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Operation and Maintenance Manual

SEM Model 250 Disintegrator

MAN-021 | Created 01-27-20 | ECN-00507

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Important Safety Procedures

The Model 250 key tape & optical media disintegrator incorporates powerful, heavy duty cutting mechanisms, **serious and permanent injury may result** if proper precautions are not followed.

1. This equipment should never be operated by children or individuals that are untrained or incapable of understanding these safety precautions.

2. Do not reach into the feed opening for any reason. Never insert fingers, hands, other extremities, or objects not meant to be crushed into the feed opening.

3. Do not operate or come into close proximity to this equipment wearing loose clothing, neckties, dangling jewelry, or long hair which may become entangled in the cutting chamber.

4. Maintenance or repair of this equipment should be performed only by trained, authorized service personnel

5. Always disconnect electric power (unplug) before removing or opening any cover or other panels providing access to the internal mechanisms.
If you over feed the shredder or have an emergency and need to shut down the machine, press the red

6. In case of emergency, press ***EMERGENCY STOP*** button on the left side of the machine or open the collection bin door.

SEM recommends that machine operators wear safety glasses, hearing protection, a mask, and if doing maintenance or opening the cutting chamber, cut resistant gloves. It is up to each customer to determine the PPE for their individual site

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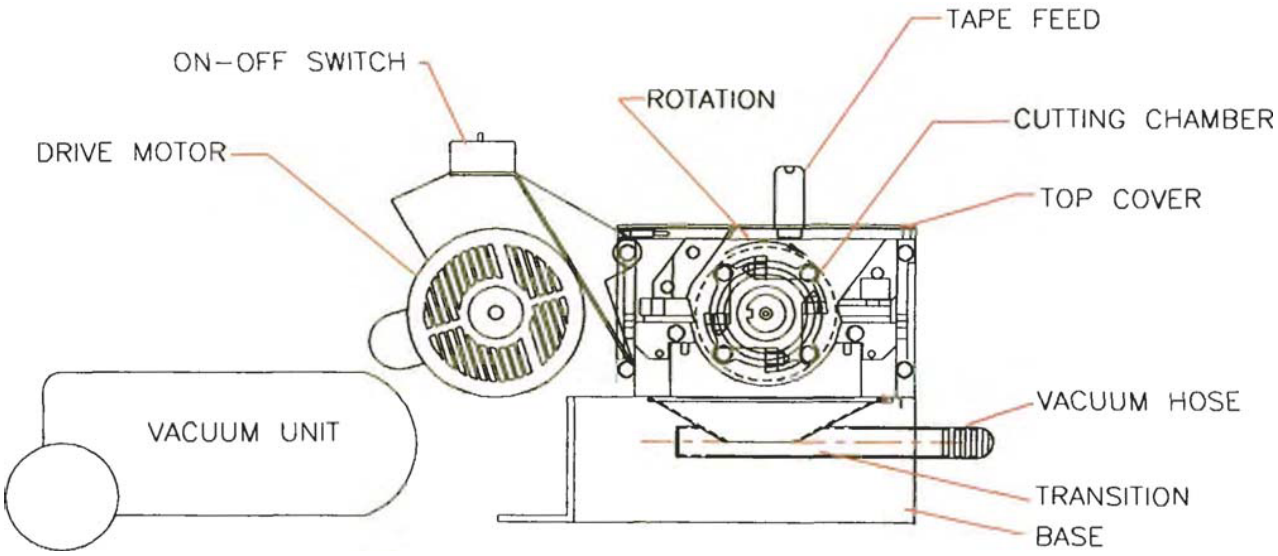
General Assembly of the Model 250 Key Tape Unit (Table-Top Version)



- Shown out of position
- Placed aside chamber and base
- Space requirement reference: approximately 21” x 21” x 12” high

Installation and Power Requirements

Disintegrator Location

The Model 250 can be located in an office area within 6 feet of a wall receptacle with a dedicated 20-amp line. It is recommended that there be unit be two to three inches between the rear of the unit and the wall.

Electrical Wiring (See Page 12 for Electrical Diagram)

A. The Model 250 includes an appropriate power cord and 20-amp male plug. The Model 250 is activated by a front mounted ON/OFF toggle switch.

B. The 1-gallon capacity vacuum unit is supplied with a plug for 115V (7.3 amp) or 3-gallon 220V (4.8 amp) to suit the customer's order requirements. The vacuum plugs directly into the receptacle supplied in the unit's base.

C. The Model 250 has been wired to your original order specifications. The motor supplied operates on single phase voltage (115V or 220V).

D. Note: Motors are normally dual voltages, 115/230V, but can only be operated at the specific voltage as wired at the factory, if voltage change is required in the field contact the factory for proper instructions.

E. If for any reason the Model 250 is rotating in the wrong direction, disconnect the power (unplug), and remove the metal plate on the motor and change the leads as shown on the plate diagram.

F. Electrical schematics available in PDF on request.

Power Requirements

115 Volt/1-Phase/60 Cycle requires 18 amps
230 Volt/1-Phase/60 Cycle requires 9.6 amps
230 Volt/1-Phase/50 Cycle requires 11.5 amps

Cabinet Installation and Setup

A. Place cabinet in location approximately 2-3 inches from wall and within six feet of dedicated 20-amp receptacle.

B. Place Model 250 on top cover with front of unit door and the four base holes aligned with the cabinet top holes.

C. Using the supplied bolts, place a bolt and flat washer in each of the four holes from the top and secure tightly with additional washer and locknut from below using a ½" wrench and ½" socket.

D. Place vacuum upright inside rear of cabinet and feed hose up through large center hole. Attach hose to rear of collection transition.

E. Feed vacuum power cord down through remaining hole and connect to vacuum plug.

Operation and Feed Rates

Please read this section carefully. Most problems occur during the first hours of operation. Most problems can be avoided and/or eliminated by a careful review of the operating, maintenance, and recommended service period instructions.

A. The Model 250 has been shipped complete, tested, and is operational when received.

B. The Model 250 requires a 20-amp dedicated electrical line, equipped with a 20-amp receptacle and a separate 115V circuit receptacle for the vacuum unit.

C. Once positioned, verify that the vacuum is connected, and that all access points are closed. Turn the toggle switch to the "ON" position and the unit will start. Both the disintegrator and the vacuum should come on together*. In the event that the vacuum does not start, locate the power button on top of the vacuum to start the vacuum.*

D. The Model 250 was designed to destroy key tape, and optical media (CDs/DVDs/BDs) at a rate shown below. As with any type of machinery, it can be overloaded or jammed if overfed. The product destruction rate depends on the material type, material size, and desired deestroyed particle size. When feeding, use the concept of "less is more". By feeding the unit with less volume more often will result in steadier and better feed rates, resulting in reduced operating costs.

The Model 250 is not a shredder, but a rotary knife mill, which dictates how the unit is fed and the rate it can be fed. Again, the rule of thumb is "less is more" creating steady output without over feeding. Looking at the top of the Model 250 you will notice that there are two feeding slots, the smaller feeding slot is for key tape while the other is for optical media. Key tape media can be put on the spool attachment on the top cover of the cutting chamber.

Maximum Feed Rates

- Optical media with a 3/32" dia. screen: eight pieces per minute
- Optical media with a 5/64" dia. screen: four pieces per minute

E. When destruction is complete, allow the Model 250 and vacuum to operate an additional 80 seconds after the last fed piece of material. This will prevent build up in the cutting chamber area and evacuation line, ensuring proper operation for the next user.

F. The Model 250's waste collection bag must be periodically emptied for proper operation.

Troubleshooting

The Model 250 will not start

A. Check that the unit is plugged into a working receptacle.

B. A motor thermal overload is located in the unit's starter, located on top of the unit. As a safety feature the heater in the controls may kick out after an overload. Simply reset the control to restart the Model 250.

C. The rotor in the cutting chamber may be jammed.
   1. Switch the power to the ***OFF*** position and unplug the power cord from the wall.
   2. Remove the top cover of the cutting chamber and remove the cover of the belt guard.
   3. Looking inside of the opened cutting chamber, look for any loose or jammed material inside of the chamber. Taking precautions of the sharp knives inside of the cutting chamber, carefully remove all debris from the chamber.
   4. If the rotor is in fact jammed, rotate the rotor counterclockwise by means of the drive belt by hand to clear the clogged material.
   5. Remove all remaining debris and replace the top cover of the cutting chamber and belt guard cover.
   6. Plug the power cord back into the wall power receptacle and turn the unit back to the ***ON*** position.

The cutting chamber starts, but the vacuum doesn't

A. Check that the vacuum is plugged into the connector that goes to the starter. If not reconnect.

B. Check that the power button on the vacuum has not been switched off. If so, turn the vacuum to the on position.

The cutting chamber area is getting jammed more frequently

A. Be sure that you are not over feeding the unit. See the section on operation and feed rates.

B. Check the condition of the knives. They may require re-sharpening. See sections on replacing and sharpening knives

Maintenance

Before performing any type of maintenance on the Model 250, always disconnect the unit from power and follow all safety precautions.

Belt Adjustment

Remove the belt guard cover. The motor is mounted on a slotted frame. Loosen the mounting bolts and adjust the motor for proper belt tension. This is determined by applying thumb pressure on the belt causing a slight bow on slack side. This should be no more than ½". **Important**: The belt should be checked and tightened if required after the first several days of operation. After that it should be checked monthly.

Lubrication

Grease fittings can be found on both rotor bearings. The bearings should be greased twice a year using Gulflex A multi-purpose or equivalent grease.

Knives

For full efficiency, knives should be sharpened from two to five times per year, depending upon use. If for example, your knives require sharpening after three months of operation, your sharpening schedule should be every three months. It is highly recommended that a spare set of knives be available for your disintegrator to eliminate down-time. Knives should not go beyond 50-100 hours of operation without knife sharpening.

Replacing Knives (See diagram on page 11)

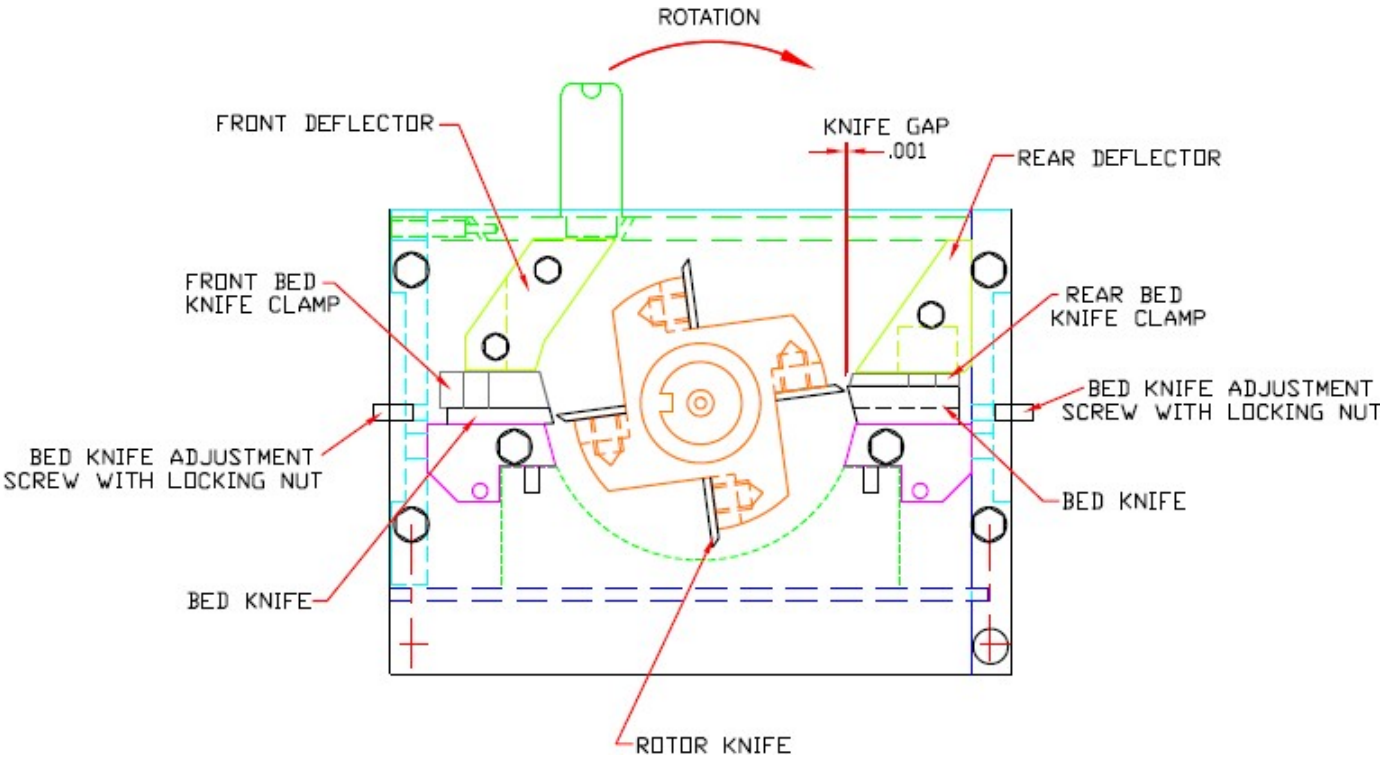
1. Be sure that the power cord has been unplugged from the wall receptacle.
2. Remove the top cover screws to access the knives.
3. Prior to removing or replacing the rotor knives, back off the bed knife adjusting screws. Cover the edge of each knife with a heavy gauze tape such as scotch filament or cloth tape. Remove the rotor knives first and be sure to remove all rotor and bed knives prior to replacing any of the knives.

4. To remove the bed knives, remove the two bolts on the right and two bolts on the left of the aluminum deflectors. Remove the three bed knife bolts from each bed knife. Remove the Bed Knife Holder and finally the bed knife itself.

5. Take the spare bed knife and insert it exactly the way the dull knife came out. Insert the bed knife bolts and only hand tighten for the moment. Finally replace the rotor knives and tighten with a torque wrench to 50 ft./lbs. Remove the tape covering the edges of all knives and adjust the distance between the rotor knife and bed knife by manually rotating the rotor in the reverse operating direction. Using the bed knife adjusting screws will allow you to make slight adjustments to move the bed knife closer to the rotor knives. The knife gap between the rotor and bed knives should be adjusted to .001-inch clearance using a feeler gauge. **Note: Tool kits are available from SEM.**

6. Before tightening the bed knives securely, determine that the knives are set properly by manually rotating the rotor in the reversed operating direction to ensure that no rotor knife touches the bed knives and that the proper gap has been established. Tightening one bed knife at a time, torque the bed knife bolts to 45 ft./lbs. and re-check the gap of the bed knife. If the gap is correct, move on to the last bed knife and repeat this step. If the gap is incorrect loosen the bed knife bolts and readjust the bed knife again until the proper knife gap is achieved.

Recommended Rotor and Bed Knife Setting Assembly



Knife Sharpening

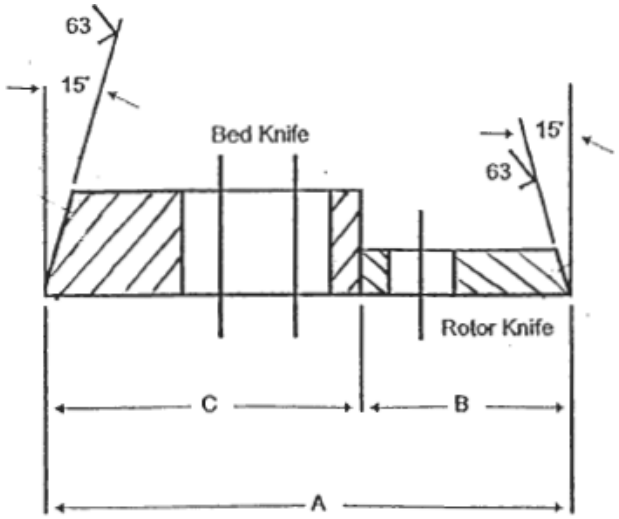
Knives may be sent to Security Engineered Machinery for sharpening or they may be sharpened by a capable machine shop in your area. **When sharpening the rotor knives, they must be sharpened as a set to maintain the proper tolerance between the bed knives.** If knives are badly nicked the machinist should not try to eliminate the entire nick so as to conserve the edge and prolong knife life. The knives will still function very well even with some nicks after sharpening.

Notes on Knife Grinding

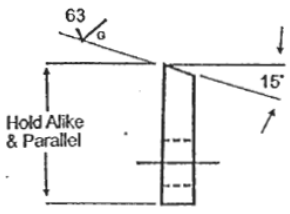
1. After regrinding several times, the knives must be checked to be sure that there will still be adjustment left in the bed knives. The general rule is to place a rotor knife and bed knife back to back as shown in the diagram shown below, and then measure the total width (dimension "A") of both knives.

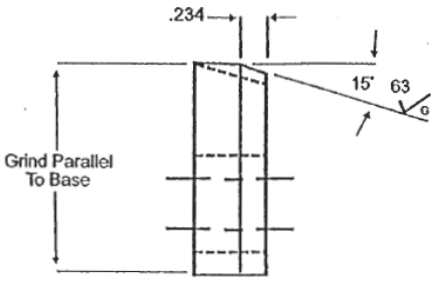
2. If dimension "A" is close to or below the minimum, knives should be replaced.

Standard Form Rotor and Bed Knife Sharpening Dimensions



A = (Minimum) = 2-5/8"
B = Bed Knives must be held alike and parallel in sets within .010"
C = Rotor Knives must be held alike and parallel in sets within .002"





Changing the Screen

1. Unplug the power cord from the wall receptacle.
2. Remove screw from the combination transition using a 7/16" wrench.
3. Remove the four nuts & lock washers from under screen using a ½" deep socket.
4. Lower the Screen.
5. Insert the new screen and re-tighten the nuts.
6. Plug the power cord back into the receptacle.

Recommended Spare/Optional Items Available

Standard Knives (4R/2B)	P/N: 390250K
Perforated Screen 5/64" Dia. Holes	P/N: 343250SCR564
Perforated Screen 3/32" Dia. Holes	P/N: 343250SCR18
Vacuum Bags (3) Pack – 230V	P/N: 75060295A-3A

Note: For 230V units prior to Dec 2019, contact SEM for vacuum bags for your serial number.

HOW TO MAINTAIN

The instructions given in this booklet serve as a guide to routine maintenance. To avoid unnecessary service calls, check the hose, bag and filter often. Clear a clogged hose with the blower, change the bag if it is full, and clean the motor filter when it is dirty.

Disposable Dust Bags and Filters

The dust bag and motor filter play a very important roll in the efficiency of the vacuum cleaner. The purpose of the dust bag is to trap dirt, but at the same time, the paper bag must be porous enough to allow air to pass through. If the bag or the motor filter become clogged, no air can pass through the cleaner and no cleaning can take place regardless of how powerful the unit is. To keep the cleaner operating at maximum efficiency, change the dust bag frequently and clean the filter as needed. Some fine particles can restrict airflow very quickly and will decrease performance even before the bag appears to be full. For that reason, when vacuuming carpet fresheners or cleaners, powder, plaster dust, or similar fine substances, the bag and filter may need to be changed more often.

Look for the GENUINE EUREKA PRODUCT **symbol.**

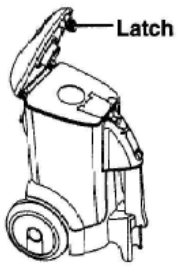
FILTERAIRE® Disposable Dust Bag (optional)

Our high filtration bag is a two-layer, disposable bag that combines our standard paper bag with a nonwoven air filter inside. Use a Filteraire dust bag to create a cleaner indoor environment because the bag filters better than our standard bag. The bags are available (three in a package) from your local dealer, or you can call 1-800-282-2886 for other locations. Look for the Genuine Eureka Filteraire dust bag–Style MM.

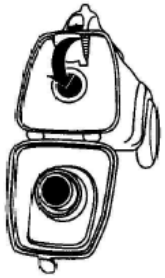
How to Remove Disposable Dust Bags–Style MM

NOTE: Turn off vacuum and unplug the electrical cord before changing dust bag or cleaning motor filter. Never operate the vacuum cleaner without the dust bag or filter.

1. **Turn off and unplug cleaner.**
2. **Open lid by pushing down hood latch.**



3. **Fold BAG CLOSURE FLAP down and push behind rubber seal.**



4. **Insert finger into upper left notch then pull out and remove bag.**

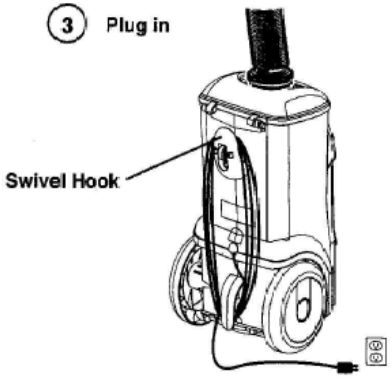
HOW TO USE

CAUTION: Moving parts. Make sure on/off switch is in off position before plugging in.

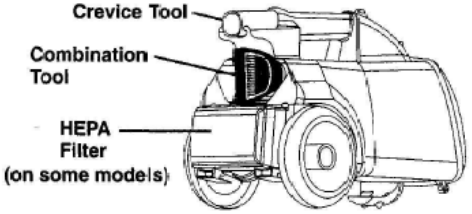
A carpet should be cleaned regularly over heavily traveled areas, and once a week over the entire carpeted area. Vacuum slowly, making several passes (forward and backward) over the carpet, covering small areas at a time. The time required to clean the carpet will depend on several factors–including type of carpet and amount of dirt.

1. **Connect Hose**

2. **Rotate Swivel Hook to release cord**
3. **Plug in**



4. **Store Tools**



5. **Push ON/OFF Switch**
(A thermostat automatically shuts the motor off if it overheats, see Automatic Motor Shut-Off)