

DeDuster®

Model C-50





Please record your equipment's model and serial number(s) and the date you received it in the spaces provided.

It's a good idea to record the model and serial number(s) of your equipment and the date you received it in the User Guide. Our service department uses this information, along with the manual number, to provide help for the specific equipment you installed.

Please keep this User Guide and all manuals, engineering prints and parts lists together for documentation of your equipment.

Date:

Manual Number: UGC059-0119

Serial Number(s):

Model Number(s)

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1 About This Manual

This operating manual contains information and processes for the entire operating cycle of the dedusting unit. It is intended for use by trained operators.

The following main points are described:

- Safety
- How it works
- Installation
- Operation
- Maintenance and repairs
- Dismantling
- Troubleshooting
- Spare parts

Order-specific data, exact dimensions and product specifications are listed in the enclosed documents (see Appendix).

This operating manual must be available at the place of use at all times.

For your own safety and to prevent injuries, it is mandatory to read this operating manual thoroughly and to observe it at all times, paying particular attention to the safety instructions.

The operator must supplement this operating manual with the existing national regulations (e.g. accident prevention, environmental protection and disposal).

Reviewing and following this operating manual is a prerequisite for fault-free operation and the recognition of any warranty claims. This operating manual was compiled in order to provide personnel with the information that is required for the installation, operation and maintenance.

Any person involved in installation, operation, maintenance and troubleshooting must have read and understood this operating manual.

Maintenance and repair work that exceeds the scope of what is described here must be done by the manufacturer.

Reference documents and drawings are included in the Appendix.

2 Safety

2.1 Classification of the Warning Notices

This operating manual contains various symbols. The symbols point out possible hazards and protective measures or assist in orientation.

Warning Symbols

The warning symbols are divided up into the categories Danger, Warning, Caution and Attention.

It is particularly important to obey these safety notices in order to avoid death, injury or property damage.



▶ DANGER

Identifies an immediate danger. Death or serious injury will result if no appropriate precautionary measures are taken.



▶ WARNING

Identifies a potentially dangerous situation. Death or serious injury can result if no appropriate precautionary measures are taken.



▶ CAUTION

Identifies a potentially dangerous situation. Injury can result if no appropriate precautionary measures are taken.



▶ ATTENTION

Identifies a potentially dangerous situation. Property damage can result if no appropriate precautionary measures are taken.

Special Hazards

The warning symbol is replaced by a special symbol where electrical hazards exist.



▶ DANGER

Identifies a danger from electrical voltage.

Notice Symbols

The notice symbols draw your attention to important information or assists in orientation.



▶ INFORMATION

Identifies important information about the product or the described action steps to which particular attention must be paid.



▶ SEQUENTIAL STEP

Identifies a sequence of operations that must be observed in order to guarantee that procedures run smoothly.

2.2 Safety Notices

2.2.1 General Principles

- This unit is constructed in accordance with the state-of-the-art technologies and science, and in line with the recognized safety regulations. Nevertheless, risks to the life and safety of the operator or third parties can arise during use and damage to the unit or other property can occur.
- To ensure safe operation, read the operating manual and pay careful attention to the safety instructions and danger notices!
- Use the unit only in the correct manner.
- Only operate the unit when it is in a technically faultless state.
- Faults that can impair safety must be remedied immediately.

2.2.2 Organizational Measures

Operator Instructions

Always keep this operating manual available at the place where the unit is in use and make sure that it is complete and legible.

- In addition to the operating manual, point out and observe the statutory and other binding accident prevention and accident protection regulations that generally apply. The rules and regulations should cover:
 - Safety at work
 - Accident protection
 - Handling hazardous materials
 - Handling food or pharmaceutical products
 - First aid
 - Environmental protection
 - Disposal
 - Hygiene
- Supplement the operating manual with special operational requirements relating to work organization, work procedures and personnel used. Special operational requirements include supervision and reporting requirements.
- All persons tasked with work on the unit must have read and understood this operating manual before commencing work.
- Only operate unit in safe and functional state!
- Be sure that personnel are working with safety in mind and in accordance with the operating manual.
- Provide personal protective equipment as required.
- No modifications, attachments or conversions may be made to the unit without the manufacturer's written permission! Otherwise, the warranty and the operating permit for the unit will be rendered void.
- Use only spare parts that conform to the technical requirements specified by the manufacturer.
- Observe recommended intervals for repeat checks/inspections.

Operator Instructions

Before carrying out any work on the unit, read this operating manual.

- Work safely.
- Wear personal protective equipment when operating equipment.
- Observe all safety and warning notices.
- In the event of any changes to the unit or any dangerous operating conditions, shut down the unit immediately and report the fault to the responsible department or person.

2.2.3 Personnel Selection and Qualifications

- The unit may only be worked on by persons specifically trained to do so.
- Designate specific personnel to be responsible for assembly, disassembly, maintenance, repair and troubleshooting. Have the unit assembled, maintained and repaired only by personnel who have been trained and authorized by the manufacturer.

2.2.4 Notices of Particular Types of Danger

Electrical Energy

Electrical regulations state that only a skilled electrician or a trained person under the supervision of a skilled electrician may work on electrical equipment.

- Inspect the unit's electrical equipment regularly. Faults such as loose connections or damaged cables must be remedied immediately.
- When performing any work on the unit, de-energize and lock out the unit to prevent it from being accidentally switched back on.

3 Product Description

3.1 General

Designation C-50 DeDuster®

Identification Name plates are attached in clearly visible locations on the unit.

Purpose This dedusting unit is suitable for cleaning granular products within the scope of the customer dependent product specification. Cleaning may be a prerequisite for processing.

The C-50 DeDuster® can be installed on the following equipment types:

- Injection molding machines
- Dryers
- Extruders

Characteristics of the dedusting unit:

- High throughput of approximately 45 lb/h (20 kg/h)
- Low overall height of 10.25 in (260 mm)
- Ability to remove dust and angel hair (streamers)
- Low energy consumption
- Easy to operate

The product specifications and the project-related configuration information are defined in the enclosed technical P&ID layout and assembly drawing.

3.2 Correct Use

This dedusting unit:

- is only for cleaning bulk materials in accordance with the enclosed product specifications.
- may only be operated within the product specifications.
- may only be used under conditions that are within the specifications and by trained persons following applicable safety and injury prevention regulations.

Correct use also includes obeying all notices in this operating manual, maintaining the specified ambient conditions and operating in accordance with the maintenance and servicing instructions.

Incorrect Use Any deviation from the specified operating conditions is incorrect.

The operator is solely responsible for all injuries and material damage resulting from incorrect use.

3.3 Setup

The illustration below shows the standard setup of the C-50 DeDuster® system. The actual setup will vary based on installation setup.

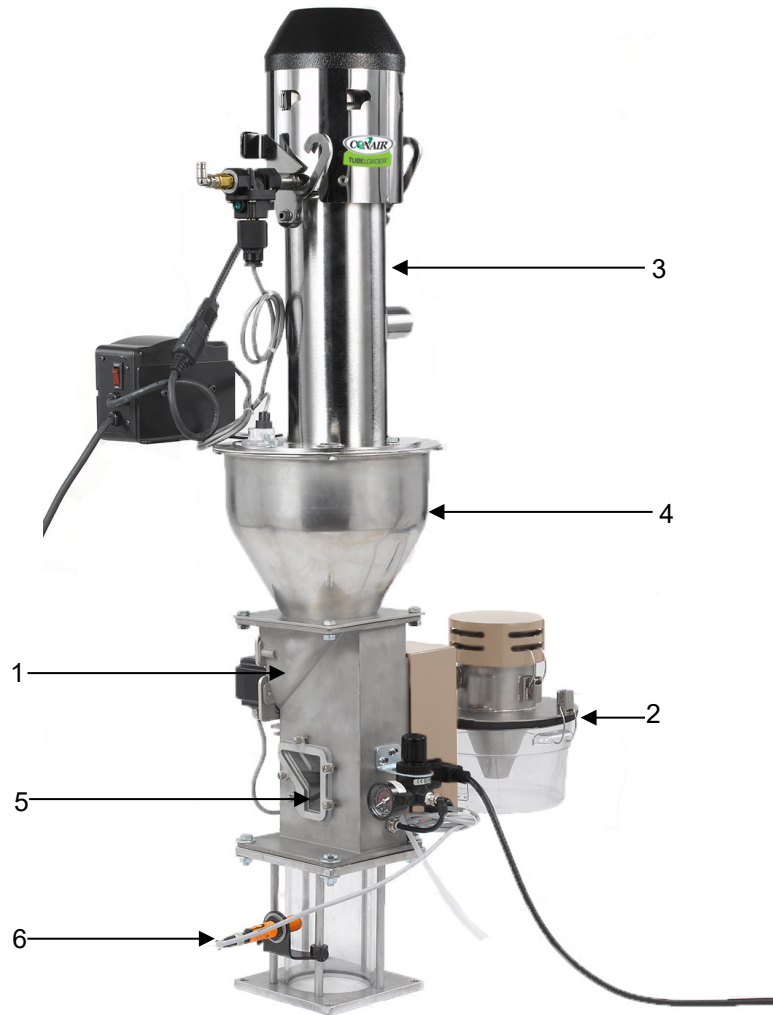


Figure 1: Setup

1. C-50 DeDuster®
2. Dust Container
3. Flapper-type Vacuum Loader (optional)
4. Inlet Hopper
5. Sight Glass
6. Level Sensor (Connected to C-50)



► DANGER

Plastic pellets should never be allowed to accumulate inside the DeDuster®. The C-50 DeDuster® includes a Level Sensor that stops the product flow into the DeDuster®. The Level Sensor must be connected to a Sight Glass below the C-50. When material is detected by the Level Sensor, C-50 DeDuster® switches off for set time and pneumatic cylinder brings flow cone to zero position and stops the flow of material.

3.3.1 C-50 DeDuster®

The C-50 DeDuster® is comprised of multiple components as listed in Figure 2. The Integrated Product Feeder assembly controls the product throughput into the C-50 DeDuster®. The Dust Collector assembly collects the removed dust and releases clean air to the atmosphere (as described in 3.3.3). The Pressure Regulator controls the air flow through the vacuum generator and ionizer assembly (as described in 3.3.4).

The Integrated Product Feeder Assembly consists of:

- A Drive Block that connects the actuator to the Flow Cone that regulates solids flow into the DeDuster®.
- A Pneumatic Cylinder which controls the movement of the Drive Block.
- Air Flow Controls on the Pneumatic Cylinder that control the upward and the downward movement of the Flow Cone.
 - The TOP air flow control valve determines the total upward travel of the flow cone.
 - The BOTTOM air flow control valve determines the total downward travel of the Flow Cone while feeding.
- An integrated Solenoid Valve and Timer controls the oscillation of the Flow Cone which in turn controls the material flow rate into the C-50 DeDuster®. These are not adjustable.
- The movement of the Flow Cone determines the product throughput.
- The product flow is stopped when the Flow Cone is held at the bottom position by the pneumatic actuator.
- The frequency of the Flow Cone oscillation is not changed. The material flow rate through the C-50 DeDuster® is changed by adjusting the TOP air flow control valve.

The C-50 DeDuster® separates unwanted dust from granular products.

In general, the cleaning performance of the C-50 DeDuster® is influenced by:

- Material Flow Rate
 - Increased rate: lower cleaning efficiency
 - Decreased rate: higher cleaning efficiency.
- Air Flow Through Compressed Air Pressure Regulator
 - More air will increase cleaning performance but also increase the amount of good material carried over to the dust collector.
 - Less air will minimize carry over but decrease cleaning performance too.
 - Find an optimum air pressure setting to achieve optimum cleaning performance and acceptable carryover.

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call 814-437-6861



► Please see section 6.2.2 for a detailed description of the Integrated Product Feeder Setup.

► Contact the Conair if you have any questions.

3 Product Description

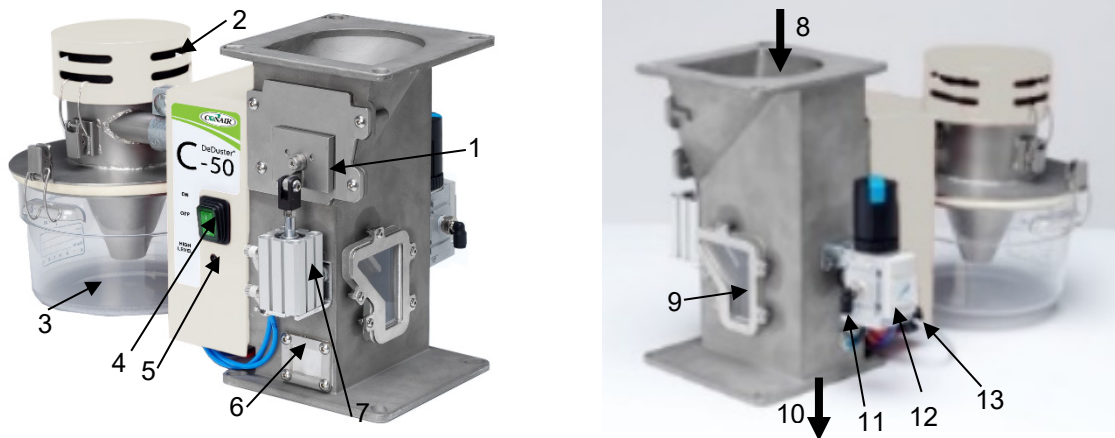
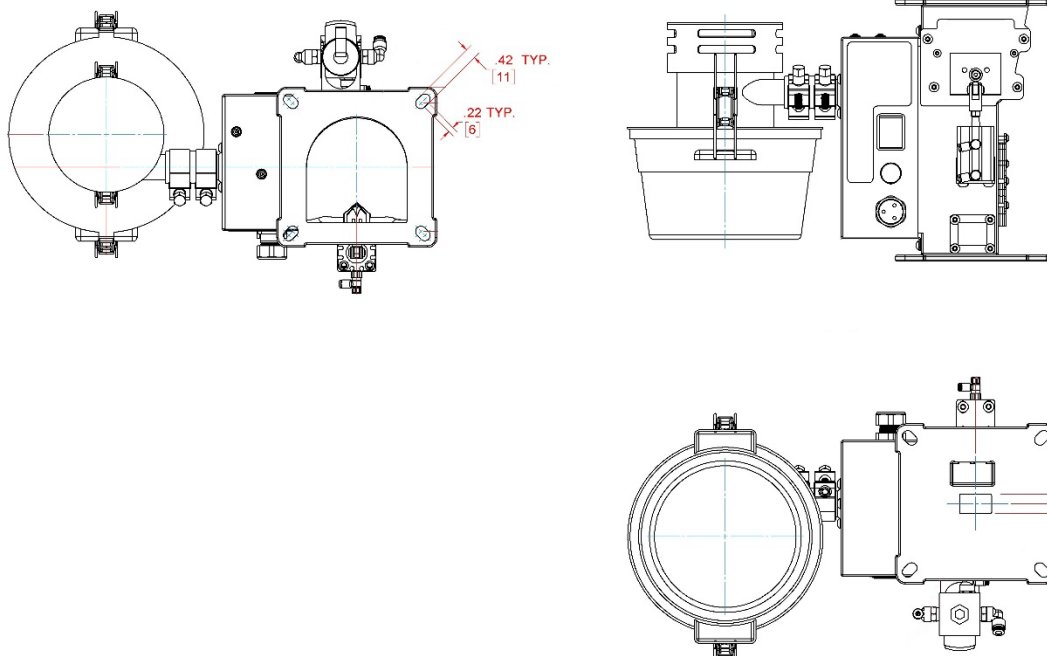


Figure 2: C-50 DeDuster®

- | | | | |
|----|---------------------------|-----|----------------------------|
| 1. | Drive Block For Flow Cone | 8. | Dusty Product Inlet |
| 2. | Outlet Filter Cover | 9. | Window |
| 3. | Dust Container | 10. | Clean Product Outlet |
| 4. | Power Switch | 11. | Air Supply Connection |
| 5. | High Level Indicator | 12. | Pressure Regulator & Gauge |
| 6. | Fresh Air Inlet w/ Filter | 13. | Level Sensor Connection |
| 7. | Pneumatic Cylinder | | |



3.3.2 Fresh Air Inlet Filter

The Fresh Air Inlet Filter cleans the ambient air that is drawn into the C-50 DeDuster®.

See the Spare Parts List in Section 10 for replacement part numbers.



Figure 3: Fresh Air Inlet Assembly

1. Filter Cover
2. Filter (5µm)

3.3.3 Dust Collector Assembly

The Dust Collector Assembly separates and collects the dust that was removed from the product by the C-50 DeDuster®. Centrifugal force separates the dust from the exhaust air in the Cyclone and the dust is collected in the Dust Container below. The air is then ejected from the unit through the Outlet Air Filter. The Outlet Air Filter is protected by the Outlet Air Filter Cover.

See the Spare Parts List in Section 10 for replacement part numbers.



Figure 4: Dust Collector Assembly

1. Cyclone
2. Outlet Air Filter Cover
3. Outlet Air Filter
4. Dust Container

3.4 How It Works

Product is gravity fed through the C-50 DeDuster®. Cleaning air is pulled through the DeDuster® from the bottom by the integrated compressed air operated vacuum generator. Unwanted dust is separated from the product and collected in the Dust Container.

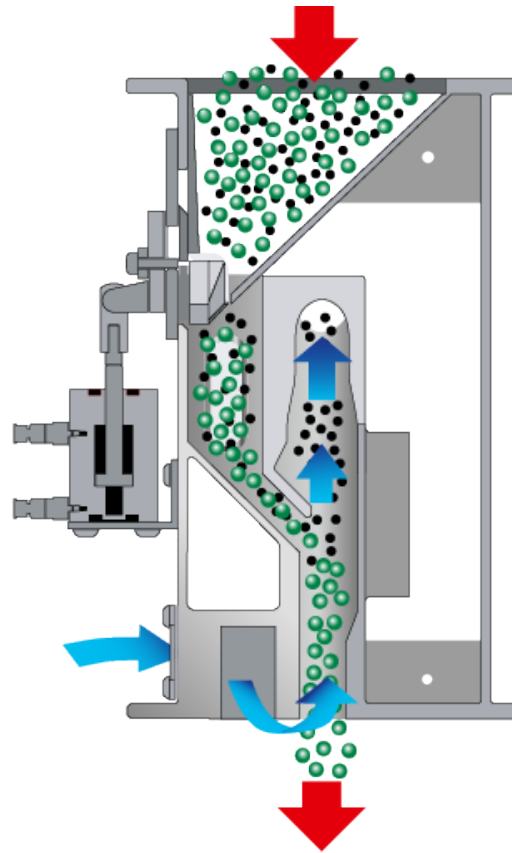


Figure 5: C-50 DeDuster® Operation

1. **Controlled Feed Zone:** A pneumatically driven flow cone maintains a steady feed rate of the pellets into the C-50 DeDuster®.
2. **Ionizing Zone:** Compressed air uniformly distributes negative ions from the Ion Generator to neutralize the static charge that holds dust on the surface of the pellets.
3. **Venturi Zone:** A compressed air operated vacuum generator creates the counter flow air stream that separates streamers and dust from the falling pellets.
4. **Air Inlet:** If the outlet of the DeDuster® is closed off to the atmosphere, then an air inlet on the side of the DeDuster® allows the vacuum generator to pull in filtered air from the atmosphere.
5. **Dust Collector:** Unwanted dust and streamers are sent to the attached mini dust collector. Filtered air is released to the atmosphere.

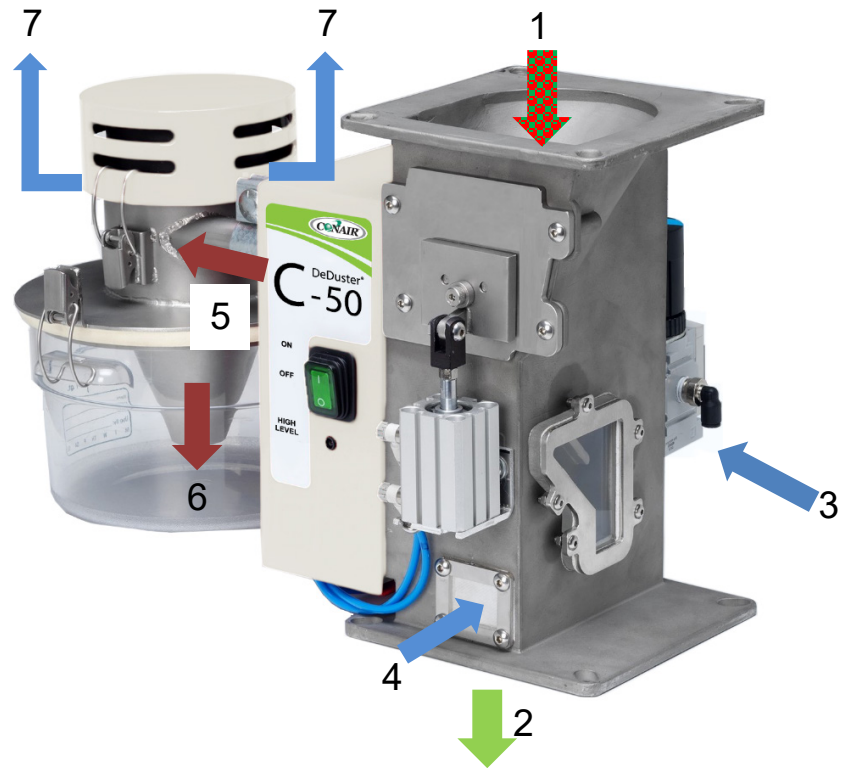


Figure 6: Operation Diagram

1. Untreated Product In
2. Cleaned Product Out
3. Compressed Air Supply
4. Fresh Air Inlet (Filtered)
5. Dirty Air, Dust and Streamers
6. Dust and Streamers
7. Outlet Air (Filtered)

Cleaning Process

After falling through the Integrated Product Feeder, dusty product passes by an Ion Generator that disrupts the electrostatic charge between the product and the dust.

The dusty product then enters the Venturi Zone where the cleaning air separates dust particles and angel hair from the product. The counter flow air speed in the Venturi Zone is controlled using the Air Pressure Regulator.

Clean product exits the C-50 DeDuster® downward. The level of product in the hopper below the C-50 DeDuster® is maintained using the integrated Level Sensor installed on the Sight Glass below the DeDuster®

Material is typically fed to the C-50 DeDuster® Inlet Hopper by a separate Flapper-type Vacuum Loader.

Dust Separation

The exhaust air from the C-50 DeDuster® is directed to the Cyclone Assembly where the dust is separated from the air stream and collected into the Dust Container. The air then passes through the Outlet Air Filter and is released to the atmosphere.

See the Spare Parts List in Section 10 for replacement part numbers.

Compressed Air Supply

The compressed air supply must be filtered, dried and de-oiled before entering the C-50 DeDuster®.

3.5 Technical Data

Detailed dimensions, electrical information and compressed air requirements are presented in the Technical Drawing in the Appendix.

3.6 Scope of Supply

The C-50 DeDuster® is supplied as individual subassemblies that must be assembled by the end user. Confirm that all parts are included in the package immediately upon receipt.

The scope of supply contains:

- C-50 DeDuster®
- Level Sensor
- Power Cord
- Dust Collection Assembly



▶ The parts supplied for your order can vary. Check your packing list to confirm all of the correct parts were supplied.

4 Transportation and Storage

Transportation



► **CAUTION**

Transportation may only be carried out by qualified persons and in accordance with the safety instructions and the local regulations. Some of the parts of the dedusting unit may be heavy. Use suitable lifting gear when necessary.



► **ATTENTION**

Lift the DeDuster® only by the housing. Do not lift the unit using the dust collector housing.

- Disassemble the C-50 DeDuster® into subassemblies prior to transport.
- Carefully pack the components so that they are protected against impact.

Storage

- Clean the C-50 DeDuster® assembly before storing.
- Close off all openings in the equipment with suitable protective covers before storing.
- Store the C-50 DeDuster® assembly in a dry, dust-free location and add desiccants if necessary.

5 Installation

Upon Receipt of Goods

When received, inspect the C-50 DeDuster® package for damage caused during transportation. Immediately report damage to the transport company and to the supplier.

Unpack and inspect all parts for damage and completeness.

If the equipment is damaged, inform the transport company and the supplier immediately.

If items listed on the packing list are missing, inform the supplier immediately.

5.1 Site Conditions

- The C-50 DeDuster® is intended only for upright installation.
- The C-50 DeDuster® must be mounted on a sturdy and level surface.
- Ensure that no strong vacuum or pressure from other parts of the system exists at the C-50 DeDuster® product discharge.
- The C-50 DeDuster® is intended only for indoor use with protection from dust and moisture.
- **The temperature of the material being processed through the C-50 DeDuster® must not exceed 82 °C (180 °F).**
- The temperature of air drawn from the product outlet must not exceed 82 °C (180 °F). Subtract 1° from this temperature limit for every 1° above an ambient temperature of 27 °C (80 °F).

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call 814-437-6861



► **Contact Conair. for process temperature greater than 82 °C (180 °F).**

5.2 Installing the C-50 DeDuster®

The C-50 DeDuster® removes dust and streamers from plastic pellets before they are fed into an extruder or injection molding machine. For best results, the extruder or injection molding machine should be cleaned before installing the C-50 DeDuster® so all contaminants downstream of the DeDuster® are removed.



Feed screw crusted with contaminants.



Clean feed screw

Figure 7: Feed Screw Before and After

Assembling the C-50 DeDuster®

The individual components of the DeDuster® are supplied disassembled.

- Remove the parts of the C-50 DeDuster® from the packing material.
- Mount the DeDuster® on the stand or equipment where the assembly will be used (Section 5.1 Site Conditions). Make sure an appropriate gasket is installed between the C-50 product outlet flange and the equipment that it is installed on to minimize heat conduction from below.
- Attach the Dust Collector assembly to the DeDuster® using the supplied coupling. Carefully position the Dust Collector assembly so the Outlet Filter mount surface is parallel to the DeDuster® mount flanges.
- Attach a suitable air hose from the Compressed Air Supply to the Compressed Air Regulator & Gauge assembly on the C-50 DeDuster®. Refer to the technical drawing in the Appendix for the correct size air supply hose.
- Install the supplied Level Switch on a Sight Glass below the C-50 and connect the wire from the Level Switch to the C-50.
- Confirm that the Power Switch is in the OFF position (“0”). Connect the Power Cord to the DeDuster® and to an appropriate power receptacle. Refer to the technical drawing in the Appendix for the power requirements.
- Turn the Power Switch on the DeDuster® to the ON position (“1”) to confirm that the Flow cone Product Feeder moves upwards. Note that there will be an approximately 10 second delay before the Product Feeder starts to operate and that the Product Feeder will not operate and remain in the closed position if the Level Sensor is not connected or if the sensor is detecting material.
- Confirm that the Dust Collector Assembly and Compressed Air Connections are secure.



► DANGER

Plastic pellets should never be allowed to accumulate inside the DeDuster®. The C-50 DeDuster® includes a level sensor that stops the product flow into the DeDuster®. The level sensor must be connected to a sight glass below the C-50. When material is detected by the level sensor, C-50 DeDuster® switches off and pneumatic cylinder brings flow cone to zero position and stops the flow of material.

6 Operation

6.1 Preparing for Operation

- Check that the Compressed Air Supply is attached securely and is not leaking.
- Check that the Level Sensor below the C-50 DeDuster® is installed and operating properly (Section 6.2.1 Level Sensor Setup).
- Check that the Power Plug Connection is secure and correct voltage is supplied.

6.2 Basic Setup

6.2.1 Level Sensor Setup

- Install the Level Sensor in a bracket on a Sight Glass below the DeDuster® and connect the Level Sensor wire to the C-50. When properly connected and energized, the Level Sensor will illuminate orange.
- The supplied Level Sensor is, by default, NORMALLY CLOSED. The Integrated Product Feeder will not operate if the Level Sensor detects material **OR** if the Level Sensor is not properly connected.
- Adjust the sensitivity of the Level Sensor by placing it in front of the Sight Glass with material inside of the Sight Glass. When the Level Sensor starts to detect material, the green Signal Indicator on the Level Sensor begins to shift from left to toward the orange light in the centre. Once material covers the Level Sensor, the orange light on the Level Sensor switches OFF, which turns the green light on the High-Level Indicator ON. In this state, the Integrated Product Feeder is OFF.

Orange Light ON: Product Feeder is ON

Orange Light OFF: Product Feeder is OFF

- | | |
|------------------------------|---|
| ○ Green on left | No material in front of sensor |
| ○ Green shifts left-to-right | Material building up in front of sensor |
| ○ Green on right: | Material covers sensor. Power is OFF |



Figure 8: Level Sensor Adjustment

- While the Flow Cone Product Feeder is OFF/ at lowest position, the material will clear from the Ionizing and Venturi zones.

- After the material clears from the Level Sensor, a delay timer keeps the Flow Cone Product Feeder OFF/ at lowest position until the timer is finished. When the delay timer is finished, the Flow Cone Product Feeder returns to original function and allows material to pass through the chute opening at a controlled rate. The delay timer is inside of the electrical enclosure and is set at the factory. It should not be adjusted.

6.2.2 Integrated Product Feeder Setup

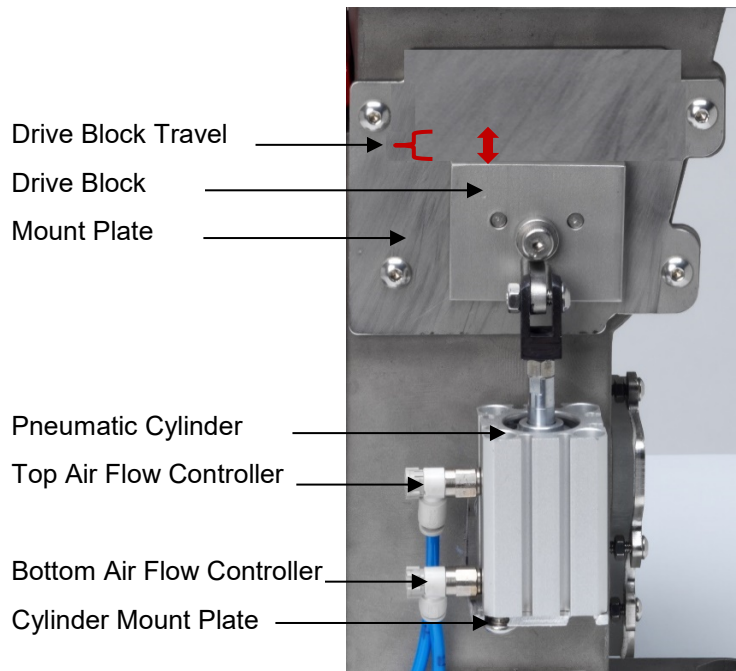


Figure 9: Flow Adjustment

- The integrated product feeder assembly on C-50 DeDuster® is protected by an actuator guard for operator's protection.
- Before removing the guard, de-energize the C-50 DeDuster® by unplugging the power cord and disconnecting the air supply.
- Remove the actuator guard to service the feeder.



▶ CAUTION

Removing the guard will create a pinch point hazard that can cause injury. Only remove the guard for service and do not return the system to operation without replacing the guard.

- Product flow through the DeDuster® is stopped when the Flow Cone is at the lowest position. The Flow Cone moves to the lowest position when compressed air is connected and power is turned OFF or when the level sensor is triggered (Red Light = High Level is ON).
- Turn ON the power. A red light on the "High Level" indicator will turn ON and then OFF after 10 seconds if no material is detected by level sensor.
- Once the red light on the "High Level" indicator turns OFF, the C-50 DeDuster® feeder starts.
- **Factory Setting: The Drive Block travel length on the C-50 DeDuster® is pre-set to 3mm - 4mm.**
- The travel of the Drive Block is changed by adjusting the TOP and BOTTOM air flow control valves on the pneumatic cylinder.
- Use Table 1 or Table 2 to determine Drive Block travel length for the material of interest.

- Energize the C-50 DeDuster® and connect the compressed air source. Then turn ON the power and verify that the drive block travels approximately 3mm - 4mm.
- Rotate the TOP air flow control valve in the counter-clockwise direction to increase the Drive Block upward travel length. Rotate the TOP air flow control valve in the clockwise direction to decrease the Drive Block upward travel length.
- Rotate the BOTTOM air flow control valve in the counter-clockwise direction to increase the Drive Block downward travel length. Rotate the BOTTOM air flow control valve in the clockwise direction to decrease the Drive Block downward travel length.
 - Changing the downward travel length using the BOTTOM air flow control valve changes the solids flow mode between pulsating and continuous flow. A continuous flow is better for cleaning performance but may not be achievable for all flow rates and material types.



▶ ATTENTION

Pull out the knob on the Air Flow Control Valve to adjust it. Remember to push the knob back in when finished with adjustments to lock the setting.

- Confirm that the material flow rate through the C-50 matches the desired rate.
 - If the rate is too low then adjust the TOP air flow control valve counter-clockwise to increase the rate.
 - If the rate is too high then adjust the TOP air flow control valve clockwise to decrease the rate.
 - The flow rate may change significantly if the feeder is jammed on pellets. If a jam occurs frequently or if the flow is pulsating and the desired rate is not reached then increase the flow rate.
- Reinstall the guard to prevent operator injury.
- Confirm that the feeder set up stops the product flow when the level sensor detects material below the DeDuster®.

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▶ Contact Conair Service for DeDuster® settings for support if necessary.

Product Flow

Product is fed into the C-50 DeDuster® by the pneumatically controlled flow cone at the inlet. The Drive Block travel length determines the resultant product throughput and is product dependent (i.e., size, shape, density etc.). The data presented in the tables below shows basic settings towards Drive Block Travel for the desired product throughput for different materials.

These setpoints are a starting point for your machine setup. You will likely have to adjust the TOP air flow control valve to meet your exact requirements.

Material	Bulk Density (Kg/m ³)	Mass Flow Rate (Kg/hr)	Particle Size (mm)	Particle Shape	Drive Block Travel mm
LDPE	560	20	2-5	Spherical	6 or 7
HDPE	600	20	2-5	Spherical	4 or 5
Glass Filled Polymer	630	20	2-10	Long Grain	6 or 7
Polystyrene (PS)	670	20	2-4	Cylindrical	3 or 4
Polycarbonate (PC)	710	20	2-4	Cylindrical	3 or 4
Polyethylene (PE)	720	20	2-5	Small Grain	4 or 5
PMMA	750	20	2-4	Cylindrical	3 or 4
PET	870	20	2-4	Cylindrical	3 or 4
PET	870	20	2-4	Spherical	3 or 4

Table 1: Capacity (Metric)

Material	Bulk Density (Kg/m ³)	Mass Flow Rate (Kg/hr)	Particle Size (mm)	Particle Shape	Drive Block Travel mm
LDPE	35	45	2-5	Spherical	6 or 7
HDPE	37	45	2-5	Spherical	4 or 5
Glass Filled Polymer	39	45	2-10	Long Grain	6 or 7
Polystyrene (PS)	42	45	2-4	Cylindrical	3 or 4
Polycarbonate (PC)	44	45	2-4	Cylindrical	3 or 4
Polyethylene (PE)	45	45	2-5	Small Grain	4 or 5
PMMA	47	45	2-4	Cylindrical	3 or 4
PET	54	45	2-4	Cylindrical	3 or 4
PET	55	45	2-4	Spherical	3 or 4

Table 2: Capacity (Imperial)



► **Contact Conair. for DeDuster® settings for support if necessary.**

Contact Conair
Parts and Service
Call 800 458 1960 or
From outside the US
call 814-437-6861

6.3 Switching ON

- Turn ON the Compressed Air Supply and set the Compressed Air Pressure Regulator to 15 psi (0.1 MPa).
- Turn ON the Power Switch.

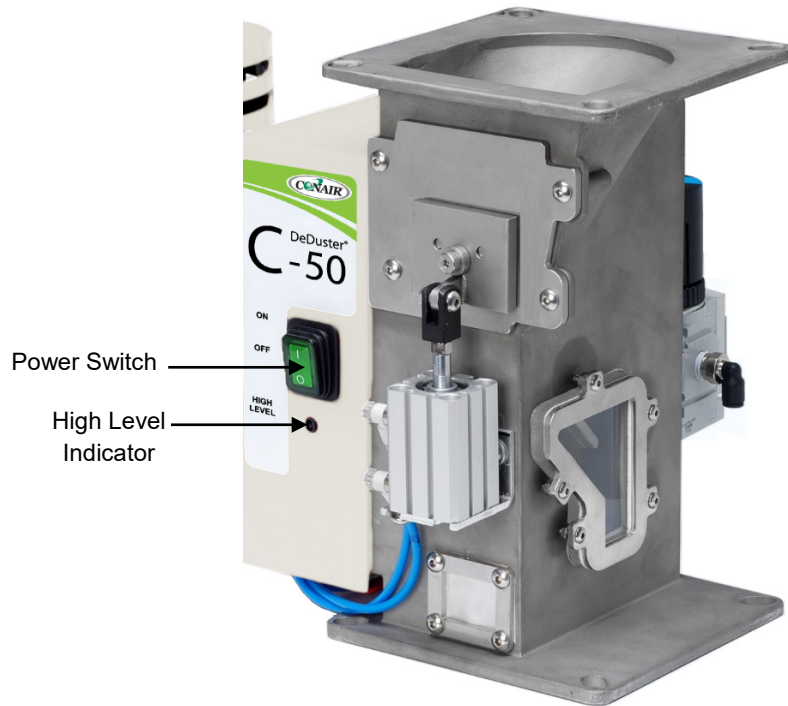


Figure 10: Electrical Control



► In the event of a fault, see Section 9 Troubleshooting.

6.3.1 Setting Product Flow

- Follow the instructions in Section 6.2.2 to set up the Integrated Product Feeder.
- Determine the product throughput by measuring the amount of time it takes for a given weight of material to pass through the DeDuster®.
- To increase the product throughput, increase the Product Feeder's Drive Block travel.
- To decrease the product throughput, decrease the Product Feeder's Drive Block travel.



► Confirm that the product flow stops when level sensor is triggered for the selected Drive Block travel length.

► Contact the Conair for support.

Contact Conair
Parts and Service
Call 800 458 1960 or
From outside the US
call 814-437-6861

6.3.2 Setting the Air Flow

- Turn the knob on the Compressed Air Pressure Regulator *clockwise* to increase the air pressure until pellets are seen accumulating in the dust container. Record the pressure setting as the upper limit. This limit will vary by material.
 - Turn the knob *counter clockwise* to reduce the air pressure and minimize pellet carryover while maintaining the expected cleaning performance. More carryover results in more cleaning performance. Record the pressure setting as the lower limit.
 - Set the pressure between upper and lower limits for minimum carry over and optimum cleaning performance.
 - If air flow is too low, cleaning performance can be insufficient.
 - If air flow is too high, an unnecessary quantity of good product will be carried over to the Dust Container.
 - The optimum air pressure setting is a balance between the two.
- NOTE:** Regulator pressure should not be set above 45psi (0.30MPa).

6.3.3 Optimizing Cleaning Performance

The C-50 settings are adjusted based on the following process conditions:

- Level of product contamination
- Desired throughput
- Desired product purity

It is important to note that the settings affect each other. For example, if the throughput is increased at the Integrated Product Feeder, the air pressure must also be adjusted to maintain the same cleaning performance.

NOTE: Check the dust content of the cleaned product and the DeDuster® settings at regular intervals. In the event of process deviation or material change, re-test and re-adjust the DeDuster® settings (Section 6.2 Basic Setup).

6.4 Switching OFF

- Turn OFF the Power Supply switch.
- Allow all product to clear from the DeDuster®.
- Shut OFF the compressed air supply to the DeDuster®.

7 Maintenance and Repairs

7.1 Safety Notices

Only perform repairs that are described in this operating manual.

Observe the safety notices in Section 2 Safety.

Only qualified electrical technicians may perform electrical maintenance.



► DANGER

When performing maintenance tasks, be sure that no voltage is present in the working area!

7.2 Maintenance Plan

The following maintenance plan lists the required maintenance intervals.

The operator is responsible for performing the required maintenance work at the correct intervals as stated.

Interval	Maintenance work	Description
As required	Empty the Dust Container on Dust Collector Assembly	Section 7.2.1
As required	Clean the DeDuster®	Section 7.2.2
Monthly	Visually inspect all components for damage	Section 7.2.3
Monthly	Clean the Ionizing Zone	Section 7.2.4
Monthly	Replacing the Fresh Inlet Air Filter	Section 7.2.5
Monthly	Clean or replace the Outlet Air Filter	Section 7.2.6
Annually	Inspect the electrical connections for corrosion or unacceptable wear	--

Table 3: Maintenance Plan

7.2.1 Emptying the Dust Container



Figure 11: Dust Collector Assembly

1. Dust Container Latch
2. Dust Container
3. Outlet Air Filter Cover
4. Outlet Air Filter Latch

- Switch OFF the Power Supply and turn OFF the Compressed Air Supply (Section 6.4 Switching OFF).
- Open the Dust Container Latches.
- Remove and empty the Dust Container.
- Discard the dust and wipe the inside surfaces of the Dust Container clean with a soft cloth.

7.2.2 Cleaning the C-50 DeDuster®

- Clean all accessible parts with a vacuum cleaner and a soft cloth.
- Use compressed air if necessary.



▶ The C-50 DeDuster® window may be opened for cleaning operations but always confirm that the DeDuster® is unplugged and the compressed air supply is disconnected before starting.

▶ Never wash the inside of the C-50 DeDuster® with water or other liquid solvents.

7.2.3 Visual Inspection

- Inspect all components for visible damage.
- Check that all fasteners are tight.
- Check that the air hose is correctly attached and that all hose connections are secure and do not leak.

7.2.4 Cleaning the Ionizing Zone

- Inspect for dust deposits around Ionizing Zone by looking through the Window.
- Unplug the electrical cable from the power source.
- Disconnect the compressed air supply from the DeDuster®
- Unscrew the fasteners on Window.
- Using a vacuum, remove dust from the Ionizing and Venturi zones.
- Reattach the C-50 Window and ensure fasteners are secure.

7.2.5 Replacing the Fresh Inlet Air Filter

The C-50 DeDuster® is equipped with a filter element for the air that is drawn into the DeDuster®. The Filter element should be changed at regular intervals to maintain cleaning efficiency.

See the Spare Parts List in Section 10 for replacement part numbers.

7.2.6 Cleaning the Outlet Air Filter

During normal operation, the filter media gets plugged and deteriorates due to dust particles trapped inside the pores during normal operation. Open the Outlet Air Filter Latches to remove and clean the filter. This filter can be cleaned, however, it is easy to damage the filter elements even when cleaned correctly. To correctly clean the filter, compressed air should be blown from the *inside to the outside*. Conair recommends replacing the filters periodically (i.e. after 3-4 cleaning cycles).

See the Spare Parts List in Section 10 for replacement part numbers.

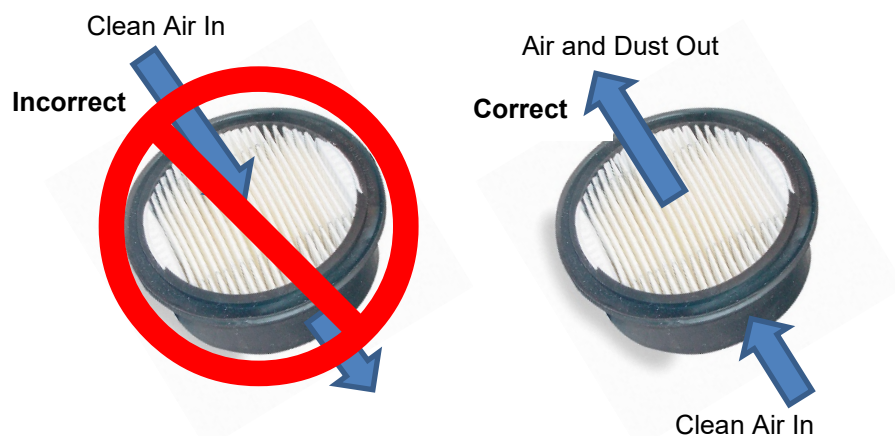


Figure 12: Cleaning Filter Elements

7.3 Repairs

Contact Conair
Parts and Service
Call 800 458 1960 or
From outside the US
call 814-437-6861

The C-50 DeDuster® may not be serviced by the end user. If a problem with the DeDuster® occurs, contact the Conair.

8 Dismantling/Disposal



► **DANGER**

Before dismantling the DeDuster®, disconnect it from the external power supply and confirm that no voltage is present.



► **CAUTION**

Some of the parts of the DeDuster® are heavy. Use suitable lifting gear when necessary.

Dismantling

- Switch OFF and unplug the C-50 DeDuster®.
- Disconnect the Compressed Air Supply Hose.
- Empty the Dust Container (Section 7.2.1 Emptying the Dust Container).
- Remove the DeDuster® assembly from the installation stack-up.
- Close off all unit openings and store (Section 4 Transportation and Storage).

Disposal

Dispose of the DeDuster® components in accordance with the applicable regulations.

Dust Disposal

Dispose of the dust according to the applicable plant rules and local regulations.

9 Troubleshooting



► DANGER

Only trained personnel may carry out troubleshooting. Ensure the unit is de-energized when troubleshooting.

Problem	Inspection	Corrective measures
Dust remains in the product	Visual or Dust Content (PPM) Analysis (contact Conair for more details)	Confirm that air is flowing into unit from Compressed Air Supply
		Reduce the product flow (throughput) - Section 6.2.2 Integrated Product Feeder Setup
		Increase the air pressure - Section 6.3.2 Setting the Air Flow
		Check the filters for excessive contamination and clean or change as necessary – Section 7.2.2 Cleaning the C-50 DeDuster®
Too much product in the dust drum	Visual	Reduce the air pressure - Section 6.3.2 Setting the Air Flow
Product flow (throughput) is too low	Visual or Timed Weight Measurement	Confirm that the DeDuster® is powered
		Check the product inlet area for a blockage
		Adjust the Drive Block travel as per Table 1 or 2. Follow Section 6.2.2 Integrate Product Feeder Setup
Product flow is too fast	Visual or Timed Weight Measurement	Adjust the Drive Block travel as per Table 1 or 2. Follow Section 6.2.2 Integrate Product Feeder Setup

Table 4: Troubleshooting



► If the fault cannot be resolved or if it is not in the list above, contact the Conair.

Contact Conair
Parts and Service
Call 800 458 1960 or
From outside the US
call 814-437-6861

Contact Conair
 Parts and Service
 Call 800 458 1960 or
 From outside the US
 call 814-437-6861

10 Spare Parts

Refer to your equipment drawing for the location of these spare parts.
 Please consult Conair Customer Service for pricing and accurate availability.

Common C-50 DeDuster® Spare Parts

Description	Quantity Used	Part Number	Typical Lead Time for Stock Items
Window Frame Assembly Kit: <ul style="list-style-type: none"> • Window frame • Polycarbonate window pane • Window gasket • Window tape 	1	87-0107-00	1 week
Inlet Filter	1	87-0066-00	1 week
Level Sensor	1	42-0241-00	1 week
Pressure Regulator w/ Gauge	1	41-0618-00	1 week
1in Compression Clamp	1	52-0208-00	1 week
Outlet Air Filter	1	33-0214-00	1 week
Dust Drum	1	38-0054-14	1 week
Dust Drum Gasket	1	87-0087-28	1 week
Outlet Filter Gasket	1	87-0077-28	1 week
Double Acting Actuator	1	41-0611-00	1 week
Elbow Speed Controller	2	41-0615-00	1 week
Rod Clevis	1	41-0612-00	1 week
Teflon Gasket, Cone Side	1	87-0126-45	1 week
Teflon Gasket, Drive Block	1	87-0127-45	1 week
Flow Cone	1	87-0114-00	1 week

Table 5: List of Spare Parts

▶ When ordering spare parts, state the model number and the serial number of the unit (see name plate on unit).

We're Here to Help

Conair has made the largest investment in customer support in the plastics industry. Our service experts are available to help with any problem you might have installing and operating your equipment. Your Conair sales representative also can help analyze the nature of your problem, assuring that it did not result from misapplication or improper use.

How to Contact Customer Service

To contact Customer Service personnel, call:



NOTE: Normal operating hours are 8:00 am - 5:00 pm (EST). After hours emergency service is available at the same phone number.

From outside the United States, call: 814-437-6861

You can commission Conair service personnel to provide on-site service by contacting the Customer Service Department. Standard rates include an on-site hourly rate, with a one-day minimum plus expenses.

Before You Call...

If you do have a problem, please complete the following checklist before calling Conair:

- Make sure you have all model, control type from the serial tag, and parts list numbers for your particular equipment. Service personnel will need this information to assist you.
- Make sure power is supplied to the equipment.
- Make sure that all connectors and wires within and between control systems and related components have been installed correctly.
- Check the troubleshooting guide of this manual for a solution.
- Thoroughly examine the instruction manual(s) for associated equipment, especially controls. Each manual may have its own troubleshooting guide to help you.
- Check that the equipment has been operated as described in this manual.
- Check accompanying schematic drawings for information on special considerations.

Equipment Guarantee

Conair guarantees the machinery and equipment on this order, for a period as defined in the quotation from date of shipment, against defects in material and workmanship under the normal use and service for which it was recommended (except for parts that are typically replaced after normal usage, such as filters, liner plates, etc.). Conair's guarantee is limited to replacing, at our option, the part or parts determined by us to be defective after examination. The customer assumes the cost of transportation of the part or parts to and from the factory.

Performance Warranty

Conair warrants that this equipment will perform at or above the ratings stated in specific quotations covering the equipment or as detailed in engineering specifications, provided the equipment is applied, installed, operated and maintained in the recommended manner as outlined in our quotation or specifications.

Should performance not meet warranted levels, Conair at its discretion will exercise one of the following options:

- Inspect the equipment and perform alterations or adjustments to satisfy performance claims. (Charges for such inspections and corrections will be waived unless failure to meet warranty is due to misapplication, improper installation, poor maintenance practices or improper operation.)
- Replace the original equipment with other Conair equipment that will meet original performance claims at no extra cost to the customer.
- Refund the invoiced cost to the customer. Credit is subject to prior notice by the customer at which time a Return Goods Authorization Number (RGA) will be issued by Conair's Service Department. Returned equipment must be well crated and in proper operating condition, including all parts. Returns must be prepaid.

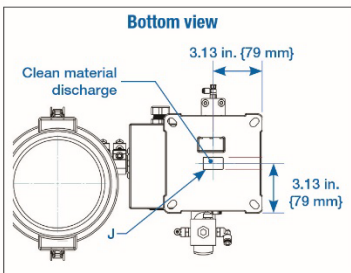
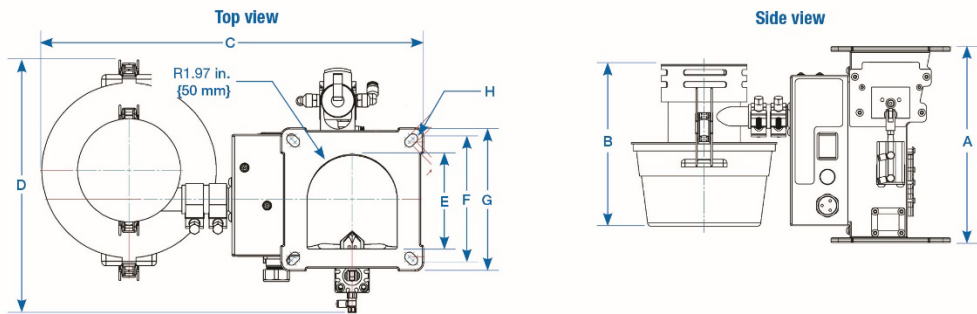
Purchaser must notify Conair in writing of any claim and provide a customer receipt and other evidence that a claim is being made.

Warranty Limitations

Except for the Equipment Guarantee and Performance Warranty stated above, Conair disclaims all other warranties with respect to the equipment, express or implied, arising by operation of law, course of dealing, usage of trade or otherwise, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

Appendix

Specifications



Specification Notes

* Top and bottom mounting patterns are the same.

† FLA data for reference purposes only. Does not include any options or accessories on equipment. For full FLA detail for power circuit design of specific machines and systems, refer to the electrical diagrams of the equipment order and the nameplate applied to the machine.

Specifications may change without notice. Consult with a Conair representative for the most current information.

Model	C-50
Flow rate (pellet throughput)	
	45 lbs/hr {20 kg/hr} at 35 lbs/ft ³ density
	90 lbs/hr {41 kg/hr} at 50 lbs/ft ³ densities
Dimensions inches (mm)	
A - Overall height	10.25 {260}
B - Canister and dust path height	8.46 {215}
C - Width	16.71 {424}
D - Overall depth	10.56 {268}
E - Material inlet (H x W), curved top	4.09 x 3.94 {104 x 100}
F - Bolt pattern (square - slotted)*	5.0 {127}
G - Body depth	6.25 {159}
H - Through slotted holes	0.42 x 0.62 {107 x 157}
J - Material outlet	1.25 x 0.75 {316 x 190}
Approximate weight lb (kg)	
Installed weight	28 {13}
Shipping weight	37 {17}
Available voltages - Approximate full load amps†	
110 VAC	0.50
220 VAC	0.25
Compressed air requirements	
	2.3 CFM {3.4 – 5 m ³ /hr} at 20-30 psi {1.5-2 bar}