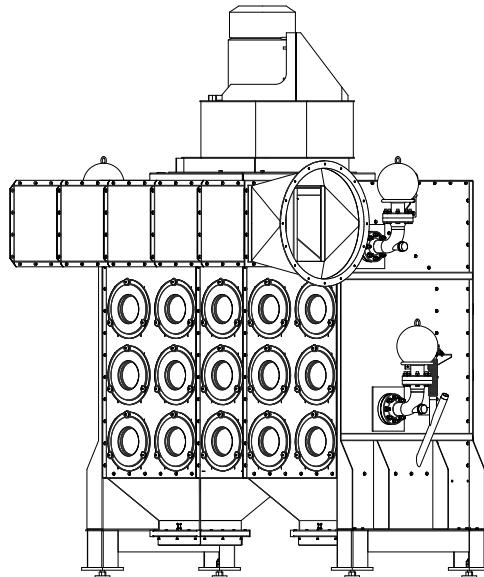


IVEC® Afterfilter Installation and Seasoning



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

This document provides instructions for the installation of new IVEC® afterfilter cartridge filters and the proper procedure to season the cartridge filters for optimal performance and longevity of the filters and the system.



PD14333

Figure 1 IVEC Afterfilter Powder Collector

Cartridge Filter Removal

1. Remove the outer filter covers and inner filter covers behind them to expose the old cartridge filters within the collector.
2. Remove each cartridge filter, tapping the sides of the afterfilter collector housing to knock any loose powder from the walls.
3. Empty the system's dust collector.

Installing New Afterfilter Cartridge Filters



WARNING: Wear protective clothing, safety goggles, and approved respiratory protection whenever handling powder or performing maintenance on the powder system. Follow personal protection equipment recommendations included on the Material Safety Data Sheet for the powder being used.

See Figure 2.

1. Orient cartridge filters to ensure the foam seal will face the inside of the collector when installed.
2. Insert cartridge filters into the collector until the outermost cartridge filter appears flush with the external face of the collector.
3. Install the inner filter cover, tightening the handle until the cover is past the front face of the collector and approximately 1 in. (25.4 mm) of threaded rod is exposed.



Filter Orientation



Filters Installed



Inner Filter Cover Fitment



Measuring Exposed Threads

Figure 2 IVEC Cartridge Filter Installation

NOTE: Do not overtighten the inner filter cover. No more than 1 1/8 in. (28.5 mm) of threaded rod should appear beyond the handle.

See Figure 3.

4. Ensure the gap between outermost cartridge filter and the inner cover plate is approximately 3/16 in. (4.76 mm).
5. Install outer cover until it bottoms out on the inner cover handle. There will be approximately a 3/16 in. (4.76 mm) gap between the outer cover and the face of the collector.

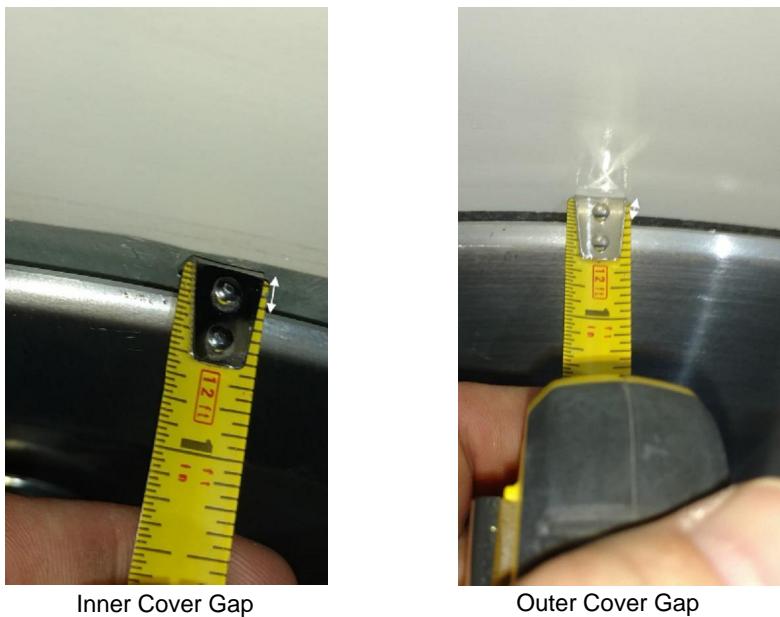


Figure 3 Filter Cover Installation Gaps

Seasoning The Cartridge Filters



WARNING: Wear protective clothing, safety goggles, and approved respiratory protection whenever handling powder or performing maintenance on the powder system. Follow personal protection equipment recommendations included on the Material Safety Data Sheet for the powder being used.

New cartridge filters must be properly seasoned. Improperly seasoned cartridge filters may suffer from reduced performance and a shortened lifespan.

Cartridge filter seasoning is accomplished by introducing fresh powder to the afterfilter collector through the cyclone inlet duct. Seasoning cartridge filters requires a minimum of 10 lbs (4.5 kg) of fresh powder for each cartridge filter in the IVEC afterfilter powder collector. The standard 11250 CFM system uses 15 cartridge filters, and therefore requires 150 lbs (67.5 kg) of fresh powder for the seasoning procedure.

Seasoning the cartridge filters requires the use of a hand-held velometer to ensure proper airflow through the system.

See Figure 4.

1. Press the *Exhauster Start* button and turn the *Pulse On Demand* switch to the *On-Demand* position. In the event a *Pulse On Demand* switch is not present, turn the blow down air pressure to 0 PSI.
2. Measure the initial average air velocity across the booth part openings using a hand-held velometer.
3. Record the cartridge filter and final filter static pressures observed on the pressure gauges on the system control panel.
4. Slowly add powder onto the floor of the booth in front of the inlet duct opening while the exhauster is running.



Figure 4 ColorMax® 2 Booth and Cyclone System

5. When the proper amount of powder has been added to the system, press the *Exhauster Stop* button.
6. Open the transfer pan under the cyclone to allow powder to flow directly to the after filter.
7. Once powder is no longer visible at the booth floor inlet, open the split cyclone all the way to ensure all fresh powder is now sent to the after filter.
8. After all powder is exhausted to the after filter, close the transfer pan and split cyclone.
9. Press the *Exhauster Start* button and record cartridge and final filter pressures.
10. Turn the cartridge blow down pressure to 95 PSI.
11. Open the damper on the fan discharge after about three minutes.
12. Record the average air velocity across the booth openings using a hand-held velometer. Average face velocity of air through the booth system should be close to 140 feet per minute (42.7 meters per minute).
13. Record the cartridge filter and final filter static pressures observed on the pressure gauges on the system control panel once again.
14. If velometer and pressure readings are within acceptable ranges, cartridge filter seasoning is complete and the system is ready for use. It is advisable to perform a color change process to clean the booth and cyclone before production.

NOTE: Do not allow excessive airflow through the filters at initial startup, or immediately after filter changes. The increased velocity of the system may plug up the filters

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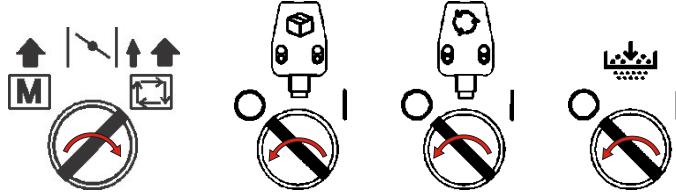
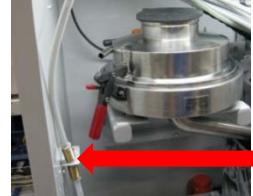
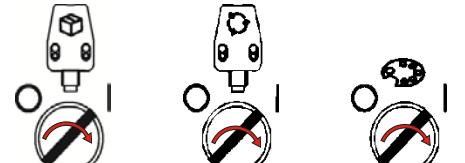
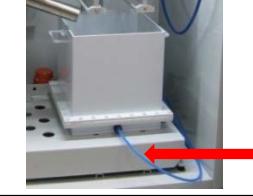
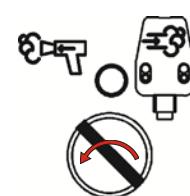
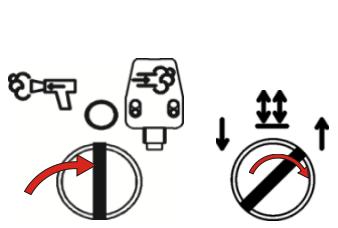
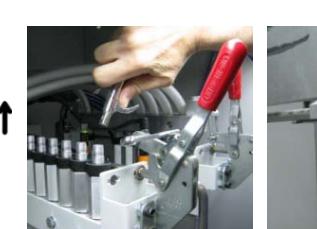
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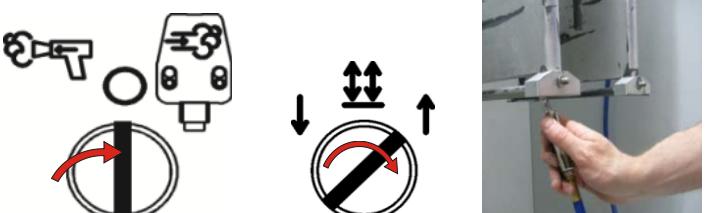
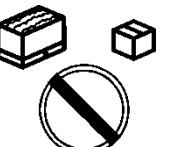
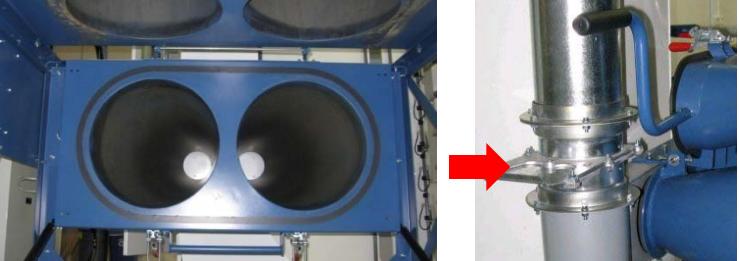
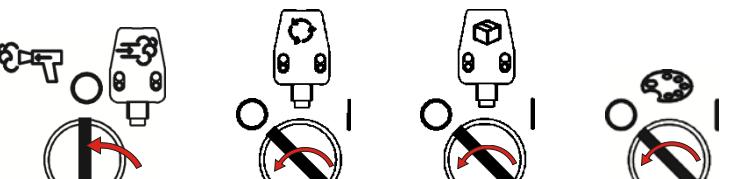
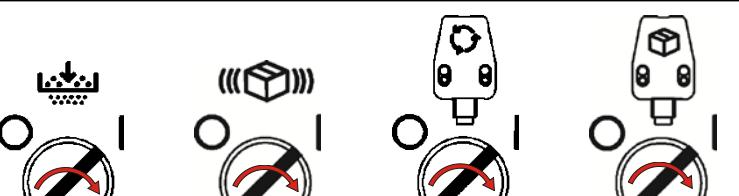


Caution: For all blow-off procedures, use the grounded blow-off gun and hose assembly provided by Nordson.

Color Change Tasks: Cyclone Side Operator

<p>1. Encore® manual guns: Disconnect the powder hose from the spray gun and connect it to the purge port. Prodigy® manual guns: Hang up the spray gun so it is pointing into the booth. Sure Coat® manual guns: Purge the spray gun, then disconnect the powder hose and insert the end of the hose into the booth.</p>	 <p>Purge Port</p>
<p>2. Move to the feed center</p> <ol style="list-style-type: none"> Make sure the damper switch is set to AUTO. Turn OFF the bulk feed pump (if equipped), the reclaim pump, and the sieve. 	
<ol style="list-style-type: none"> Disconnect the bulk and reclaim hoses from the sieve and connect them to the purge ports. At the bulk feed system, remove the siphon hose from the powder supply and connect it to the purge port. 	 <p>Purge Port</p>
<ol style="list-style-type: none"> Unclamp the sieve deck and turn the pan chute so it points toward the back of the feed center. Re-clamp the deck. 	 <p>Pan Chute</p>
<ol style="list-style-type: none"> Turn ON the bulk feed pump (if equipped), reclaim pump, and color change switch. <p>NOTE: Lances will move up automatically.</p>	
<ol style="list-style-type: none"> Turn OFF the vibratory table (if used). 	
<ol style="list-style-type: none"> If used, disconnect the fluidizing air tubing from the hopper. Remove the hopper from the feed center. 	 <p>Fluidizing Tubing</p>
<ol style="list-style-type: none"> Blow off the lower parts of the lances and the purge manifold. 	
<p>⚠ Make sure the other operator is clear of the spray guns.</p> <ol style="list-style-type: none"> Turn the purge switch to the GUN PURGE position. 	 <p>Lances automatically move down onto the purge manifold, are clamped in place, and the internal gun purge begins.</p>
<ol style="list-style-type: none"> Unclamp the sieve. One at a time, remove the deck, screen, and pan and blow them clean. Remove the gasket from the screen and clean it. Set the sieve components outside the feed center. 	
<ol style="list-style-type: none"> Lance assemblies equipped with hose manifolds: <ol style="list-style-type: none"> When the internal gun purge is done, raise the lances halfway, unclamp the hose manifold, and blow clean the manifold and pump outlet nozzles. Blow down into the nozzles, and up into the lance ports from the bottom of the lances. 	  

Color Change Tasks: Cyclone Side Operator

<p>q. Lance assemblies <i>not</i> equipped with hose manifolds:</p> <ul style="list-style-type: none"> i. When the internal gun purge is done, raise the lances all the way. ii. Blow off the bottom of the lances and up into the lance ports. 	
<p>r. Blow off the lances, powder hoses, air tubing, sieve bracket, vibratory table and purge manifold, and inside ceiling, walls, and floor of the feed center.</p>	
<p>s. Turn the purge switch to the PUMP position.</p>	
<p>3. Move to the cyclone</p> <p>! Transfer pan must be cleaned while pump purge is cycling</p> <ul style="list-style-type: none"> a. Open the transfer pan and blow it clean while the bulk feed and reclaim pumps are purging. b. Blow clean the bottom flange of the cyclone. 	
<p>c. Lock the transfer pan in the open position.</p>	
<p>4. Move to the feed center</p> <ul style="list-style-type: none"> a. Assemble the sieve with the pan chute pointing toward the lances. b. Load a feed hopper or powder box onto the table. c. Turn the powder source switch to hopper or box. d. Connect the fluidizing tubing to the hopper (if used). 	
<p>5. Move to the cyclone</p> <p>! Riser cleaning must be completed and riser door closed before cyclone can be opened</p> <ul style="list-style-type: none"> b. Release the latches and swing the lower section into the cleaning position. c. Open the cleaning duct slide gate. 	
<p>6. Move to the feed center</p> <ul style="list-style-type: none"> a. Turn the purge switch OFF. b. Turn the reclaim and bulk feed pumps OFF. c. Turn the color change switch OFF. <p>d. Lower the lance into the new powder.</p> <p>e. Connect the bulk transfer hose to the sieve.</p> <p>f. If not spraying to waste before production, connect the reclaim transfer hose to the sieve.</p> <p>g. At the bulk feed system, insert the pump siphon hose into the new powder.</p>	 
<p>h. Turn ON the sieve.</p> <p>i. Turn ON the vibratory table, if used.</p> <p>j. Turn ON the reclaim and bulk feed pumps.</p>	
<p>7. Move to the non-cyclone side operator platform</p> <ul style="list-style-type: none"> a. Connect the powder hose to the spray gun. <p>8. Move to the cyclone side operator platform</p> <ul style="list-style-type: none"> a. Connect the powder hose to the spray gun and start spraying the new powder. 	<p>9. If spraying to waste before production:</p> <ul style="list-style-type: none"> a. Spray until confident all old powder is out of the system. b. Move to the feed center, turn OFF the reclaim pump and sieve. c. Connect the reclaim hose to the sieve. d. Turn ON the sieve and reclaim pump.



Caution: For all blow-off procedures, use the grounded blow-off gun and hose assembly provided by Nordson.

Color Change Tasks: Non-Cyclone Side Operator

<p>1. Press the ancillary equipment clean cycle button.</p>	<p>The gun movers go to their home position and the exterior of the automatic spray guns are blown off.</p>
<p>2. Move to the entry end of the booth</p> <ul style="list-style-type: none"> a. Close and latch the booth entry doors. 	
<p>3. Return to the non-cyclone side operator platform</p> <ul style="list-style-type: none"> a. Encore® manual guns: Disconnect the powder hose from the gun and connect it to the purge port. Remove the nozzle and electrode holder and blow them clean. Point the blow gun into the powder inlet and blow out the gun. Blow off the gun exterior. Prodigy® manual guns: Blow the gun clean and hang it up so it is pointing into the booth. Sure Coat® manual guns: Purge the gun, then disconnect the powder hose and insert the end of the hose into the booth. Remove the nozzle and blow it clean. From the hose inlet, blow out the powder path. Install the nozzle on the gun then hang it up. b. Close and latch the operator door. 	
<p>4. Move to the exit end of the booth – Perform coarse cleaning</p> <ul style="list-style-type: none"> a. Open the operator door and blow off the floor duct while walking toward the entrance. b. Blow off the AeroDecks™ and lift them open. c. Blow off the stainless steel riser door, then exit the booth. 	
<p>5. Move to the cyclone side operator platform</p> <ul style="list-style-type: none"> a. Clean the spray gun and hang it up as described previously. b. Close and latch the operator door. c. Move the booth off-line. (Roll-on/roll-off booth) 	
<p>6. Move to the exit end of the booth – Perform finish cleaning</p> <ul style="list-style-type: none"> a. Blow off the door and exit opening sills. Open the door and blow off the entry sills. 	
<ul style="list-style-type: none"> b. When the automatic guns closest to the exit end start purging, enter the booth and blow off the interior of the booth using a sweeping motion, working from top to bottom, from exit end to entry end of booth. c. Clean the ceiling, walls, and floor, blowing the powder toward the riser inlet. d. Blow off the automatic gun tips. e. Blow off the AeroDecks and leave them in the open position. 	
<ul style="list-style-type: none"> f. Blow out the riser inlet while using a sweeping motion. g. Open the riser door and blow out the interior of the riser. 	

Color Change Tasks: Non-Cyclone Side Operator

<ul style="list-style-type: none"> h. Set the AeroDecks in the operating position and exit the booth. i. Close and latch the exit door. 	
<p>7. Move to the cyclone</p> <ul style="list-style-type: none"> a. Blow off the lower section of the cyclone. Start at the flange and blow toward the bottom with a circular/spiral motion. b. Blow off the bottom flange and interior of the cyclone using a circular/spiral motion. Break air vortex in cyclone by using linear side-to-side and front-to-back motion inside cyclone. 	
<ul style="list-style-type: none"> c. Swing the lower section of the cyclone down and latch it closed. d. Swing the transfer pan down and latch it closed. e. Close the cleaning duct slide gate. f. Open the booth doors at the entry end of the booth (if not already opened). g. Start spraying new powder. 	
<p>8. If spraying to waste</p> <ul style="list-style-type: none"> a. Spray until confident that all old powder is out of the system. b. Do not start production until the cyclone side operator has connected the reclaim hose to the sieve. 	



Nordson Corporation • Amherst, Ohio USA

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Issued 06/15

Disclaimer: Due to the different number of tasks and explanations required for each operator, the tasks cannot line up exactly on paper. Exact coordination is approximate. Where it is CRITICAL for operators to coordinate tasks, it is noted in the procedure.

Color Change Tasks: Cyclone Side Operator

1. **Encore® manual guns:** Disconnect the powder hose from the spray gun and connect it to the purge port.
Prodigy® manual guns: Hang up the spray gun so it is pointing into the booth.
Sure Coat® manual guns: Purge the spray gun, then disconnect the powder hose and insert the end of the hose into the booth.
2. **Move to the feed center**
 - a. Make sure the damper switch is set to AUTO.
 - b. Turn OFF the bulk feed pump (if equipped), the reclaim pump.
 - c. Disconnect the bulk and reclaim hoses from the sieve and connect them to the purge ports.
 - d. At the bulk feed system, remove the siphon hose from the powder supply and connect it to the purge port.
 - e. Unclamp the sieve deck and turn the pan chute so it points toward the back of the feed center.
 - f. Re-clamp the deck.
 - g. Turn ON the bulk feed pump (if equipped), reclaim pump, and color change switch.
NOTE: Lances will move up automatically.
 - h. Turn OFF the vibratory table (if used).
 - i. If used, disconnect the fluidizing air tubing from the hopper.
 - j. Remove the hopper from the feed center.
3. **Move to the cyclone side operator platform**
 - a. **Encore® manual guns:** Disconnect the powder hose from the gun and connect it to the purge port. Remove the nozzle and electrode holder and blow them clean. Point the blow gun into the powder inlet and blow out the gun. Blow off the gun exterior.
 - b. **Prodigy® manual guns:** Blow the gun clean and hang it up so it is pointing into the booth.
 - c. **Sure Coat® manual guns:** Purge the gun, then disconnect the powder hose and insert the end of the hose into the booth. Remove the nozzle and blow it clean. From the hose inlet, blow out the powder path. Install the nozzle on the gun then hang it up.
 - d. Close and latch the operator door.
4. **Move to the exit end of the booth – Perform Coarse Cleaning**
 - a. Open the operator door and blow off the floor duct while walking toward the entrance.
 - b. Blow off the AeroDecks™ and lift them open.
 - c. Blow off the stainless steel riser door, then exit the booth.
5. **Move to the cyclone side operator platform**
 - a. Clean the spray gun and hang it up as described previously.
 - b. Close and latch the operator door.
 - c. Move the booth off-line. (Roll-on/roll-off booth)
6. **Move to the exit end of the booth – Perform Finish Cleaning**
 - a. Blow off the door and exit opening sills. Open the door and blow off the entry sills.

Color Change Tasks: Non-Cyclone Side Operator

1. **Press the ancillary equipment clean cycle button.**

Caution: For all blow-off procedures, use the grounded blow-off gun and hose assembly provided by Nordson.
2. **Move to the entry end of the booth**
 - a. Close and latch the booth entry doors.
3. **Return to the non-cyclone side operator platform**
 - a. **Encore® manual guns:** Disconnect the powder hose from the gun and connect it to the purge port. Remove the nozzle and electrode holder and blow them clean. Point the blow gun into the powder inlet and blow out the gun. Blow off the gun exterior.
 - b. **Prodigy® manual guns:** Blow the gun clean and hang it up so it is pointing into the booth.
 - c. **Sure Coat® manual guns:** Purge the gun, then disconnect the powder hose and insert the end of the hose into the booth. Remove the nozzle and blow it clean. From the hose inlet, blow out the powder path. Install the nozzle on the gun then hang it up.
 - d. Close and latch the operator door.
4. **Move to the exit end of the booth – Perform Coarse Cleaning**
 - a. Open the operator door and blow off the floor duct while walking toward the entrance.
 - b. Blow off the AeroDecks™ and lift them open.
 - c. Blow off the stainless steel riser door, then exit the booth.
5. **Move to the cyclone side operator platform**
 - a. Clean the spray gun and hang it up as described previously.
 - b. Close and latch the operator door.
 - c. Move the booth off-line. (Roll-on/roll-off booth)
6. **Move to the exit end of the booth – Perform Finish Cleaning**
 - a. Blow off the door and exit opening sills. Open the door and blow off the entry sills.

Color Change Tasks: Cyclone Side Operator		Color Change Tasks: Non-Cyclone Side Operator	
q.	Lance assemblies <i>not</i> equipped with hose manifolds: <ol style="list-style-type: none"> When the internal gun purge is done, raise the lances all the way. Blow off the bottom of the lances and up into the lance ports. 	b.	When the automatic guns closest to the exit end start purging, enter the booth and blow off the interior of the booth using a sweeping motion, working from top to bottom, from exit end to entry end of booth.
r.	Blow off the lances, powder hoses, air tubing, sieve bracket, vibratory table and purge manifold, and inside ceiling, walls, and floor of the feed center.	c.	Clean the ceiling, walls, and floor, blowing the powder toward the riser inlet.
s.	Turn the purge switch to the PUMP position.	d.	Blow off the automatic gun tips.
3.	Move to the cyclone <p>! Transfer pan must be cleaned while pump purge is cycling</p> <ol style="list-style-type: none"> Open the transfer pan and blow it clean while the bulk feed and reclaim pumps are purging. Blow clean the bottom flange of the cyclone. Lock the transfer pan in the open position. 	e.	Blow off the riser inlet while using a sweeping motion.
		f.	Open the riser door and blow out the interior of the riser.
		g.	
		h.	Set the AeroDecks in the operating position and exit the booth.
		i.	Close and latch the exit door.
4.	Move to the feed center <ol style="list-style-type: none"> Assemble the sieve with the pan chute pointing toward the lances. Load a feed hopper or powder box onto the table. Turn the powder source switch to hopper or box. Connect the fluidizing tubing to the hopper (if used). Turn the purge switch OFF. Turn the reclaim and bulk feed pumps OFF. Turn the color change switch OFF. 		
5.	Move to the cyclone <p>! Riser cleaning must be completed and riser door closed before lower cyclone can be opened</p> <ol style="list-style-type: none"> Release the latches and swing the lower section into the cleaning position. Open the cleaning duct slide gate. 		
6.	Move to the feed center <ol style="list-style-type: none"> Lower the lance into the new powder. Connect the bulk transfer hose to the sieve. If not spraying to waste before production, connect the reclaim transfer hose to the sieve. At the bulk feed system, insert the pump siphon hose into the new powder. Turn ON the sieve. Turn ON the vibratory table, if used. Turn ON the reclaim and bulk feed pumps. 		
7.	Move to the non-cyclone side operator platform <ol style="list-style-type: none"> Connect the powder hose to the spray gun. 	9.	If spraying to waste before production: <ol style="list-style-type: none"> Spray until confident all old powder is out of the system. Move to the feed center, turn OFF the reclaim pump and sieve. Connect the reclaim hose to the sieve. Turn ON the sieve and reclaim pump.
8.	Move to the cyclone side operator platform <ol style="list-style-type: none"> Connect the powder hose to the spray gun. 		If spraying to waste <ol style="list-style-type: none"> Spray until confident that all old powder is out of the system. Open the booth doors at the entry end of the booth (if not already opened). Start spraying new powder.
			8. If spraying to waste <ol style="list-style-type: none"> Spray until confident that all old powder is out of the system. Do not start production until the cyclone side operator has connected the reclaim hose to the sieve.