

Nilfisk CFM Case Study

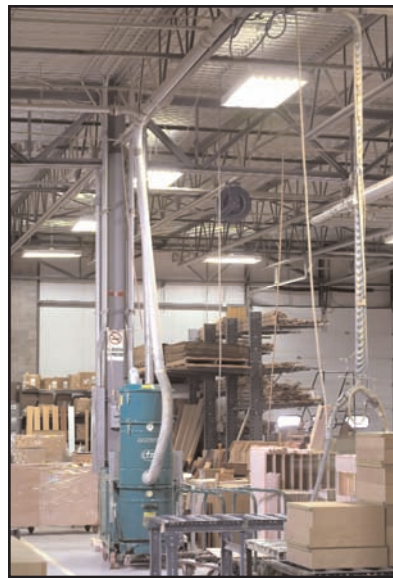
Providing Vacuum Solutions For More Than 100 Years
Central Vacuum System Cleans Up On Dirt, Production, and Quality
in New Hampshire Woodworking Plant

Inches of oak, birch, and other species of wood dust blanketed the equipment, floors, and walls at a Manchester, NH's 40,000-square-foot furniture factory. With anywhere from 20 to 40 professional sanders operating at one time, dust came with the territory, but the company president did not have a high tolerance for dust and all the problems that accompany it, including chronic respiratory conditions, production inefficiency, and higher production costs. His zest for quality, evident in the company's fine furniture, applied to his factory and employees, too. The dust simply had to go.

Shop managers had searched for a solution for five years. They tried to collect the dust at each individual sanding station during production, but the inefficient shop-style vacuums they had been using could not handle the volume. Filters were clogging two or three times an hour, forcing workers to stop and change the filters. They still were required to wear dust masks. "It really became a nightmare to deal with," said one shop worker.

Finally, management came across several industrial vacuums that had potential, but all failed to make a difference. "We tried three vacuums and they didn't do the job. We pulled them right out," said the Shop Manager. "Then my rep introduced me to Nilfisk-Advance America. Honestly, it was love at first use. Now we only need to check and change filters once a year – it's amazing."

"We examined the factory and found that the previous piping system wasn't large enough and its vacuums



were not powerful enough for the high quantity of wood dust being produced," said Ray McCarthy, Nilfisk-Advance America senior district sales manager. The woodworking plant installed Nilfisk CFM 3907/18 vacuum with HEPA and cartridge filters as a central system for its 40 vacuum-assisted sanders. The vacuum is

linked into a pipe system that runs about 250 feet.

They replaced the old system with an industrial-strength central system that employs a pulse, self-purging cartridge system.

"Every 20 seconds, the vacuum pulses compressed air at the filters to knock off the dust. Plus, there are four fine filters that continuously rotate, so while one filter is being cleaned, another is in use," said McCarthy.



That was three years ago. Since installation, wood dust and its inherent problems have been virtually eliminated. “This vac is awesome. Everyone is amazed at the fact that there is no dust at all in our plant. Some people say you could actually eat off the floor!”



“We used to have to confine our sanding to a separate part of the building. Now we actually finish in the same area as we sand, which is highly unusual under these conditions.”

The Dirt on Dust

Wood dust causes a variety of problems for many woodworking plants because of the vast quantities that fly up from machines, stick to hard surfaces, and infiltrate the air ducts. The biggest problem is the potential health hazards for workers.

• Health Effects

Exposure to wood dust – especially hardwood dust such as oak and birch may cause external and internal health problems. Adverse health effects associated with wood dust exposure include dermatitis, allergic respiratory effects, mucosal and non-allergic respiratory effects, and cancer. Oak and beech are most associated with a rare form of nasal cancer. In addition, the American Conference of Governmental Industrial Hygienists (ACGIH) recognizes wood dust as a “confirmed” human carcinogen and recommends a limit of 1 milligram per cubic meter (mg/m³) for hardwoods. [Source: http://ohioline.osu.edu/aex-fact0595_1.html]

• Less Mess, Less Expense

Wood dust sticks to everything, which makes cleaning it very time-consuming. Prior to purchasing the Nilfisk system, the company wasted valuable man-hours sweeping and manually vacuuming floors and equipment.

In addition to saving time and labor on cleaning since implementing the Nilfisk vacuum system, the company also saves money on sandpaper. Wood dust was being embedded in the sand paper, dulling it prematurely. “We went through at least 10 boxes of sandpaper every 3 days, now a box lasts 2 or more weeks. At about \$12 per box, we were wasting nearly \$250 a week on paper.” Today, the company averages about 5 times more use out of the same sandpaper disc.

• Improved Productivity

Maintaining a pristine factory is extremely important. Why? Because it improves workflow, impacts quality, and has a positive impact on employee morale.

“A dirty plant can slow people down. Without dust and debris or other hazards on the floor, things move smoother. Employees move quicker and are safer without obstructions or slippery, dusty surfaces.”

About Nilfisk-Advance America

Nilfisk-Advance America helps customers meet their individual cleaning requirements and challenges with an extensive range of high-performance vacuum cleaners. From its Malvern, Pa., headquarters, Nilfisk-Advance America provides industrial vacuums for heavy-duty applications that require maximum suction power and specialty vacuums for clean applications that demand “absolute” air purity and facility cleanliness. The company’s Nilfisk and CFM brand vacuums are equipped with ergonomic and user friendly features and exceptionally efficient filtration systems, ensuring dust- and debris-free facilities in a variety of manufacturing industries including food, electronics, chemical/pharmaceutical, metalworking, woodworking, and powder coating.

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