

Going Mobile— McGill's On-site Mobile Duct Machine Delivers Mercedes-like Performance

At the \$600-million expansion project underway at the Mercedes-Benz production facility in Tuscaloosa, AL, "clean, fast, agile and high-performance" apply to more than just the automobiles that the factory is being built to produce. Those adjectives also describe McGill AirFlow's on-site mobile duct machine that was instrumental in keeping the plant's HVAC contractor, McAbee Construction, on time, on budget and extremely pleased.

"It was clear that we should go with McGill," says Warren Brown, McAbee project manager. "They have a superior system, and Tommy Muckenfuss, our director of business development, had seen the time and cost savings that we benefited from by using the mobile duct machine on a Boeing factory."

The 987,000 square-foot plant required more than a mile of spiral duct in 17 sizes, from 10-inch to 50-inch diameter in gauges 18 to 24. All was hung 25 feet above the factory floor. A small amount of rectangular supply duct is in the penthouse that houses the main power areas. The system is designed for up to 55,000 cfm, and each of the 3,050 diffusers are rated at 3,050 cfm. The 18 air handlers and 20 exhaust fans were placed on the roof by helicopter.

The Difference

"McGill's on-site Mobile Duct Machine was a huge plus for us," says Roy Bayliss, McAbee's sheet metal supervisor and the project's assembly supervisor. Bayliss knew the benefits of the mobile unit. McAbee and McGill had previously collaborated on a Boeing aircraft assembly factory. "Changes can be made and problems solved so much quicker than working with a trailer full of factory-fabricated duct," he says.

This job couldn't have been done any other way, says Joe Schelble, McGill business development manager. "The entire HVAC system had to be installed in seven months," he recalls. "Most of the fabrication was done during a four-month period."

"Factory fabrication of this much duct in four months would have taxed our ability to meet other customers' needs. With the Mobile Duct Machine, it was simple, and bottom line, it saved time and money. Having McGill ship slit coils to the job site versus fabricated duct saved 10 percent of the job cost."

Fabricating duct on-site also helped meet Mercedes' cleanliness requirement. "They wanted it super clean," Bayliss says. "When the ductwork came off the machine,



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we covered the ends to keep out dust and dirt, both of which can be considerable in a large site like this. I guarantee that it was the cleanest job you'll ever see."

Scheduling was a Bear

Bayliss notes that the biggest challenge of the job was scheduling. "It was a bear...with all the concrete and dirt work and Mercedes needing it super clean ... but we overcame that," he says. The job site included three Mercedes buildings: the Body Plant, the Paint Plant and the Assembly Plant where McAbee was involved.

"We had to stay out of the way of the other contractors in our building and the other buildings," he continues. There were three zones within the Assembly Plant:

Zone 1—Fire Protection and Electrical

Zone 2—HVAC and ductwork which McAbee handled

Zone 3—Hot Water, Chill Water, Domestic Water and all Mechanicals.

By working with a sequencing schedule, all subcontractors knew their requirements. So when anything changed, the reaction had to be quick.



McGill's Mobile Duct Machine is a self-contained, 42-foot trailer with an air compressor, welding machine, steel decoiler and a two-ton, overhead crane. A pneumatic handling table delivers the duct directly to the contractor.

"We could always get in touch with McGill," Brown recalls. "They reacted immediately to changes, and that helped us meet every sequencing milestone."

With the tight installation schedule and the number of other contractors, it was imperative that materials were ready when needed. That's where McAbee benefited from having the duct machine on site.

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A Quality Finish

"I can't say enough about McGill's ductwork. It's high quality. With other ductwork, I've run into problems connecting different gauges, or having ductwork that's too flimsy or busting at the seams. There was none of that with McGill's ductwork. It's just quality stuff."

Both Bayliss and Warren praised the McGill UNI-GASKET™ couplings. "Two rubber gaskets are used to join two pieces of duct," Bayliss says. "It's a better-looking job since there is no duct sealer on the outside." Warren pointed out that the system speeds installation, which helps reduce labor costs.

"When this Mercedes Assembly Plant is complete," Bayliss says, "it will be the best looking job on the whole project. It's a fine, fine job."

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