

Dust Collector Maintenance Guidelines



How do you keep your dust collection system from bringing your entire production process to a screeching halt? A proactive maintenance program is key. Here's where to start.

If you have a dust collection system with a felted fabric filter or cartridge collector, a few simple maintenance tasks can greatly extend the life of your system. For most business leaders, the major challenge is identifying which team member will perform these critical tasks and determining how these tasks will be integrated into daily routines. Whether you opt to have them performed by a machine operator or a member of your maintenance crew, the important thing is to make sure they get done.

What should be done—and when? Here's a general guideline for daily, weekly, monthly and annual maintenance.

Daily

Add the following maintenance tasks to the system operator's daily task list. These tasks can be performed while the system is in operation.

- Pressure drop across filter media should be 2 to 5.0 inches water. Over 4 inches water gauge may be an indicator of a potential problem.

- Confirm that the compressed air header pressure is 90 to 100 PSI (6.2 to 6.9 bar) or to the manufacturer's specifications.
- If your system has a secondary safety filter, check for pressure drop. Over 2" can be an indication of a problem with bypassing dust in the primary filter
- Drain any water from the compressed air header.
- Listen to the full cleaning cycle of pulse valves. If something sounds suspicious, investigate to identify and repair pulse valves or solenoids that are misfiring. Valves should be rebuilt or replaced every 2 to 4 years.
- Visually inspect the fan exhaust for particulate matter. If the system is equipped with a sensor that measures the presence of particulate matter, check it.
- Make sure the components that remove dust from the collector hopper are working.
- Check air flow and static pressure at the farthest collection point and compare to previous readings. If the static pressure dropped noticeably from previous readings and no additional equipment has been added, the filter media may need to be changed.

Weekly

The following tasks should be performed weekly during system shut-down.

- Inspect the inside of the hopper to make sure it is free from accumulated dust and that no dust is present in the air outflow.
- Inspect all gaskets on doors and access ports.
- Inspect the clean air plenum for dust leakage and filter elements which are not properly seated.
- Repair dust leaks. Vacuum clean the system and use a damp towel to wipe any dust found in the plenum, inside the bag cages or in the cartridge filter.
- Inspect the compressed air regulator, filter and dryer. The air dew point should be less than -40 degrees.
- Clean out differential pressure gauge, tube, tube filter or dust trap to ensure proper operation of the differential pressure gauge.
- Inspect fan drive components.
- Confirm that dampers are working properly.

Quarterly or Semi Annually

Make the following tasks part of the operator's regular monthly preventive maintenance routine during system shutdown:

- Visually inspect and determine if any dust is building up in the ducts. The accumulations should be addressed on an annual inspection if the accumulation is minor. Address any large accumulations during the inspection.
- Inspect duct supports.
- Inspect hopper dust discharge device to assure proper air seal at hopper discharge. If a rotary valve is present, check vane clearance and adjust as necessary.
- Inspect all bolts for corrosion and deformation.
- Inspect fan rotor and internal scroll for wear.

Annually

Complete these annual maintenance checks during a system shutdown:

- Inspect all system components for corrosion.
- Inspect all welds. Repair welds as necessary.

If your production process produces toxic, combustible or explosive dust, make sure that the employees completing these maintenance tasks have had the proper safety training and use the proper equipment to avoid causing any dangerous conditions (e.g. injuries, fires or explosions).

Questions about keeping your dust collection system working its best? The experts at G.F. Puhl are happy to help. Just give us a call at 615.230.9500 or [email us](#).