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Installation/Operating instruction for the FilterPAK 8000

The FilterPAK 8000 is a high capacity, re-circulating fluid delivery system designed to use with larger vibratory systems such as the VibraKING 85, or when greater time between filter changes is advantageous.

Specifications:

- 40 gallon total volume
- 15 gallon working volume
- Dual polyester filter bags (5 to 100 micron, 10 micron standard)
- 2 gallon per minute fed capacity at a 30 inch head
- Removable sludge tray
- Two submersible pumps
- One "outside" grade junction box
- Stainless steel construction

The FilterPAK 8000 provides filtration of vibratory fluids via replaceable filter bags, gravity settling, and a series of flow over baffles. The replaceable filters are available from Burr King Manufacturing in 5, 10, 15, 25, 50, and 100-micron meshes. Select finer mesh (i.e. 10 micron vs. 100 micron) for greater filtration. Finer mesh filters will have shorter service life than filters with coarser mesh, but will provide clearer filtration and thus cleaner vibratory processing. The standard filter that is provided with the FilterPAK 8000 is 10-micron mesh.

To place your FilterPAK 8000 in service follow these instructions (SEE PICTURES LAST PAGE)

1. Install a 1.0-inch male barb into the drain outlet of your VibraKING chamber.
2. Connect the 1.0-inch clear plastic hose between the input to the FilterPAK 8000 and the chamber output drain.
3. Route the 1/4-inch pump tube from the chamber input to the feeder pump connection. Pass the tube and the pump power cord through the 1 inch hole of the protective rubber grommet on the side of the FilterPAK 8000. You may split the grommet to accept the pump power cord and fluid feeder tube.
4. Place the pumps into the brackets that are provided in the central and end chamber.
5. Assure the two filter feeder tubes are connected to the central pump via the TEE and hoses provided.
6. **Add water to the FilterPAK 8000 to the level of the ¾ inch holes in the various baffles.** Do not fill beyond the small hole found in the end baffle near the waste input**. At this fill level there are 15 gallons of fluid in the FilterPAK 8000.** Do not over fill the FilterPAK.
7. Add compounds (soaps) of the type and the ratios suggested by the compound manufacturer **(Burr King recommends BKS60, AR60, or burnishing soaps for de-burring and most surface moderation)**. In example, if the suggested ratio is 2-oz. soap per gallon of water, add about 40oz. of soap to the FilterPAK reservoir and mix with the 15 gallons of water previously added. We recommend that you premix all fluids.
8. **Position the lid such that the 1.0-inch input is directly above the sludge tray**. Secure the lid with the clamps provided.
9. Adjust the metering valve on your vibratory chamber to the desired fluid flow rate. The pump that is provided with the FilterPAK 8000 is capable of providing 2 gallons per minute at a 30-inch rise. **Adjust the valve to maintain the media wet but do not flood the chamber.**
10. The filters in your FilterPAK 8000 will require periodic change. The length of time between changes will vary depending on the capacity of your chamber, the media type you are using, the chamber liquid flow rate, the material you are processing, the mass of your material, and naturally the mesh size of the filter you use. To replace the filters remove the unit lid, position the fluid feeder tubes clear of each filter and withdraw the filters. Install the new filters and reposition the fluid feeder tubes. You will find it helpful to have a bucket handy into which you should place the depleted filters

(including its fluid and sludge contents). Later, after the filters have fully drained, remove the depleted filters from the bucket and dispose of the filters and their dried contents in a responsible manner.

With ceramic media and most metals the filters will function effectively for at least eight hours of continuous operation. Note however that the sludge tray may require more frequent cleaning.

Note: Plastic and synthetic media will foam and will require more frequent filter changes than will ceramic media. This is natural and unavoidable due to the composition of plastic media. Typically the life of filters when plastic media is used will be less than ½ that of filters when ceramic media is used.

10. Periodically clean out the sludge that will form in the bottom of the FilterPAK. Do not allow the sludge to accumulate deeper than 1/2-inch in any chamber.
11. Add water and soap to your FilterPAK as required to keep the fluid level at the recommended level. **DO NOT RUN THE PUMPS DRY**. Running the pumps dry may damage the pump as it will have inadequate cooling.
12. **Dispose of the depleted (filled) filters in a responsible manner**. Generally, the filter bags can be disposed in public landfills when material such as steel, iron, aluminum, and copper are processed: however, you should consult with your local authorities for specific requirements and instructions in regard to disposal of all waste materials.

Additional operating and SAFETY instructions for use of your FilterPAK 8000

1. **During the first few hours of operation after the installation of new media**:
   - The drain tube from the vibratory chamber to the FilterPAK 8000 may plug. This is a consequence of the new media sloughing off edge particles that may not gravitate into the filter bag. Should you observe particles collecting in the clear drain hose tilt the hose to allow the particles to flow into the FilterPAK 8000. Alternately, disconnect the hose and allow the particles to escape into a bucket for disposal. Reconnect the hose. If the hose becomes fully impacted the FilterPAK 8000 will pump dry prematurely and the available fluid will collect in the vibratory chamber. If this occurs it will be necessary to stopper the chamber before removing the clear drain hose to prevent spillage. It may also be necessary too forcibly dislodge the hose impaction using a rod or similar device.
   - The filter bags may require changing after 4 to 8 hours of operation or less. This is a natural consequence of "break-in" of the media. Larger, coarser media will create more initial debris than will smaller finer media.
   - After media "break-in" change the filter at regular intervals (see previous discussion on page 1). Keeping the filtration system clean will pay dividends in media life, reduced cycle times, and part cleanliness.
2. **Use the sludge tray** to frequently remove accumulated sludge from the input chamber of the FilterPAK 8000.

3. **Use a 5-gallon bucket** or similar container to place exhausted filters into after removal from the FilterPAK 8000. Doing thus will provide you a handy way to avoid spillage since the exhausted filter will have some liquid trapped, and also provide a place for the filter to dry in preparation for disposal. It is not uncommon to trap two or three pounds of sludge in the filter.

4. **Pre-mix your water and compounds** (soaps) in a separate, clean bucket. Add the fluid to the FilterPAK 8000 (or to the vibratory chamber) as required. Doing thus will assure that you maintain the proper ratio of compound to water.

5. The FilterPAK 8000 weights over 75 pounds empty and may exceed 200 pounds when filled. **AVOID INJURY, DO NOT ATTEMP TO LIFT THE UNIT WITHOUT MECHANICAL ADVANTAGE. Burr King recommends that you use a suction device to remove fluids and/or accumulated debris from the FilterPAK 8000. In no case should you attempt to hand carry the unit in a filled state.**

6. **DO NOT MODIFY** any electrical connection or device without the advice of a competent electrician. The pumps and connections provided with the FilterPAK 8000 are designed for electrical safety in a wet environment. DO NOT defeat these design features. **FAILURE TO HEED THIS INSTRUCTION MAY CREATE AN ELECTROCUTION HAZARD.**

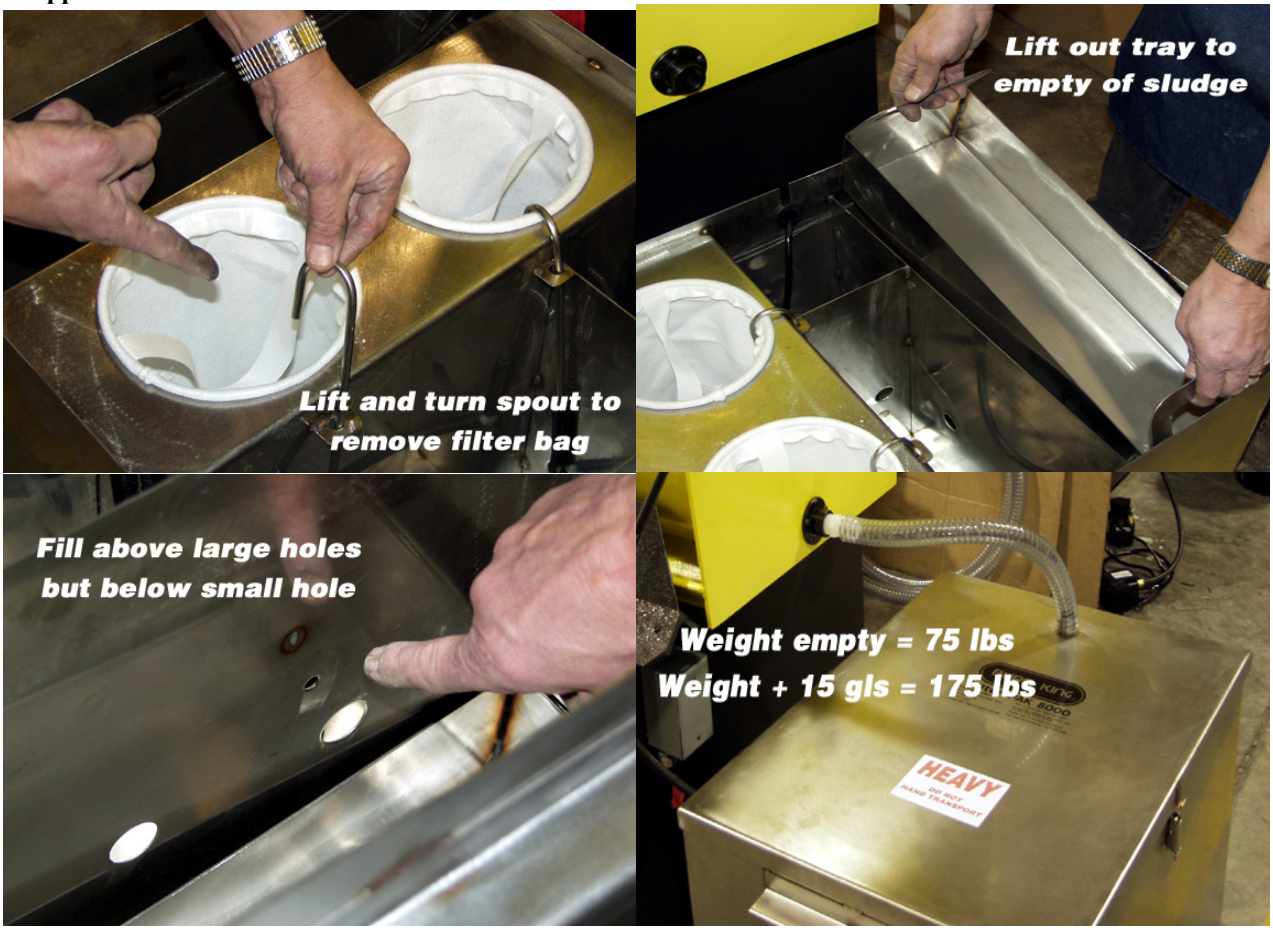
7. **Do not allow the pumps to sit** in a layer of collected sludge in the FilterPAK 8000. The sludge will harden over time and damage the pump. Periodically, take your FilterPAK out of service and thoroughly clean out all sludge from all chambers. Rinse the pumps in fresh water and inspect them to assure they are working properly. Note that vibratory sludge

is very destructive and as a consequence the pumps may require replacement after a few months service. This is particularly true if the FilterPAK has not been serviced as recommended.

7. **Periodically check the pH (acidity/alkalinity) of the vibratory fluids**. As a general rule deburring media prefers a pH of 8 to 11 (alkaline) when used on steel, aluminum, cast iron, copper, etc. Adding the recommended mixture of vibratory soap to water that is pH neutral (7.0) will typically raise the pH to the recommended 8 to 11 range. As oils and other contaminants are added as a natural consequence of the deburring process the pH may drop below the recommended level. This may result in accelerated rusting and/or other staining of your material. Should this happen replace the vibratory fluid with fresh fluid mixed per manufacturer's instructions. There are several methods available for measuring pH. Electronic meters are the most accurate and the most expensive. Litmus paper is inexpensive and suitable for this purpose. Purchase litmus paper at drug stores, chemical supply houses, or through your local industrial supply.

Some burnishing compounds will create pH levels of less than 7.0 (acidic) as may be required for good results. Check with your media (compound) supplier.

8. **DO NOT USE FLUIDS OTHER THAN WATER** (with approved soaps and/or additives) in the FilterPAK 8000. Doing so may create a fire or explosion hazard resulting in serious injury and/or property loss. Additionally, fluids other than water and recommended soaps and/or additives may attack the urethane liner of the vibratory chamber and significantly shorten its service life. **Burr King vibratory chambers are covered by warranty that is void if unapproved fluids are used.**



Please contact Burr King for assistance.