

Installation, Operating and Maintenance Instructions for KRAEMER MFG "PC" Type Dust Collector

Your KRAEMER MFG "PC" dust collector has been shipped in various pieces. If you observe the following sequence, you should have no problems assembling the unit.

Place the hopper unit in the required location. Use the drawings to help with the orientation and the outlet holes should be positioned directly over the holes in the floor. When it is in the correct position fasten the footpads to the floor or structure (as the site demands) by means of bolts.

Install the discharge sleeves from the hopper outlets to the lower level. Position the storage drums under these sleeves. Bolt the four angle iron cleats to the floor so that they correspond with the matching cleats on the bottom sides of the drums. These cleats are to hold the drums down and stop them from lifting when the unit starts sucking. Place the lids on the drums. Clamp the sleeves over the hopper outlets by tightening the screw clamps.

Assemble the components of the filter box section. It may be easier to do this on the ground.

Bolt the compressed air storage tank to the side of the dust collector. It can only go one way, just under the sequential controller box. The bolts are already in the unit -- remove them. Position the tank with the bracket holes aligned with the bolt holes, insert the bolts and tighten. The little pipe nipples on the tank should face upward (see drawing for confirmation).

Push the ends of the pipes through the holes in the side of the dust collector. They are located near the top of the box above the compressed air storage tank. The pipes are fitted with square mounting plates with four bolt holes which should line up with corresponding drilled and tapped holes in the box casing.

The pipes have small holes on one side and these should face down, so that the compressed air will blow into the aluminium venturi tubes already installed in the top box section. The ends of the pipes fit into holding brackets inside the filter unit.

Locate the pipes in these brackets and tighten in position. The pulse valves have rubber hose connections and clamps already fitted. Slide the open ends of the hoses over the pipe nipples on the top of the storage tank and tighten the clamps. Insert the four bolts into each of the square bracket plates and tighten them against the box section.

Install the pressure relief valve/filter on the threaded nipple on one end of the compressed air storage tank.

Fit the ends of the clear plastic air tubes into the corresponding brass grommets on the right angle pulse valves and tighten. The tubes have already been cut to length and they will only be able to reach one valve each. NOTE: Ensure the rubber strip gasket is fitted to one side of all mating flanges before bolting together.

Bolt the back draft damper onto the inlet flange. Ensure that the hinged end is at the top of the box, so that the flap hangs down (the inlet flange is square and the outlet is rectangular).

Install the gasket rubber strip on the flange on top of the hopper. The gasket is self-adhesive, simply peel the paper off and stick the gasket on the flange.

Lift the top box section, using the lifting lugs and position it on the hopper making sure that the orientation is correct. Insert all the bolts, fit washers and nuts and tighten.

Bolt the outlet manifold to the outlet flange on the end of the filter unit. The manifold should hang down and turn outwards to the fan (see drawing). Mount the support bracket under the bottom elbow and tighten all the bolts.

Connect the system ductwork to the dust collector inlet that has the back draft damper.

Connect the outlet ducting to the fan outlet silencer.

A licensed electrician should install the control panel in the proper location. Make the electrical connection between the fan motor and the control box located on the inlet end of the filter box section. Also connect the power supply to this same box.

The sequencer panel and the solenoid enclosure are mounted on the front of the unit above the storage tank.

The solenoid enclosure is wired and has a black, waterproof cable complete with end fittings attached.

The wiring harness comes out of the end fitting. It consists of one red wire for each corresponding diaphragm valve, one white wire and one green wire.

The red wires are numbered and when the end fittings on the black conduit are fitted through the bottom of the sequencer enclosure, the numbered red wires are taken to the corresponding numbers on the terminal block. The white wire is taken to the common terminal and the green wire is taken to the ground terminal. Both systems were installed, tested, removed and packaged.

The housing for the filters and the diaphragm valves is lettered to match as are the

tubes from the solenoids to the diaphragm valves.

Once the dust collector is in place, the explosion vent duct can be supplied and connected to the flange surrounding the explosion doors (if applicable).

Connect the compressed air supply to the compressed air tank on your new KRAEMER MFG type "PC" dust collector (this compressed air must be clean and dry).

When the unit is electrically connected, allow the motor to run **ONLY** after all dust connections are made (otherwise, motor overload may occur). Inspect the fan rotation and ensure the fan is rotating toward the outlet (see diagram).



After the entire system is connected, the amps should be measured and they are not to exceed the amperage rating on the motor plate. If the amps are too high (this is known as motor overload), the speed will have to be reduced or more restrictions must be placed on the duct system.

The unit is now ready for operation.

Operating Instructions

Before starting the main fan motor, ensure all dust connections have been completed, all inspection doors are closed and sealed, and the drums are clamped in position. If arrangement 2, verify the container is in the proper position. These precautions will stop unwanted leaks in the system.

Pushing the green starter button on the control panel or electric switch will start the main fan motor.

Start the sequential controller by turning the on/off switch. This step could be deleted by interlinking the main fan motor starter with the sequential controller. When the green start button is pressed, both the main fan motor and the sequential controller would begin operation.

Make sure the fan is turning freely and in the correct direction (toward the outlet).

Inspect the pressure gauge on the compressed air tank to ensure there is compressed air available (the pressure should be between 80 to 100 PSI). Confirm the solenoid valves are functional and working in sequence -- this can be done by watching the gauge.

When the valve pulses, the pressure in the tank will decrease and the gauge indicator will move toward zero. The compressed air pulsing into the filters can be distinctly heard and the lights in the sequential controller panel will show which valve is pulsing.

The pressure will increase again in the tank until it reaches approximately 80 PSI and the next valve should then pulse. The time between pulses is approximately 10-15 seconds. Make sure all the valves pulse in order. When the last valve has pulsed, the sequence should revert back to the first valve.

When the work shift has ended, pushing the red stop button should stop the fan motor.

The sequential controller may now be shut off (if it is not interlinked with the fan). You may allow the sequential controller to run through an entire pulsing cycle with the fan switched off. This will enable further cleaning of the filter cartridges without new dust being introduced.

Ensure the fan and sequential controllers are both turned off. Remove the clamps on the drum sleeves and check the dust load in the drums. If the drums have a substantial amount of dust, then loosen all the clamps and remove and empty all the drums.

A schedule may be established for the regular emptying of drums once the frequency

has been determined. This will negate the necessity of constantly checking drum contents.

Replace all the drums and reconnect the sleeves and clamps. The dust collector is now ready for restarting and the cycle can be repeated.

Maintenance Suggestions

The drums should be checked and emptied on a regular basis. The frequency of this procedure will depend on the dust loading and how many shifts are in operation.

The v-belts are adjusted to the correct tension when the collector is installed. An adjustment is needed after 3 to 4 days of use and again 3 to 4 weeks after start up. V-belts have to be tightened to allow ½" play, giving to the pressure of one finger in the centre between the pulleys with reasonable force. Frayed belts or cracked belts should be replaced as soon as possible.

The blower should be inspected every six weeks under normal use and the blower bearings should be greased if needed. Do not overgrease (no grease should escape the housing seals).

The condition of the filter cartridges should be examined regularly. Opening one or more doors on the main filter housing section can do this. Because the compressed air is continuously cleaning the filters, the cartridges should be fairly clean. Check for tears or holes in the pleats and dust plugged between the pleats.

If the cartridges are dirty, remove them and manually clean them with compressed air. If the cartridges are damaged or excessively dirty, they must be replaced. The cartridges are removed by loosening the slide rail holding bolts. The filters are ready to be slid off the guide rail and removed through the door. To reinstall cartridges, reverse this procedure and tighten the slide rail holding bolts. Inspect the door seals and catches to ensure an airtight fit when the doors are closed.

Lubrication Requirements		
Usage / Conditions		
1 *	One or two shifts per day	
2 *	Normal 24 hour continuous use	
3 *	24 Hour continuous use in dirty or moist locations	
4 *	High vibration or shaft end hot	
5 *	Seasonal (used only for part of the year)	
HP Range	Usage / Conditions	Relube Interval
Fractional to 7.5	1 *	5 years
Fractional to 7.5	2 *	2 years
Fractional to 7.5	3 *	6 months
Fractional to 7.5	4 *	6 months
Fractional to 7.5	5 *	start of season
10 to 40	1 *	3 years

10 to 40	2 *	1 year
10 to 40	3 *	6 months
10 to 40	4 *	6 months
10 to 40	5 *	start of season
50 to 200	1 *	1 year
50 to 200	2 *	9 months
50 to 200	3 *	3 months
50 to 200	4 *	3 months
50 to 200	5 *	start of season
Type of Equipment	Type of Grease	Generic
Eberle Motors	Beacon 325	Lithium Complex
Hyundai Motors	Beacon 325	Lithium Complex
Leeson Motors	Shell Dolium	Polyurea
VP Motors	Beacon 325	Lithium Complex
Weg Motors	Beacon 325	Lithium Complex
Other Motors	See Manufacturer	See Manufacturer
Pillow Blocks	Alvania Grease 2	Lithium
Gearboxes	Castrol Hypoy C	Gear Oil SAE 80W-90
** Use of any non-compatible (Aluminum, Barium, Sodium or Bentone) grease will void warranty **		

If you have any questions, please call us at 1-800-443-6443.

