

# Proper dust collection improves productivity

New dust collection units have made a big difference in two shops' production abilities

## Flexible connections add versatility

Truly custom shops require as much flexibility in their dust collection systems as they do in their production process. That was the case when the woodworking shop for the Eli Whitney Museum in Hamden, Conn., needed a new dust collection system.

Mike Dunn, the museum woodshop's project manager, says the work they do runs "from A to Z. On any day it could be anything." That includes kayaks, rowboats, museum display cases, experimental apparatus, parts for wooden toys and airplane models.

Equipment in the shop includes a Powermatic jointer, a Delta Unisaw and a DeWalt miter saw. Most of the equipment is designed to be moved. So, experts from Air Handling Systems suggested a dust collection system with lots of flexible connectors that have quick-release snap-lock connectors next to blast gates. That quickens reconfigurations.

Powered by a 5-hp Dustvent collector, the system piping runs underneath a wall-mounted workbench area to keep piping out of the way. The collector is housed outside the shop with a return air system to keep from sucking heated air out of the building in the winter-time.

—William Sampson



Flexibility is key at the Eli Whitney Museum shop. Dust collection piping runs underneath a wall-mounted work counter and machines are connected to blast gate ports with flexible tubing and snap-lock connectors.

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Above all, good dust collection increases productivity, say Joseph Brown, vice president of Innovative Design Industries, and Gerald Wheeler, founder of Cabinet Door Shop. This translates into more product and more profit, they say.

Five-year-old Innovative Design Industries recently moved into a new 26,000-square-foot facility. From the old to the new facility, the biggest difference was the amount of dust in the air, says Brown. "When we were at our other facility, dust was just massive."

According to Brown, proper dust collection has improved productivity, employee health and satisfaction, and the overall impression customers get when they visit the plant. "The key player at this facility is DISA, with the new dust collection system," he says.

## Handling fine dust

Brown met with DISA at IWF Atlanta 2002 and explained his company's needs. "They showed us they would put in a system that would maintain our needs. I said, 'I'll believe it when I see it.'"

Now, says Brown, "I would say our recovery of dust is in excess of 95 percent. There's hardly any dust that comes off the floor."

IDI uses MDF in its products, and the dust is very fine, Brown says.

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# Dust collection

Innovative Design Industries recently installed a 35,000 cfm dust collection unit from DISA.



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Gerald Wheeler, founder of Cabinet Door Shop, is pictured beside the 44-inch, 150 hp main fan unit of his 35,000 cfm dust collection system.



“With the particle size being so small, it’s just like baby powder. It’s so hard to capture, but with the correct tooling and the dust collection system DISA put in, it’s phenomenal.”

DISA installed a 35,000 cfm system that’s an eight-partition unit equipped with Flamex to prevent fires. “The plant is a totally clean

facility,” says Brown. “What dust accumulates at the end of the day can be picked up with a scoop.”

Because of the dust collection system, cleanup time for IDI has been reduced from 45 minutes per employee per shift to 15 minutes. With eight employees, that adds four additional hours of manufactur-

ing time to IDI’s daily production.

“The system has been one of the biggest personnel savers,” says Brown. “When you’re working in an environment that’s more of a manufacturing environment than it is a dust hall, it’s unbelievable.”

The biggest intangible effect of a clean facility is the overall impres-

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# Dust collection

sion it makes on customers and potential customers, says Brown. People visiting the plant are impressed by two things: the cleanliness of the plant and the quality product IDI produces.

IDI produces a wide range of work and it's comfortable dealing with a wide variety of materials, says Brown. "We do kitchen cabinet doors, RTA furniture and consumer electronic parts. Today we're making closures for

## Six things to consider before buying dust collection

- Will dust collection shorten cleanup time/lengthen production time?
- How would dust collection improve the shop's output?
- Will customers (or potential customers) get a better impression of the company if they see a dust-free shop?
- Would an expandable dust collection unit be a wise investment?
- How will dust collection improve insurance company ratings?
- Is there a way to sell dust collection waste for a profit?

pet carriers, which are sliding doors. We work with composites, plastics, MDF, particleboard and solid wood."

### Allergies dictate dust control

Gerald Wheeler, founder of Cabinet Door Shop, is highly allergic to wood dust. This requires him to have exceptionally good dust control in his facility. His 33,100-square-foot shop has a 35,000 cfm DISA baghouse fill system with a 150 hp blower.

"It's a positive air system and we have the option of returning it back into our plant so we don't lose our heated air during the winter," says Wheeler.

Wheeler chose his system for a number of reasons. The first is its adaptability. "It's expandable," he says. "If you get other dust collectors, you have to get it made for a particular size. If you need another 10,000 to 15,000 cfm, you've got to buy another unit. What do you do with this one? Throw it away? Or sell it at 25 cents on the dollar?

"It's a very versatile system," continues Wheeler. "Our system, which is 35,000 cfm, can be added on up to

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# Dust collection

190,000 cfm. You don't throw anything away. When you outgrow and need something bigger, you put on more modules. You've got room to grow."

Wheeler's biggest reason for purchasing his dust collection unit is the

increase in productivity he sees from Cabinet Door Shop employees.

"We get more efficiency from our employees because the place is clean. There is no sawdust in the air," he says. "Our productivity exceeds indus-



try standards as far as cabinet doors."

Trips to IWF in Atlanta and conversations with other cabinet door manufacturers have confirmed for Wheeler that his employees produce more than other shops his size.

## Worth the cost

When he talks to shop owners who neglect proper dust collection, their number one reason for not buying adequate dust collection is the cost of the system.

Good dust collection is worth the money because it does help shops make a profit in the long run, says Wheeler. "Because of our cleanliness, we're able to get our production up, so it definitely contributes. It's not just an expense.

"We do get more doors per person per working day than what the norm appears to be," continues Wheeler. He attributes this to the clean



Proper dust collection improves productivity says Gerald Wheeler, founder of Cabinet Door Shop.



The Cabinet Door Shop's dust collection unit is totally enclosed so there is no sawdust accumulation, says Wheeler.

doors, dovetail drawer boxes, wainscot and panel ends. "We do any hardwood, plus kiln-dried pine, with the exception of teak because teak has silica in it which will destroy diamond tooling," says Wheeler. The dust col-

lected in Wheeler's DISA unit is sold to a company that burns it for fuel.

Good dust collection has enabled both Innovative Design Industries and Cabinet Door Shop to increase production, provide a better work

workspace for his employees. "If you're in a clean working environment, you get more done. You have a better attitude."

An added bonus to Wheeler's decision to buy his dust collection unit with a GreCon spark detector system is the reaction of his insurance company.

### Better fire rating

"My insurance company has me classified at the lowest fire rating possible," says Wheeler. He isn't hooked up to city water and he's not near a fire hydrant. But, "It's as if I'm within a 500-foot distance of a fire hydrant on city water with city fire protection and I have none of that, but because my blower system is so efficient, they have me classified at that. My fire insurance is as low as it could possibly be."

Cabinet Door Shop uses kiln-dried hardwood to produce cabinet

For more information on the products mentioned in this article, circle the following numbers on the Reader Service Card in this issue:

Air Handling Systems ducting .....	261
DISA	
35,000 cfm eight-partition dust collection unit .....	262
Expandable 35,000 cfm baghouse fill system .....	263
Flamex	
Spark detection unit .....	264
GreCon	
Spark detection unit .....	265