

Prodigy® Mobile Box Unloader System

Description

The Prodigy Mobile Box Unloader system unloads 25 kg (50 lb) boxes of powder and pumps the powder to spray gun feed hoppers. Systems are available with 115 Vac, 60 Hz or 220 Vac, 50 Hz vibrator motors and include a Prodigy HDLV® high-capacity transfer pump.

NOTE: For more information on Prodigy HDLV High-Capacity Pump operation and repair information, refer to manual 1092270.

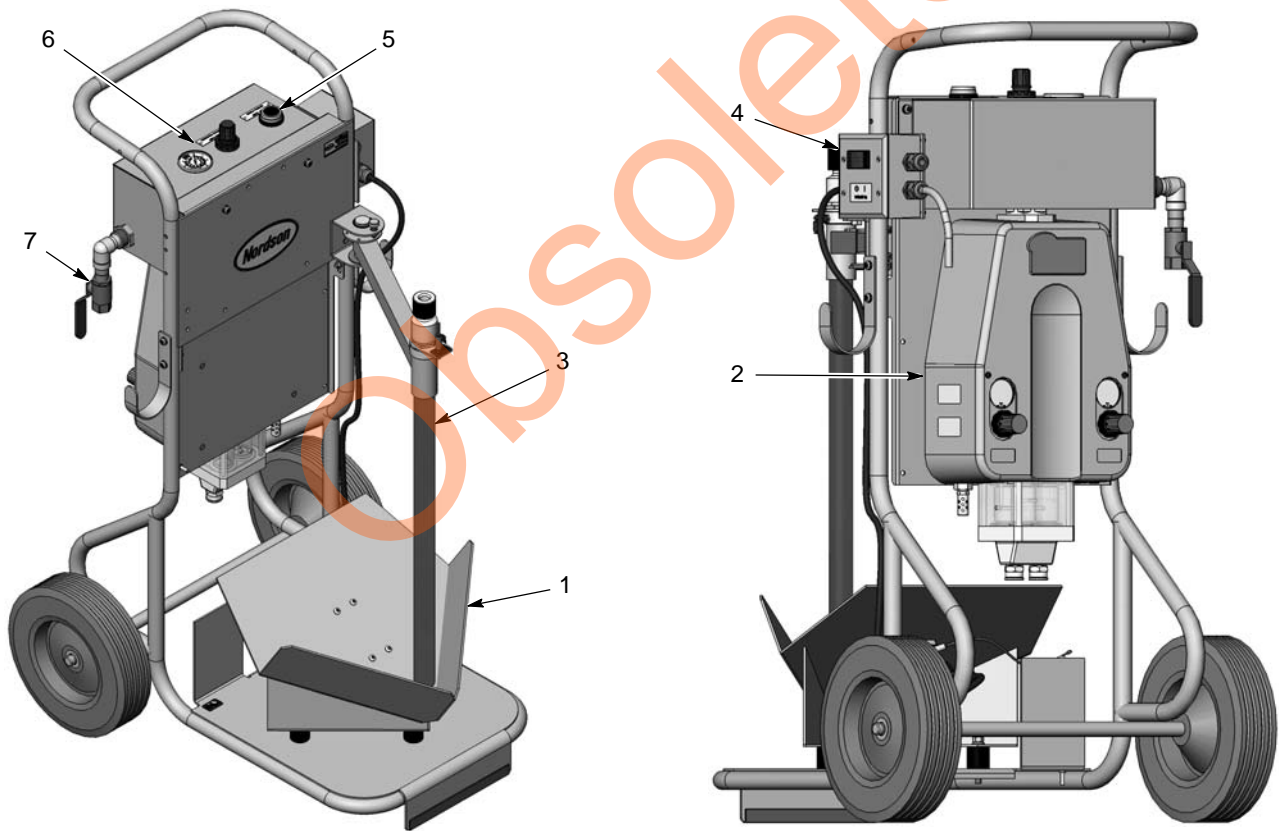


Figure 1 Prodigy Mobile Box Unloader System Components

- | | | |
|--------------------------|------------------------------|---------------------------------|
| 1. Vibrator table | 4. Vibrator motor switch box | 6. Pump air regulator and gauge |
| 2. Prodigy transfer pump | 5. Pump purge control | 7. Inlet air ball valve |
| 3. Pickup tube | | |

Installation

1. Unpack the system.
2. See Figure 2. Pull up on the lock knob (1) and swing the pickup tube arm (2) out. Release the lock knob to hold the arm in place.
3. Install the pickup tube (3) into the collar on the end of the arm.
4. Connect the 16-mm transfer tubing (4) to the pickup tube adapter.
5. Plug the ground wire (9) into the ground socket (8) on the pickup tube.
6. Connect the three leads of the electrical cable (10) to a three-pronged electrical plug or electrical panel. Electrical power supplied to the system must match the vibrator motor rating.
7. Connect a source of compressed air to the 1/2 in. NPT ball valve (11).
8. Connect the ground cable clamp (12) to a true earth ground.

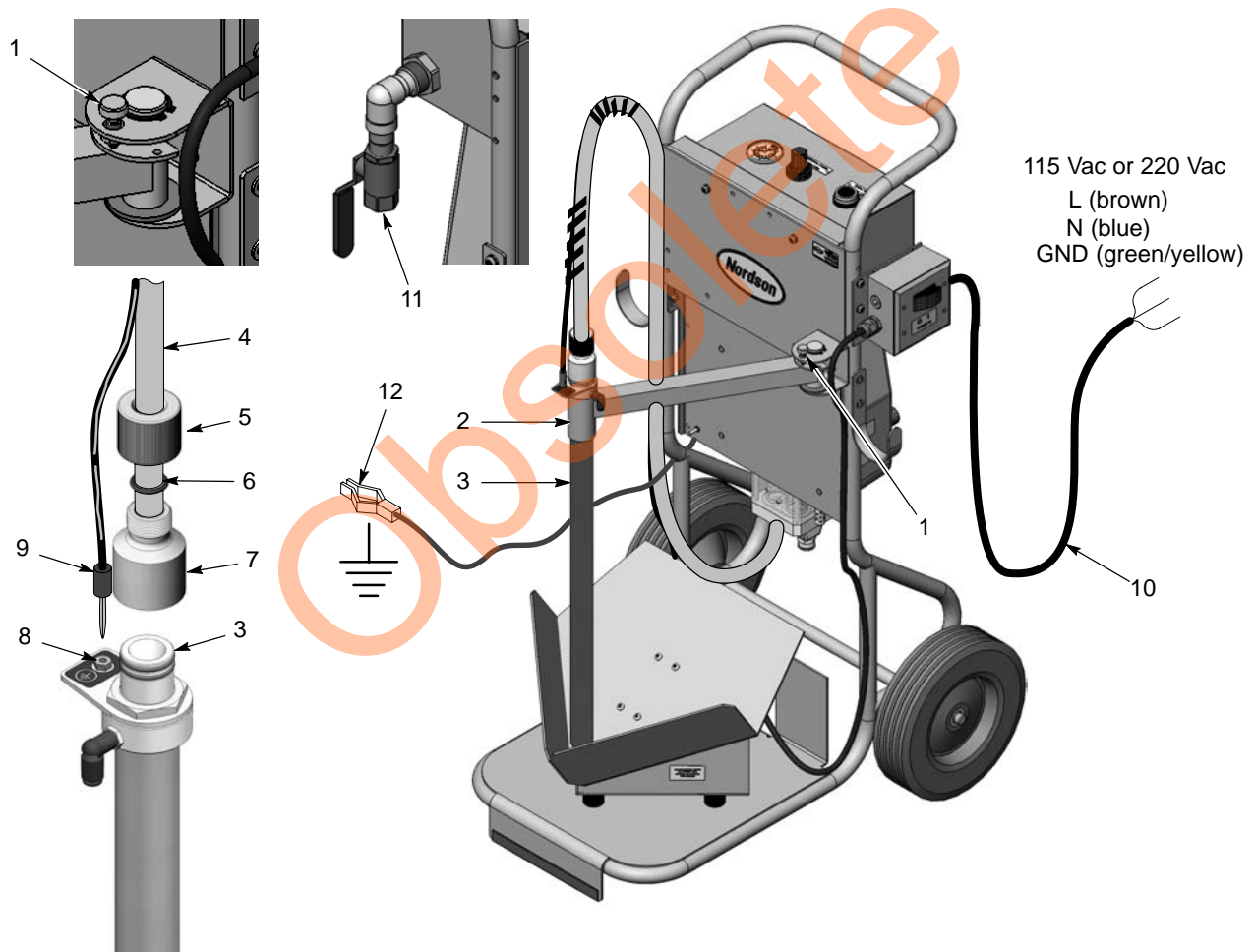


Figure 2 Installation

- | | | |
|--------------------|------------------|------------------|
| 1. Lock knob | 5. Nut | 9. Ground wire |
| 2. Arm | 6. O-ring | 10. Power cable |
| 3. Pickup tube | 7. Adapter | 11. Ball valve |
| 4. Transfer tubing | 8. Ground socket | 12. Ground cable |

Note: The pickup tube includes an elbow fitting for fluidizing air. Fluidizing air is not used with this application.

Pump Output Connection

See Figure 3. 30 meters (100 ft) of 16-mm transfer tubing is included with the system. Connect one end of the tubing to the delivery fitting. Connect the other end to the feed hopper inlet.

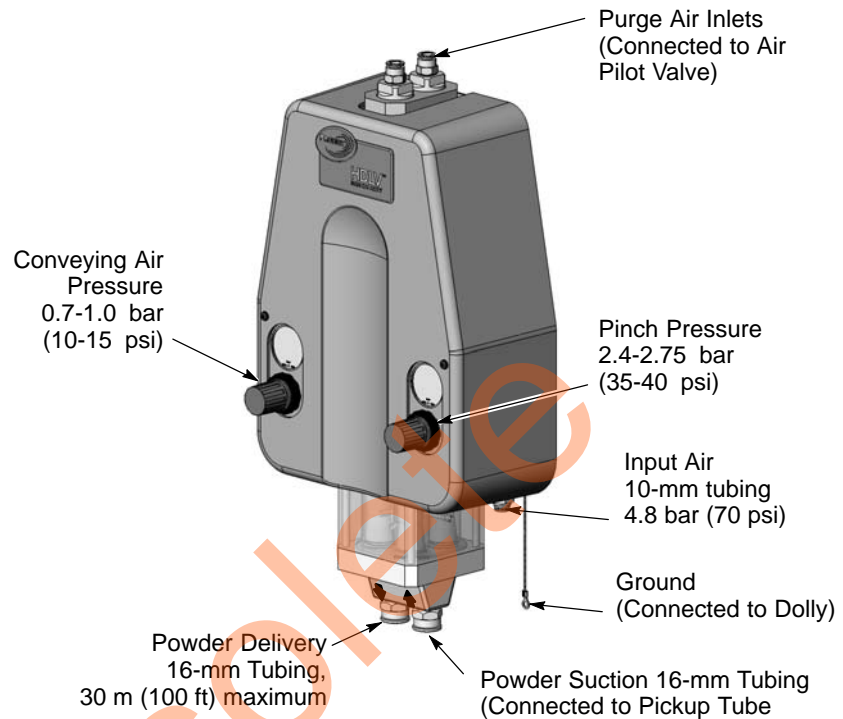


Figure 3 Pump Connections and Controls

Operation



WARNING: Input power must match the rating on the switch box label.

1. Supply electrical power and compressed air to the system.
2. Lift the pickup tube and place a box of powder on the vibrator table.
3. Open the box and plastic bag and lower the pickup tube into the powder.
4. Use the bag tie wrap to secure the plastic bag around the pickup tube.

NOTE: Fluidizing air to pickup tube is not used with this pump.

5. Turn on the vibrator motor.
6. Open the ball valve to supply air to the pneumatic panel.
7. Adjust the pump air pressure to 4.8 bar (70 psi). This provides an approximately 500 millisecond cycle rate.
8. To purge the pump and the suction and delivery tubing, press and hold the purge button on the pneumatic panel (See Figure 1).

Repair

Switch Box/Vibrator Motor Connections

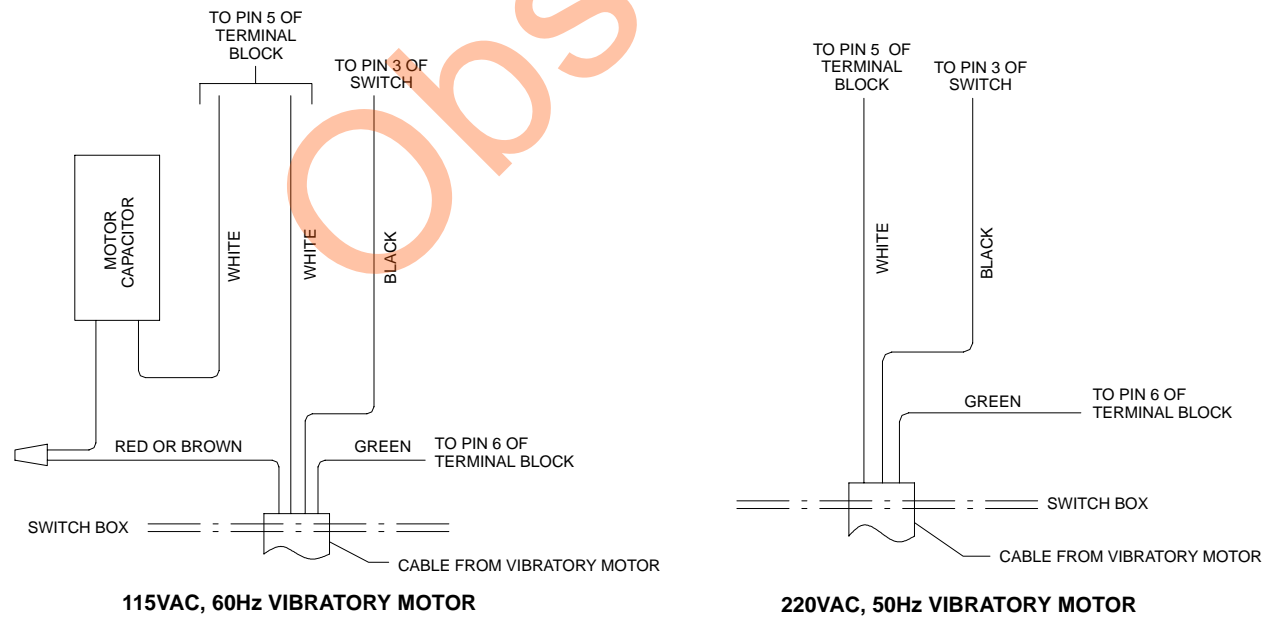
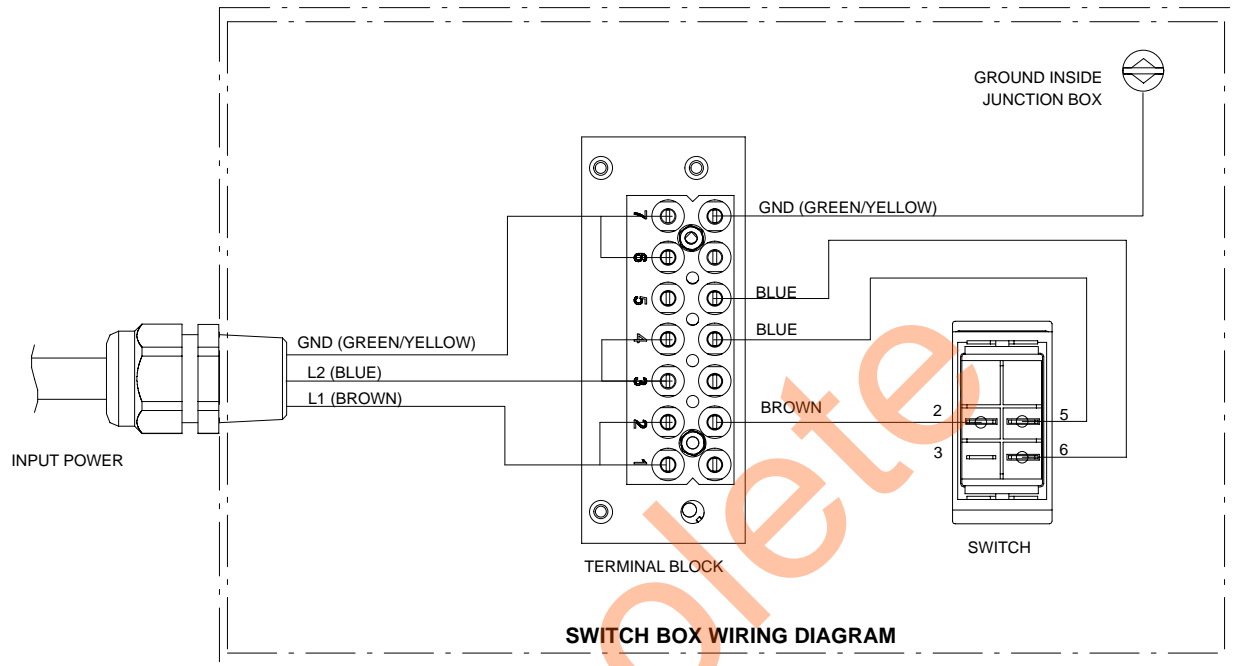


Figure 4 Switch Box and Vibrator Motor Connections

Ground Connections



WARNING: Make sure all ground connections are complete and secure. Operating the transfer system without proper grounding is hazardous and could result in personal injury or property damage.

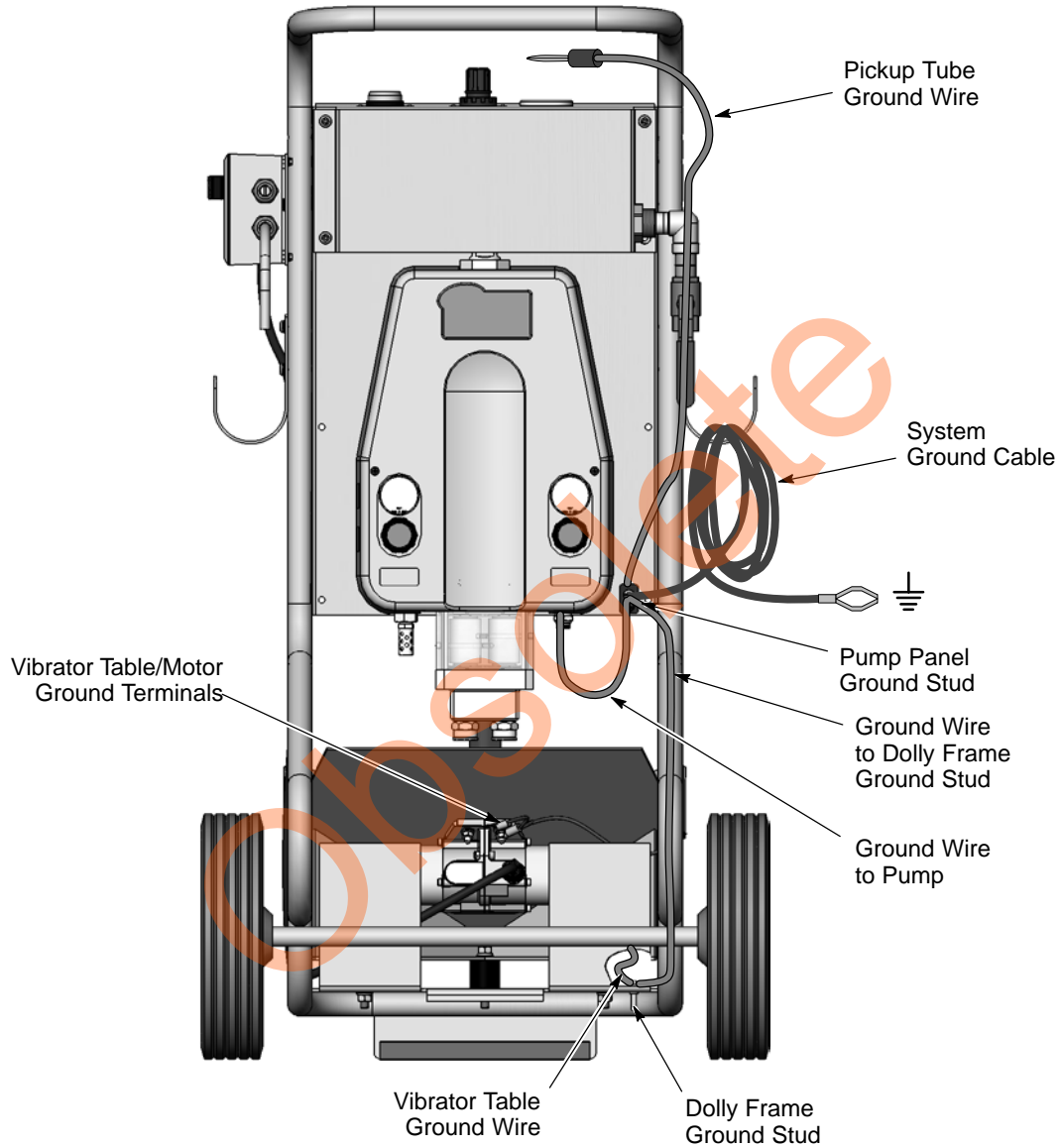


Figure 5 System Ground Connections

Parts

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

Systems

Part	Description	Note
1091056	SYSTEM, dolly, 115V VBF/HDLV, Prodigy	
1091113	SYSTEM, dolly, 220V VBF/HDLV, Prodigy	

System Parts

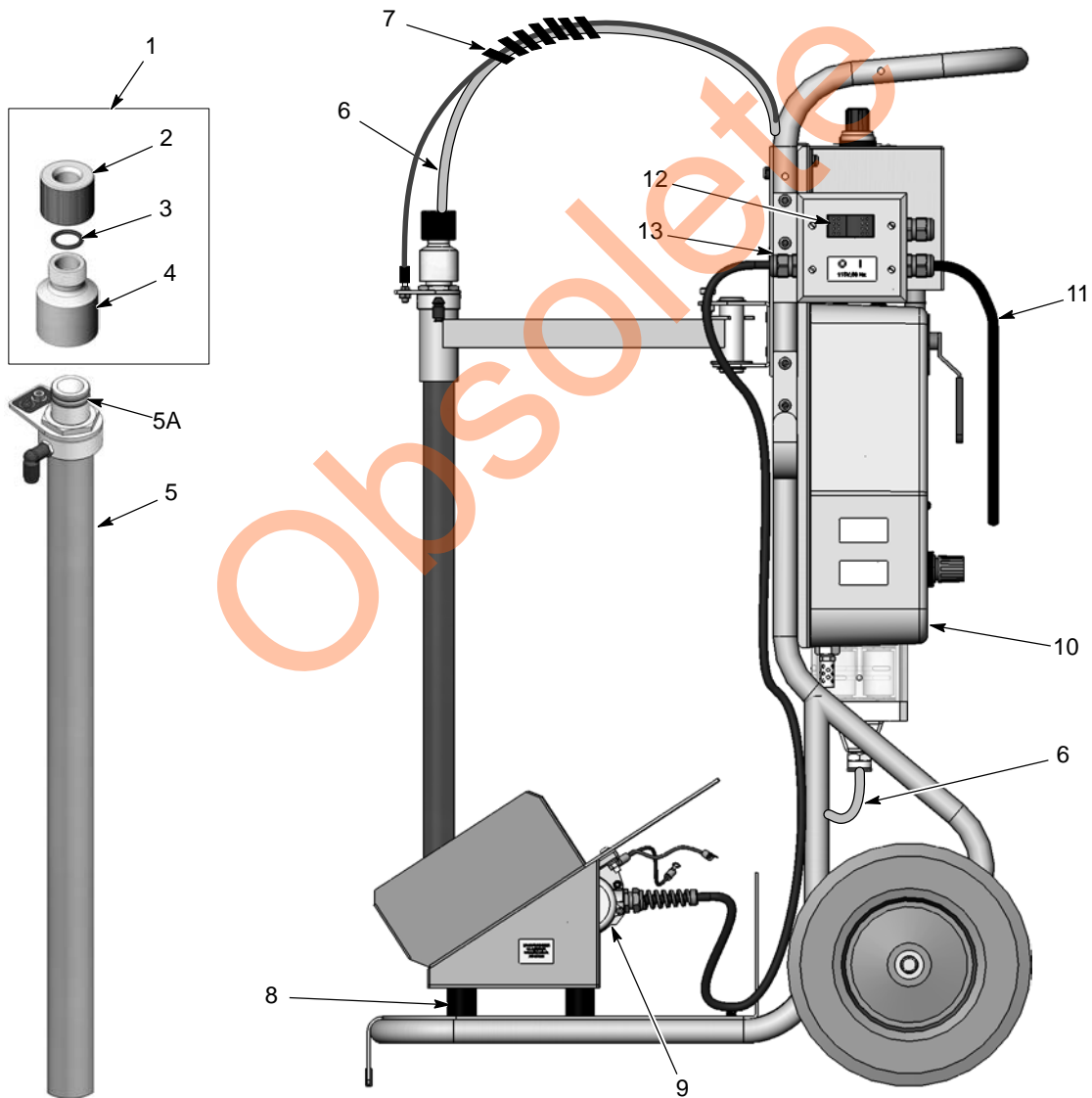


Figure 6 System Parts

Item	Part	Description	Quantity	Note
1	1068409	DISCONNECT, hi-cap HDLV pump, w/o mount O-ring	1	
2	1068402	• NUT, tube retaining, hi-cap, HDLV pump	1	
3	941143	• O-RING, silicone, 0.625 x 0.813 x 0.094 in.	1	
4	1068400	• MOUNT, pump adapter, w/o O-ring gland	1	
5	1076407	KIT, fluidizing, pickup tube, VBF, transfer	1	A
NS	1075971	• TUBE, one piece, fluidizing, pickup, VBF	1	
5A	941185	• • O-RING, silicone, conductive, 0.875 x 1.062 in.	2	
6	1091201	TUBE, polyurethane, 16 mm OD	AR	
7	900517	TUBING, poly, spiral cut, 0.62 ID	AR	
8	1018596	ISOLATOR, vibration, 30 mm dia x 8 mm studs	3	
9	1074467	KIT, service, 115V vibrator motor, w/capacitor	1	B
NS	1074382	• VIBRATOR, electrical, 115V, 60 Hz, w/connector	1	B
9	1076854	KIT, service, 220V, vibrator motor, w/capacitor	1	B
NS	1074383	• VIBRATOR, electrical, 220V, 50 Hz, w/connector	1	B
10	1092240	PUMP ASSEMBLY, high capacity, generation II, HDLV, packaged	1	
11	1029029	CABLE, power, 3 wire, 16 ft.	1	
12	322404	SWITCH, rocker, DPST, dust-tight	1	
13	972808	CONNECTOR, strain relief, 1/2 in. NPT	2	
NS	301841	STRAP, Velcro, w/buckle, 25 x 3 cm	AR	
NS	1063654	TUBE, polyethylene, 16-mm OD	100 ft	D
<p>NOTE A: Kit contains tubing and fittings to connect fluidizing air to the pickup tube. These parts are not used in this application and can be discarded.</p> <p>B: Vibrator motor kits contain replacement capacitor, which is installed in the switch box. Refer to Figure 4 for wiring diagram.</p> <p>C: Air tubing, pneumatic control module to pump.</p> <p>D: Powder transfer tubing. 30 m (100 ft) maximum.</p> <p>AR: As Required</p> <p>NS: Not Shown</p>				
				<i>Continued...</i>

Pneumatic Manifold Parts

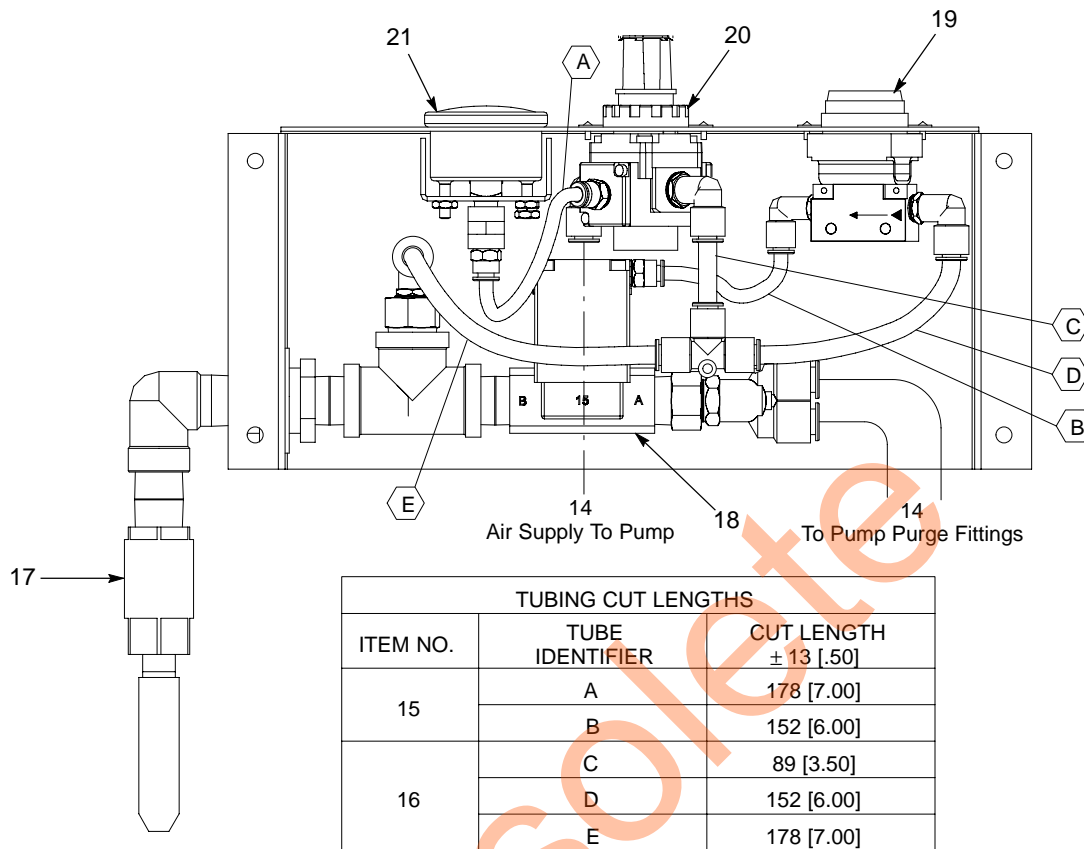


Figure 7 Pneumatic Control Module Parts

Item	Part	Description	Quantity	Note
14	900740	TUBING, polyurethane, 10 mm	AR	A
15	900742	TUBING, polyurethane, 6/4 mm, blue	AR	A
16	900618	TUBE, polyurethane, 8 mm OD, blue	AR	A
17	901151	VALVE, ball, 1/2 in. NPT	1	
18	901074	VALVE, airpilot, 2 way	1	
19	1064551	VALVE, push button, control	1	
20	1058680	REGULATOR, 1/8 in. NPT, 1/4 in. NPT, 7-125 psi	1	
21	901228	GAUGE, air, 0-100 psi, 0-7 kg/cm ²	1	

NOTE A: Order in increments of one foot.

AR: As Required

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