Waste Big Bag

Customer Product Manual
Part 7093466
Issued 04/21

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

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NORDSON DEUTSCHLAND GMBH

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.

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Change Record

Revision	Date	Change

EC DECLARATION OF CONFORMITY

ACCORDING TO CE DIRECTIVE 2006/42/ EC ANNEX II 1A

DESCRIPTION: **Big Bag Waste Station** (max. load 500kg)

FAMILY/MODELS: **p/n 7035368 and 7035345** All variants and models

APPLICABLE DIRECTIVES & STANDARDS USED TO VERIFY COMPLIANCE:

Directive 2006/42/EG (Machinery)
Directive 2014/34/EU (Explosive Atmosphere)
EN 60204-1: 2016 “Safety of Machinery - Electrical equipment of machines”
EN ISO 12 100:2010 “Safety of machinery - Basic concepts, general principles for design”

MARKING OF PRODUCT: CE

The equipment delivered is generally intended to be part of a powder coating system and can be operated on its own or in conjunction with other equipment.
In order to be in full compliance with the CE machinery directive and its amendments, the customer is obliged to respect the applicable regulations for his powder coating system upon incorporation of the equipment in the powder coating plant and before starting operation.

We hereby declare that the product specified conforms to the directives and standards described above and that it has been provided with a CE label. Provided the product is installed and operated in line with the Nordson manuals, its operation is safe.

Name and address of the responsible person authorized to compile the technical file

Kai Flockenhaus
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Date: 18/02/2021

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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

CAUTION: 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

WARNING: 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 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) 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.
- Do not use the air blow gun to clean your body. Compressed air can pierce the skin and if directed towards the face it could cause a severe eye injury.

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 EN50050–2, EN50177, EN16985, latest conditions. See Installation section – page 6 – for enclosure grounding points.

- All electrically conductive objects in the spray areas shall be electrically connected to ground with a resistance of not more than 1 ohm when measured with an appropriate instrument.
- Equipment to be grounded includes, but is not limited to, the floor of the spray area, operator working area 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.
- After servicing equipment, reconnect all disconnected equipment, ground cables and wires.

Action in the Event of a Malfunction

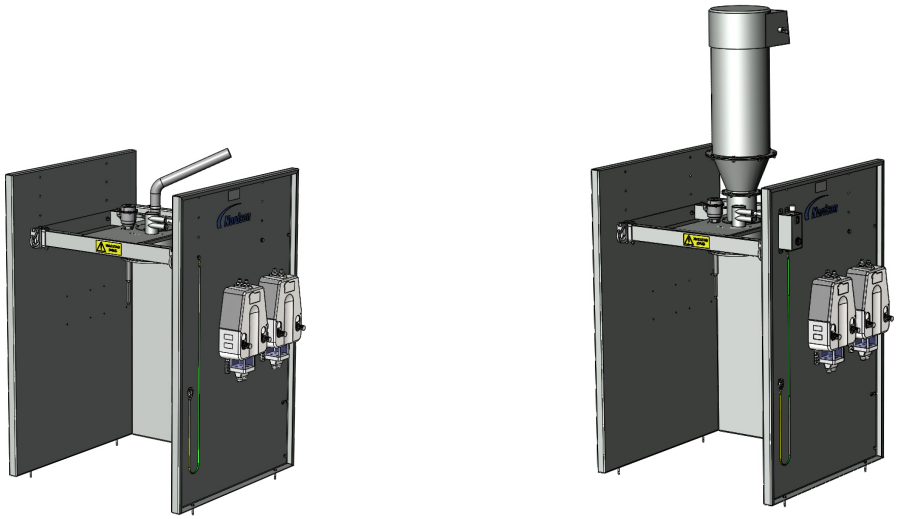
If a system or any equipment in a system malfunctions, shut off the system immediately and perform the following steps:

- 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



WASTE BIG BAG
VENTED

WASTE BIG BAG-
STAND ALONE

Figure 1 **Waste Big Bag**

The Waste Big Bag system is built exclusively for collecting the waste powder that accumulated in the Afterfilter. Using the Nordson Prodigy HDLV Transfer Pump, the waste powder is transferred into a big bag that is specifically designed for this intended use, in order to be disposed of correctly and safely. Any other use is considered as non–conforming. The manufacturer is not responsible for any incorrect use, the risk for this is assumed by the user alone.

Two versions are available, to accommodate different scenarios of the main system. The vented version is used when venting directly to the main system Afterfilter is possible. If it is not suitable to vent to the Afterfilter, the Stand Alone version, fitted with it's own venting extract and pulse cleaning cartridge filter, is an ideal solution.

The Waste Big Bag must only be operated in a way of proper and conforming use. Conforming use also means strict observance of all operating and maintenance instructions stipulated by the manufacturer or supplier of your equipment. Any further use is considered as not conforming. For damages resulting from any non–conforming use, is not the responsibility of the manufacturer/supplier.

NOTE: The Waste Big Bag station is deigned for bags with a maximum weight of 500 kg and mounted on a pallet. It is essential that where venting is fitted, it must be connected without obstruction or possibility of blockages. Grounding of the bag must be connected at all times during operation.

Powder Flow Process Diagram

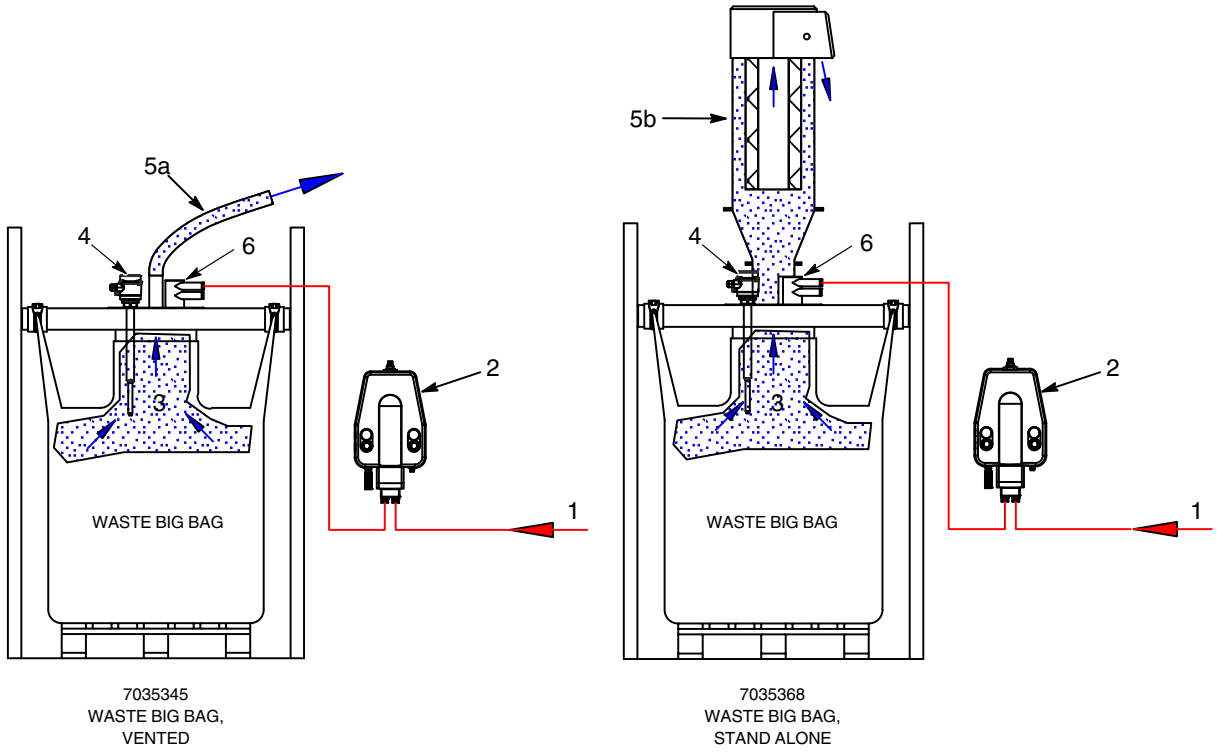


Figure 2 **Powder Flow Diagram**

Item	Component	Function
1	Waste powder	Waste powder path from the Afterfilter to the Waste Big Bag
2	Prodigy HDLV Transfer Pump	Draws powder from the Afterfilter and transfers it to the Waste Big Bag
3	Excess air	Excess air from the bag is extracted correctly and safely
4	Level Sensor (optional)	An optional level sensor can be fitted to alarm when the bag is full
5a	Vent Hose	Vents the excess air to the Afterfilter
5b	Dedicated Extract with Filter	Stand alone systems are fitted with a dedicated extract / filter unit for venting the excess air
6	Mini-Cyclone	Slows the velocity of the powder and allows it to fall under gravity into the bag

See Figure 3

Powder Flow Process Description

The Powder Flow Diagram shows the path for waste powder from the system's Afterfilter. The waste powder is continually transferred from the hopper section of the Afterfilter (1 - red lines). Passing through the Prodigy HDLV Transfer Pump (2), it enters the mini-cyclone (6) where it is able to fall under gravity, into the waste bag. Excess air (3 - blue lines) is exhausted either back to the Afterfilter on the vented system (5a) or through a dedicated extract with cartridge filter (5b) on the stand alone system.

Installation

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

NOTE: Pneumatic (including pressure and quality) and electrical supplies must be in accordance with the system drawings supplied by Nordson.

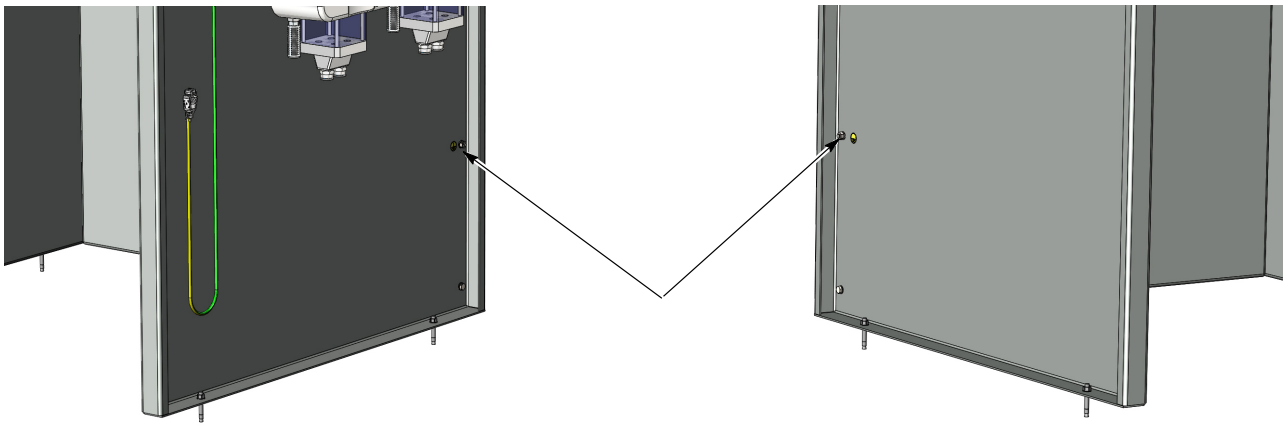


Figure 3 Enclosure Grounding Points

Preparing for Installation

NOTE: Waste Big Bag stations are delivered mainly assembled with minimal assembly required for the venting/extract. Installation of the unit should not be undertaken without the presence of a Nordson representative or a suitably qualified person.

1. Choose a level site on which to install the Waste Big Bag station. If part of a complete system, see the general layout drawings for location.
2. Seal concrete floors with a suitable material to avoid dust. Other floor surfaces should be of a type that is easy to keep clean.

Transport

Transport the unit so as to avoid damage. Use suitable packaging materials. Protect the unit from humidity, large temperature fluctuations (condensation), dust and vibrations.

Unpacking

Unpack the unit carefully to avoid damage. Inspect for any damage caused during transport. Save packing materials for possible later use, or otherwise dispose of properly according to local regulations.

Storage

Use suitable packaging materials. Protect the unit from humidity, large temperature fluctuations (condensation), dust and vibrations.

ATEX Zoning

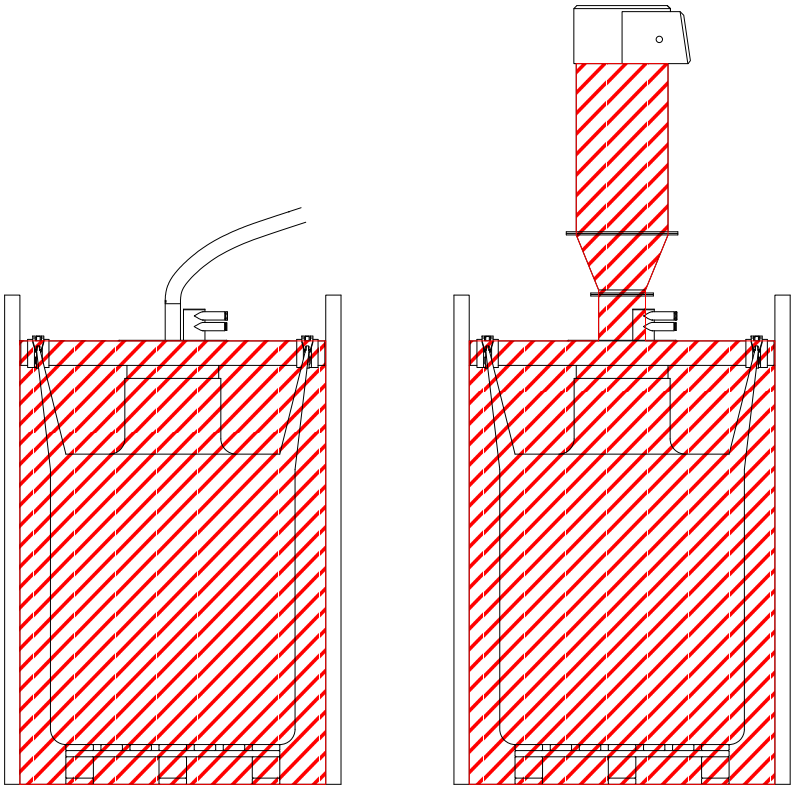


Figure 4 **Atex Zoning of Waste Big Bag**

ATEX Zoning suggested by Nordson

Operation

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

Daily Operation and Start Up

The Waste Big Bag is active when the main system is in operation. Check the system is correctly grounded, vent hoses are fitted (if a vented system) and the big bag is securely and safely loaded with pallet underneath as shown on the following page.

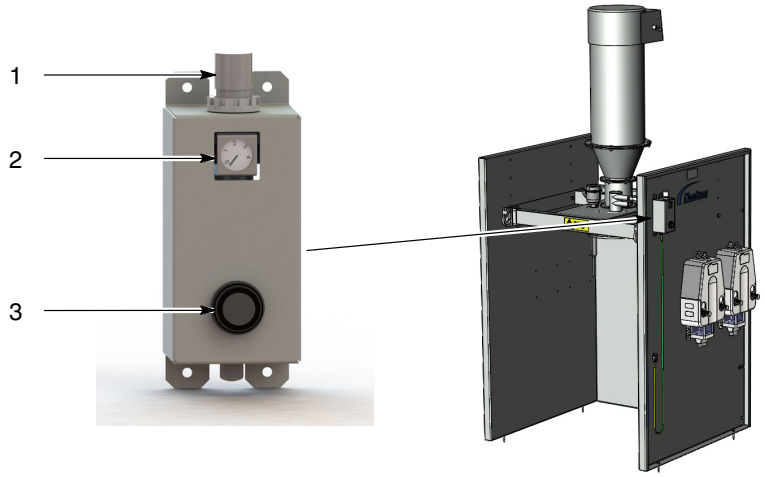


Figure 5 Cartridge Cleaning Push Button - Stand Alone Systems Only

Waste Big Bag systems that are Stand Alone are fitted with a single cartridge filter extract unit. To maintain optimum extract, the cartridge filter can be purge cleaned by pressing the push–button (3) shown above in Figure 4. It is recommended to purge clean after every change of big bag but can be done more or less frequently as required.

NOTE: Maximum pressure is 2.8 bar. Set using the regulator (1) and gauge (2)

Bag Installation Procedure

WARNING: Breathing in certain airborne dusts (including finishing powders) may be hazardous to health. Ask the powder manufacturer for a Material Safety Data Sheet (MSDS) for information. Use appropriate respiratory protection.

Figure 6

Position a suitable and strong pallet inside the Waste Big Bag station and place the new empty bag on top.

Figure 7

Starting with the 2 at the rear of the bag, attach all 4 support straps of the bag, to the support hooks on the frame and ensure the latch is closed.

Figure 8

Attach the opening of the bag to the vent cylinder and secure using the belt.

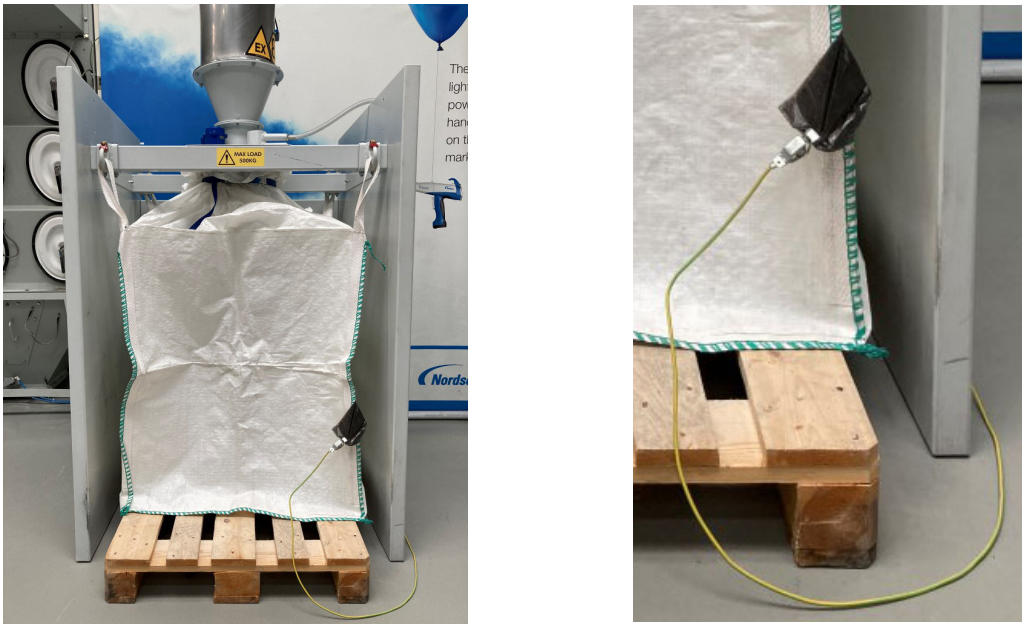


Figure 9

Connect the grounding wire clamp. Double check that everything is correctly fitted and secure before starting production.

Bag Removal – Switch off the system to avoid powder retuning to the bag. Disconnect the grounding wire. Loosen the belt and lower the neck of the bag then close to prevent powder escaping. Drive a suitable forklift truck in so it's ready to lift the pallet. Lift the pallet and bag enough so you can release the support straps. Lower the fork lift then remove and dispose of according to your company procedure and local regulations.

NOTE: If the system is fitted with a level sensor, be sure that the bag is clear of the level sensor probe before extracting the bag. Failing to do so could result in damaging the sensor.

Maintenance

WARNING: Breathing in certain airborne dusts (including finishing powders) may be hazardous to health. Ask the powder manufacturer for a Material Safety Data Sheet (MSDS) for information. Use appropriate respiratory protection.

CAUTION: It is important to follow the specific maintenance instructions of each product.

NOTE: **R** = Responsible person for performing the task. **Int** = Intervals at which this should be carried out

Maintenance

Location	Task	Procedure	R	Int
Waste Big Bag	Inspect level of waste powder	If bag is filled to up to the maximum. Follow local disposal regulations	OP	8
Waste Big Bag	Check grounding clamp on bag	Grounding clamp must be connected to big bag grounding point	OP	8
Powder hose	Check powder hose	No powder restrictions or tight bends	OP	8
Vent Hose	Inspect and clean vent hose (if applicable)	Ensure it's not clogged or any restrictions in air path	OP	8
Prodigy HDLV Transfer Pump	Check if transfer pump is functioning	Check supply air is 5 bar and also that there is not a restriction/blockage in the powder delivery hose	OP	24
Prodigy HDLV Transfer Pump	Inspect clear block for signs of powder leak-age	Ensure no powder is around the pinch valves. If powder is present inside the clear block, replace the pinch valves according to the relevant technical manual.	OP	600
Filter	Replace the Filter cartridge (if applicable)	Replace the Filter cartridge	TT	1000
Prodigy HDLV Transfer Pump	Replacement of wear parts	Replace fluid–tubes and pinch valves at the same time	TT	2000
Level Sensor (if fitted)	Functional check of level sensors	Check if level sensors are detecting correctly. Adjust the settings if needed	TT	4000

Body	Inspect the Big Bag station and its support	Check for damages, strength, welding cracks and corrosion	TT	4000
Electrical grounding*	Inspect all equipment ground connections	Resistance < 1 Ohm	TT	4000
Level Sensor (if fitted)	Calibrate level sensors	Calibrate the level sensors for correct measuring	TT	8000

NOTE: For maintenance of the Afterfilter, Sieve and Powder Feed Centre, application equipment or gun moving equipment, refer to the relevant individual technical manuals.

*It is recommended that you use a Multimeter (Example: BEHA ProInstall100; SN4225110) to test the grounding.

Troubleshooting

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

NOTE: A fault can occur for several reasons. It is advisable to check all possible causes for a given fault. Obvious causes of malfunction such as broken wires, missing fasteners etc., should be noted during visual inspections and corrected immediately. These troubleshooting procedures cover only the most common problems. If you cannot solve a problem, contact your Nordson representative.

Problem	Possible Cause	Corrective Action
1. Powder leakage (stand alone unit only)	Hose clamps loose or damaged	Check clamps and rectify
	Damaged vent hose	Inspect hose and replace if necessary
	Cartridge filter damaged	Inspect and replace if necessary
	Seals leaking	Inspect seals and replace if necessary
2. Waste powder not reclaimed	Pump(s) not functioning correctly	Check pump(s) are operating correctly and repair if necessary. Possibly pinch valves or timing valve.
	Powder transfer(s) hose blocked or disconnected	Inspect powder transfer hose(s) are connected and not blocked. Replace if necessary.
	Level probe faulty	Inspect level probe (if fitted). Repair or replace if necessary.
3. Low or no extract (stand alone unit only)	Afterfilter not running correctly	Check Afterfilter is on and running correctly
	Vent blocked or disconnected	Inspect the vent hose and connections to ensure they are in good condition and no blockages. Replace any damaged items
	Cartridge filter blocked	Check pulsing is working correctly. Repair or replace pulse if necessary.
		Inspect and replace cartridge filter if necessary.

Parts

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

Item	Part	Description	Quantity	Note
1	7035479	SENSOR,LEVEL,WASTE BIG BAG	AR	A
2	7035481	FILTER, CARTRIDGE, WASTE BIG BAG	1	
3	7035299	KIT,GASKETS,A300 SIEVE,STAND ALONE	1	
4	7035482	VALVE, PULSE, WASTE BIG BAG	1	
5	1619912	PUMP,HDLV,ELEC,BARB,NG,PRODIGY,PKG	AR	B
6	134575	WIRE, GROUND	1	
NS	7035483	BELT, WASTE BIG BAG	1	
NS	768178	TUBING,PWDR,ANTISTATIC 12.7MM (.5 IN) ID	AR	

NOTE A: Optional

B: Pumps will be mounted on Afterfilter legs

AR: As Required

NS: Not Shown

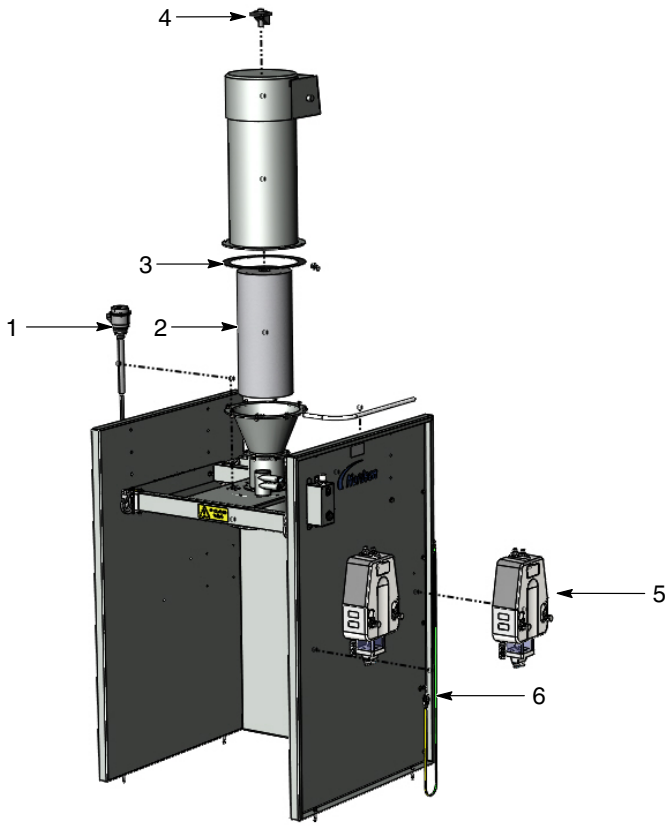


Figure 10 **Spare Parts Identification Images - Stand Alone**

Item	Part	Description	Quantity	Note
1	7035479	SENSOR,LEVEL,WASTE BIG BAG	AR	A
2	7035476	VENT HOSE, CONDUCTIVE	1	
3	970966	CLAMP, HOSE	1	
4	1619912	PUMP,HDLV,ELEC,BARB,NG,PRODIGY,PKG	1	
5	134575	WIRE, GROUND	AR	B
NS	7035483	BELT, WASTE BIG BAG	1	
NS	768178	TUBING,PWDR,ANTISTATIC 12.7MM (.5 IN) ID	AR	

NOTE A: Optional

B: Pumps will be mounted on Waste Big Bag frame or Afterfilter legs

AR: As Required

NS: Not Shown

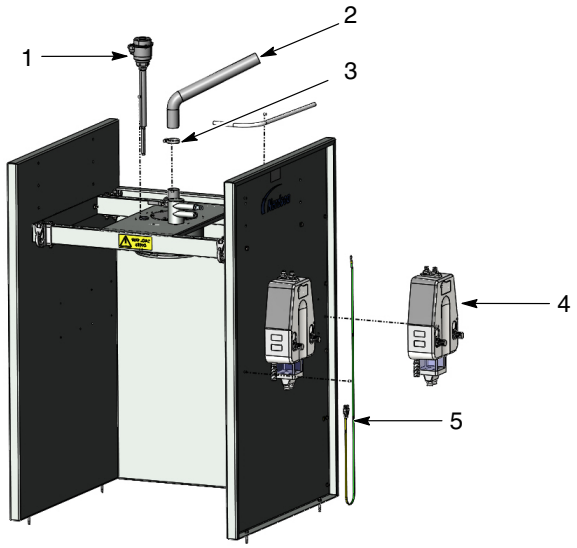


Figure 11 **Spare Parts Identification Images - Vented**

Specifications

Refer to the Services drawing supplied with the system for exact specifications. Below, you can see the typical values.

Description	Values
Factory ambient temperature	5°C - 35°C
Electrical connection	24vdc
Pneumatic connection	10mm for pumps – supplied from Afterfilter
Maximum air pressure	7 bar*
Minimum air pressure	6 bar
Air quality	2°C or less dewpoint – oil free – filtered to 5µ or less
Typical air consumption	2 m^3/hour

Noise – 80dB Maximum during normal production. >80 dB during cartridge cleaning. This is manually triggered and <1min.

* Maximum air pressure for the cartridge pulse cleaning button is 2.8 bar.