Installation, Operating and Maintenance Instructions for KTM Pulse 4000 Down Draft Table

Before starting the fan motor, ensure that the dust drawers are closed and the connecting sleeve from the blower to the table is clamped into position.

This dust collector comes with a dust tight, magnetic electrical switch. A licensed electrician is required to connect the motor, switch and electrical supply line. Start the fan/motor using the switch provided, and plug the electrical power cord to the power source.

Ensure that the compressor is running and connected to the compressed air coupling on the down draft table.

The table is now operational.

Operating Instructions

The Kraemer Pulse 4000 down draft table uses a draw through system. Air is drawn through slots in the tabletop into the air plenum below. Located in the air plenum are four cartridge filters, each 22" long. Two filters are open both ends and two filters are open one end. Filters are installed horizontally in the unit on guide rods. The filters are loaded from the end of the table opposite to the fan. The filter with two ends open is installed gasket side first, and next the filter with one open end is located, open end to match the first filter. When four filters are in place, they are secured with an end plate bolted to the filter housing.

Located at the fan end of the table are the two openings with a conical air venturi, through which the air passes to the table discharge housing. A diaphragm air valve is located in the discharge housing with piping arranged to centre on each air venturi. A small tube to an electric/air solenoid in an electrical box connects the diaphragm. The electrical box contains the solenoid and a push button switch for activating the solenoid. A compressed air tank is placed near the diaphragm air valve and is connected to it through a short hose. The tank is piped to a pressure regulator outside of the discharge housing. The exhaust fan is connected to the table discharge housing by a flexible sleeve to reduce vibration. The fan discharges through the silencer.

The cleaning pulse should be used periodically during the day, depending on how much sanding is taking place.

To activate the cleaning pulse, push the green button on the front of the table. This sends an electrical signal to the solenoid which opens the diaphragm valves and allows the compressed air in the storage tank to pulse through the filter cartridges, reversing the flow for a fraction of a second. The pulse dislodges particles of dust in the pleats of the cartridge. Pulsing should be done while the fan is running. If the fan is off, the dust may blow back through the openings of the tabletop. The frequency of the cleaning will depend largely on how much sanding is being done. Once every hour should be sufficient under normal circumstances. If the operator notices that suction at the tabletop is dropping off, then the filters are contaminated and the pulse should be activated.

The dust drawers should be checked periodically and emptied if necessary. Simply unscrew the wing nuts and slide the drawers out. Once they have been emptied, slide the drawers in, locating the studs in the holes and then clamp the drawers in position with the wing nuts.

It is advisable to pulse the filters two or three times at the end of a shift, and then switch the fan off

immediately. This will allow the loosened dust particles to settle in the dust drawers without being drawn back onto the filters by the fan exhaust.

Maintenance Suggestions

The drawers should be checked and emptied on a regular basis. The frequency of this step will depend on the shifts and the dust loading.

The v-belts are adjusted to the correct tension when the collector is shipped. 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. Check periodically to see if the fan belts are properly tensioned.

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 checked regularly. Opening the access panel on the bottom housing located on the end opposite the fan and motor does this. Because the compressed air is continuously cleaning the filter cartridges, they should be fairly clean. Check for tears or holes in the pleats and for dust plugged between the pleats. If the cartridges are dirty, remove them and clean with compressed air. When necessary or, if damaged, they can be replaced. The cartridges are removed by loosening the six retaining nuts on the access panel/door. Remove the door by sliding it off the six studs. The cartridges can then be slid off the guide rails and removed via the door.

To reinstall the cartridges, reverse the procedure, check the door seals and catches to ensure an airtight fit when the door is closed.

Periodically, lift one end piece of the wooden tabletop by removing the four screws. If there is a build-up of dust, blow it clean with compressed air toward the centre of the table. Repeat this procedure for the other end piece. If this is done with the fan running it will assist the cleaning and draw the dust into the filters.

If the pulse does not operate when the button is pushed, check electrical power to the unit. If power to the unit is good, check the function of the push button switch. If the switch is good, be sure the power is getting to the solenoid coil. If it is, and the solenoid does not pull in, the coil may be faulty.

Air Leakage

If air is continuously flowing from the pipes to the venturi, there may be several causes.

Check if the air is flowing out of the solenoid discharge opening.

If there is no flow from the solenoid, check if the tube between the solenoid and diaphragm valve is properly seated in brass fittings by pushing the tube hard into the fittings.

If the solenoid and tube connections are good, it may be a faulty diaphragm valve being stuck open and it will have to be repaired or replaced.

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.