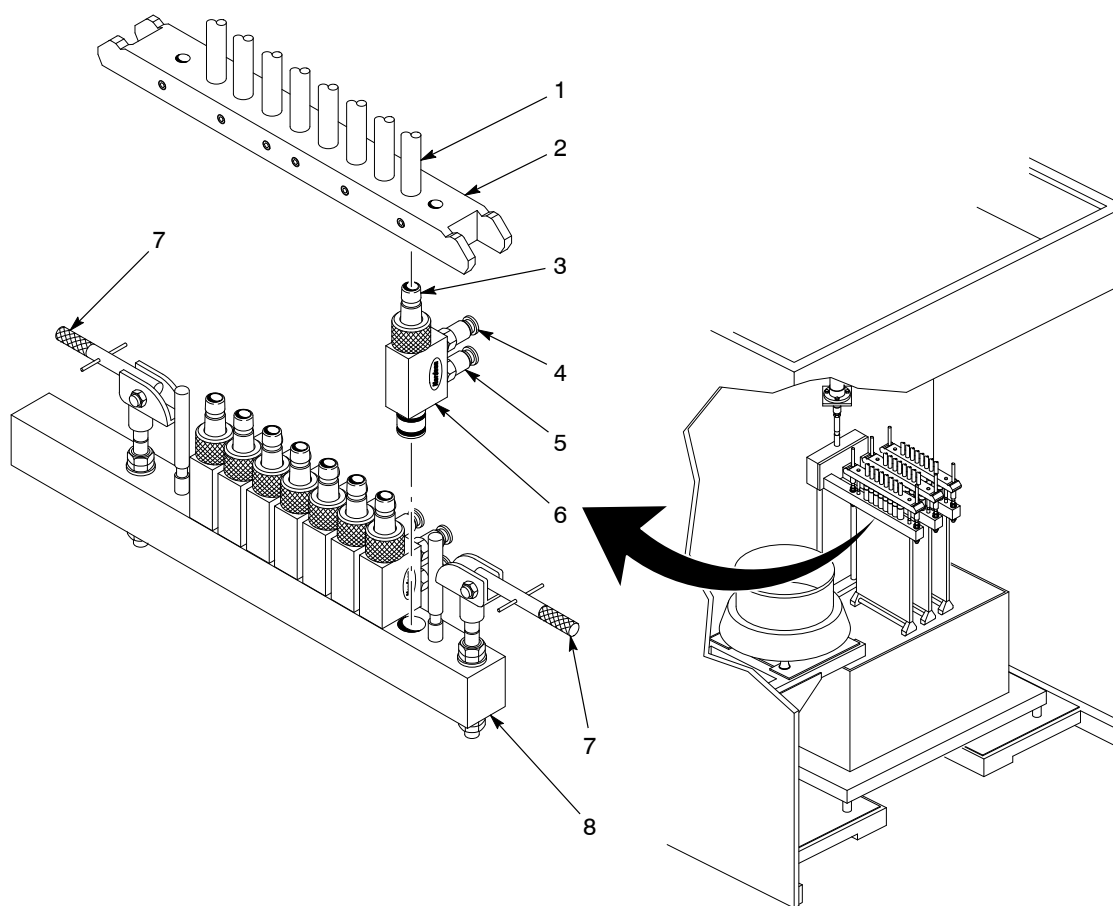


Figure 1 Removing and Installing the Inline Powder Pump

- | | | |
|-----------------------|--------------------------|---------------------|
| 1. Powder feed hose | 4. Atomizing air fitting | 7. Clamping handles |
| 2. Feed hose manifold | 5. Flow rate air fitting | 8. Manifold block |
| 3. Venturi throats | 6. Inline powder pump | |

Operation





WARNING: All conductive equipment in the spray area must be connected to a true earth ground. Ungrounded, or poorly grounded equipment can become electrically charged and cause a severe shock or create sparks hot enough to cause a fire or explosion.

Operating air pressures are directly affected by other factors in your powder coating system, including powder feed hose type and size, spray gun type, powder type, conveyor speed, and desired film build.

The following air pressures are average starting points. Adjust air pressures to achieve the desired powder delivery volume and density.

Atomizing Air:	2.1 bar (30 psi)
Flow-Rate Air:	1.4 bar (20 psi)

Maintenance

Daily	Purge the pump when performing either a color change or system shutdown. Refer to your powder feed center manual for more information.
Periodic	<div>  <p>CAUTION: Always blow out the powder feed hose from the pump end. Make sure that the booth exhaust fan is operating.</p> </div> <div>  <p>CAUTION: Do not scrape impact-fused powder off of the pump parts with any sharp metal tools. Powder will build up in any scratches on the powder contact surfaces, causing impact fusion and pump clogging.</p> </div> <p>Periodically disassemble the pump and clean its parts following these guidelines:</p> <ul style="list-style-type: none"> • Use low-pressure compressed air and lint-free cloths. • The parts may be wiped clean with a clean cloth dampened with a non-toxic solvent such as alcohol. Remove the O-rings first so the solvent does not damage them. • Inspect all parts and replace any that are worn or damaged.

Pump Repair



WARNING: Shut down the powder feed center, relieve system air pressure, and lock out the air supply before performing the following tasks. Failure to observe this warning may result in personal injury.

NOTE: Remove the pump from the feed center before repairing it. Refer to pump removal and installation procedures on page 1.

See Figure 2.

Venturi Throat Replacement

1. Unscrew and remove the cap (1) from the pump body (5).
2. Pull the venturi throat (2) out of the pump body and inspect it and the two O-rings (3) for wear or damage. If the venturi throat needs to be replaced, use one of the venturi kits listed in the pump parts list. The kits include the two O-rings.
3. Push the venturi throat into the pump body and screw on the cap.

Injector Replacement

1. Unscrew the injector (6) from the pump body (5).
2. Inspect the injector for wear or damage. Replace the injector and O-rings (7, 8) if necessary.
3. Screw the injector into the pump body.

Parts

Inline Pump Parts

See Figure 2.

Item	Part	Part	Description	Quantity	Note
—	1066891		PUMP, inline, Generation II, Tivar	1	
—		1066884	PUMP, inline, Generation II, PTFE	1	
1	1003913	1003913	• CAP, inline pump	1	
2	1066886		• KIT, venturi, inline pump, Generation II, Tivar	1	A
2		1066887	• KIT, venturi, inline pump, Generation II, PTFE	1	A
3	1036432	1036432	• • O-RING, silicone, 13 mm x 17 mm x 2 mm	2	B
4	344252	344252	• VALVE, check, M8 tube x R 1/8 in., M, output	2	
5	1037306	1037306	• BODY, inline pump, threaded	1	C
6	1066888	1066888	• KIT, INJECTOR, inline pump, Generation II	1	C
7	1003915	1003915	• • O-RING, Buna-N, 16 mm x 20 mm x 2 mm	2	
8	1036432	1036432	• • O-RING, silicone, 13 mm x 17 mm x 2 mm	1	

NOTE A: Optional venturi throat kits are available for both pumps. Refer to *Optional Injector and Venturi Throats* on page 5.

B: These O-rings are included with both venturi throat kits.

C: The old-style, unthreaded in-line pump has a one-piece body/injector. If you are replacing this part, order a body (5) and threaded injector (6).

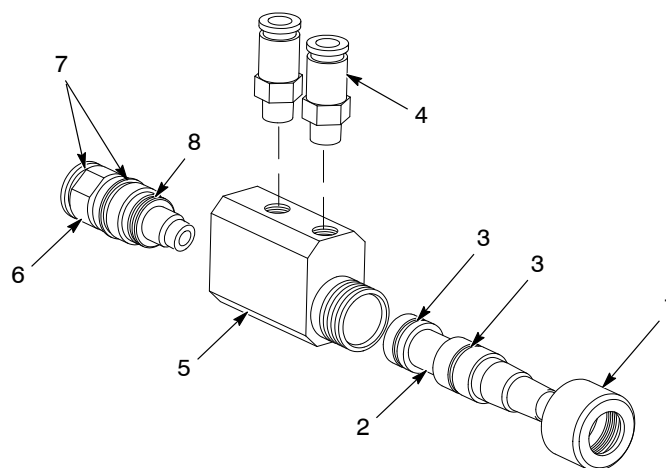


Figure 2 Inline Powder Pump Parts

Optional/Old-Style Injector and Venturi Throats

See Figure 3. Use this list to order optional or old-style injectors or venturi throats for the inline powder pump.

Item	Part	Description	Quantity	Note
1	1037305	INJECTOR, inline pump, 15-mm inlet, threaded	1	A
2	1003915	O-RING, Buna-N, 16 mm x 20 mm x 2 mm	2	A
3	1036432	O-RING, silicone, 13 mm x 17 mm x 2 mm	1	A
4	1003911	KIT, venturi, inline pump, Tivar	1	
5	1036432	• O-RING, silicone, 13 mm x 17 mm x 2 mm	2	
4	1003912	KIT, venturi, inline pump, glass-filled PTFE	1	
5	1036432	• O-RING, silicone, 13 mm x 17 mm x 2 mm	2	
4	1049967	KIT, venturi, inline pump, stainless steel	1	B
5	940015	• O-RING, conductive silicone, 0.562 x 0.687 in.	2	

NOTE A: These O-rings are not included with the injector. They are listed here for your reference.
 B: The stainless steel venturi may be used in either the Tivar or PTFE inline pump.

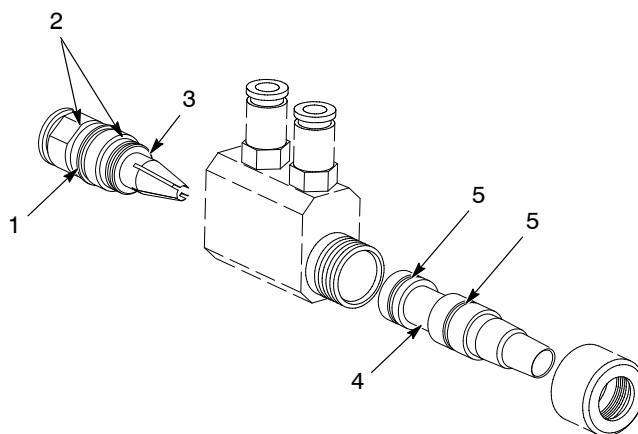


Figure 3 Optional/Old-Style Injector and Venturi Throats

Issued 11/05

Original copyright date 2001. Nordson and the Nordson logo are registered trademarks of Nordson Corporation.

Tivar is a registered trademark of Poly -Hi Corporation.

