Meet the MudMixer

BY JAKE LEWANDOWSKI

About a year ago, we received a poor batch of ready-mix concrete. Fortunately, we had taken several cylinder samples. We did end up exceeding our concrete design specification, but the concrete took longer than we had expected to cure, which resulted in scheduling consequences. Still, it could have been much worse. What would have happened if we prematurely loaded footings that had not reached their designed specification? What if the concrete never hit the required psi? Who's at fault and who would be blamed?

What I learned from this experience is that it is critical to document everything about the concrete for a project—namely, the product type used, how it is mixed, and the water-to-cement ratio, plus a few other things, especially if you're using additives. When you modify a bagged mix by adding portland cement or a water reducer, do you now own that mix design? Are you charging your client accordingly for the additional liability you are taking on by modifying bagged goods? Before answering such questions for your organization, you need a consistent means of mixing concrete; otherwise, all the specs you document may be rendered unreliable.

CONCRETE MIXERS

For us, it is important to have a mixer that is mobile and that's electric. A substantial amount of our work, whether residential, industrial, or commercial, is indoor work, which has its own challenges. We need to be able to transport the unit to the work location, which may be down a flight of stairs, up a loading dock, or the like. We need to manage indoor air quality, and sometimes we need to manage sound.

There are some awesome, extremely heavy-duty gas options, and one of those might be the best mixer for you, depending on what you do. For us, however, the gas models lack many of the attributes we're looking for in a mixer. Small, portable drum mixers had been our best option, though they're certainly not perfect. In my opinion, they're disposable. They've always lacked the power needed to mix concrete at a profitable speed. You can't easily and accurately regulate how much water you are adding, without an extra labor cost for measuring out the water for each batch. If a conscientious amount of care isn't taken to break open and dump each bag into the drum, drum mixers can produce a troubling amount of dust. Not to mention they can be tough and time-consuming to clean, and you're left with a ton of cement-laden water to dispose of. When you add in the frequency of mechanical failures, it often ends up being easier to use a wheelbarrow and a shovel.

MEET THE MUDMIXER

The MudMixer is an on-site concrete mixer made by a small, Texas-based company of the same name. We've been using one

The MudMixer is a highly portable machine that is designed to mix and dispense fresh concrete at the site of each pour—in this case, each new column footing for a new basement beam **(1)**. At 145 pounds, the unit can be easily loaded and unloaded by two workers **(2)**.

Photos by Jake Lewandowski

for almost a year, first renting one, and then, about six months ago, buying one, and so far it has been an absolute game changer. The MudMixer is similar to a volumetric concrete mixer except that the water is added and the concrete is mixed in the chute, making it different from any other electric mixer on the market. Weighing in at only 145 pounds, it's extremely mobile, as well as easy for two people to load on the truck and unload at the end of the day. Virtually the whole machine is made from 14-gauge steel that is powder-coated gray; it seems extremely robust and heavy-duty.

MudMixer claims to be able to mix 40 bags per hour, and we have verified that. This makes mixing a whole pallet of 80-pound bags of concrete an hour-or-so project. The MudMixer has a big splitter that runs down the center of the hopper that practically automates opening bagged material. When it comes to adding water, we run a garden hose to the mixer. A valve lets us control the precise amount of water saturating our mix, giving us consistent and uniform results. Cleaning is easy, too—it has an onboard hose—and only takes a few minutes. Typically, we are left with less than a full bucket of gray water.

Dust generated from bagged goods is still very much an issue but not any worse than what we are already accustomed to. MudMixer is a professional-grade tool, made to withstand the rigors of the jobsite, and it comes with a price tag to match: $3,000. If you mix 20, 30, 40, or more pallets of concrete a year, though, it's going to be a no-brainer; this tool will pay for itself quickly. Stay tuned for our 100,000-bag, long-term review, when we are going to report whether this mixer is as durable and maintenance free as the manufacturer claims.

Jake Lewandowski is a construction manager for Great Lakes Builders serving Greater Chicago.

The mixing is done by an auger running the length of the narrow, horizontal chute **(3)**.

A 75-Degree Swing Table for Cutting Acute Bevels

BY JOHN CARROLL

The Big Foot 10 1/4-inch beam saw is a high-quality tool hand-built in the U.S. around the same proven motor housing that powers the classic Skilsaw Model 77 wormdrive saw. It's got plenty of power, and for such a large saw, it is fairly light (just under 16 pounds), has great balance, and runs smoothly. That's all good, but the game changer for me has been the Big Foot swing table, an optional accessory designed specifically for this saw.

With a 3 7/8-inch cutting depth at 90 degrees, the saw can cut nominal 4-inch lumber in a single pass, ideal for cutting posts and beams and making it a great asset for fencing contractors, deck builders, timber framers, and others who cut a lot of posts and heavy timbers. Production framers like Tim Uhler, who reviewed the Big Foot saw for *Tools of the Trade* in 2016, live and die by productivity; that's why they like it, too. Although they don't cut as many 4-by timbers as those other specialized contractors, they're always looking for ways to shave a few minutes off every task. They can stack their wall plates, for example, and cut two at a time with the Big Foot saw.

I don't live in the same world as those specialized contractors. I build additions and remodel existing spaces, typically working on houses that are 50 to 100 years old and sit on narrow, urban lots. In tying into and refurbishing old houses, I run into one problem after another. Usually, the house is neither level nor square. I often find rotten wood and termites. As I work, I have to protect the interior of the house from rain and keep the occupants of the house safe and as comfortable as possible.

Because of these and other challenges, my jobs usually proceed in fits and starts. I've learned to take the bitter with the sweet, however, and grind through the problems as they crop up. Steady progress, not blazing speed, is my goal, and I buy tools that solve problems and maintain a high level of quality. In my world, the ability to cut the occasional post in one pass rather than two does not loom large.

For that reason, I never felt the urge to buy a beam saw. All that changed, however, when I saw that the

Big Foot beam saw could be fitted with a swing table that adjusts to a 75-degree bevel and can cut nominal 2-inch-thick lumber at 67 1/2 degrees. No other saw that I know of has these capacities.

This ability to cut very acute angles might seem to be an exotic feature, but I've found it to be extremely useful at key points during my jobs. I use it to do things like make the bevel crosscuts needed for the level and inclined plates used when framing a gable-end wall. On a 6-in-12 pitch, those cuts would need to be 63 1/2 degrees. I also use it to make the compound miter/bevel cut needed for an octagonal roof. At the tops of the hip rafters, the saw would have to be set to 67 1/2 degrees for those cuts. I also use it to rip the bevel along the length of the sleeper in a blind valley. On the one shown here, I ripped the sleeper at 61 degrees.

The Big Foot beam saw with the swing table is not a tool I use every day. When I need to cut acute angles in nominal 2-inch lumber, though, it solves the problem and moves my job forward.

The swing table fits only on Big Foot beam saws. If you already own a Big Foot saw, you can buy just the swing table for about $150 and change out the table. Replacing the original magnesium table that comes with the beam saw with the steel swing table is a simple job that takes about 10 minutes. If you're starting from scratch, you have to buy both the Big Foot saw, which goes for $330, and the swing table for a total expenditure of $480. bigfootsaws.com

John Carroll, author of Working Alone, *is a builder who lives and works in Durham, N.C.*

The Big Foot 10 1/4-inch beam saw can be retrofitted with a powder-coated-steel swing table that adjusts to a 75-degree bevel with a 1 1/8-inch depth of cut **(1)**. Here, the author demonstrates how the swing table allows him to rip a 61-degree bevel for the sleeper in a blind valley for a roof that he is framing **(2, 3)**. The swing table allows the saw to make beveled crosscuts such as the 63 1/2-degree cut needed to frame this gable-end wall **(4, 5)**.

Photos: Matthew Narvey

High-Powered Jobsite Lighting

BY TIM UHLER

Winter is never a season I look forward to working in. Besides colder temperatures, we have less daylight—a lot less, depending on where you live. I frame and side in the Pacific Northwest, and on January 23, when I wrote this review, we started work at 6:30 a.m., and the sun didn't rise until 7:57 a.m.; then, it set at 4:35 p.m. Days like that are when temporary jobsite lighting becomes a fact of life, and it always seems like there isn't enough.

For several years, our go-to jobsite lighting has been supplied by various iterations of Milwaukee's battery-powered M18 LED floor and stand lighting, which I've periodically reviewed for *JLC* since 2016. When I learned about Milwaukee's new MX Fuel Rocket Tower light/charger, which is designed more for commercial sites, I asked the company to send one to compare with our existing lighting. On its brightest setting, it offers an eye-popping 27,000 lumens, compared with the 9,000 lumens offered by the M18 Radius site light (see "Smart Work Lights," Jan/20).

Part of Milwaukee's MX cordless equipment line, the Rocket Tower is the mother of all battery-powered lights. In addition to providing up to 27,000 lumens of illumination, the lights extend as high as 10 feet tall, with outriggers to stabilize the unit on uneven surfaces. It collapses to a 44-inch height, making it pretty easy for one person to wheel around, though lifting the 108-pound unit in and out of the van is easier with two. With an IP56 rating, the Rocket Tower can withstand airborne dust and windblown rain, and it features Milwaukee's One Key tracking for security.

The unit has four adjustable heads that can be rotated and pointed where you want. Milwaukee claims that the LEDs will never need to be replaced and backs up this claim with a limited lifetime guarantee. While the light can run off battery power, it can also be plugged into a regular 110-volt circuit.

In use, we found it charges quickly. When working outside, we'd typically turn it on when we first arrived at a jobsite and turn it off once there was enough daylight, and we needed to recharge it only about once a week. When working inside, we would plug it into a wall outlet first thing in the morning to have light all day at full brightness while topping off the battery. According to Milwaukee, the battery will last three hours at full brightness, which under battery power is 20,000 lumens. You get the full 27,000 lumens only when the unit is plugged into A/C power.

The MX Rocket Tower comes with a hefty $3,300 price tag. While that's not a small sum to spend on jobsite lighting, we've found that it's been invaluable to the way we work, allowing us to start early and stay late if needed. Because it is faster to set up and take down than all of our other lights, it has largely replaced them. For example, the light is great for siding work, because we can illuminate an entire wall. Another example is the driveways for a pair of spec homes we are building, which we had been putting off because of rain. Finally, after waiting two months for a nice day, we lined up our flatwork sub and concrete for one of the driveways, which they finished by 11 a.m. Because we had lighting, I was able to get another delivery of concrete, and our sub and his crew stayed and poured the second driveway, placing 50 yards of concrete in one long day. This allowed us to schedule the final inspections and list the homes for sale that week. To me, that more than justifies the expense, not to mention the extra safety that good lighting provides on a jobsite.

Lighting has come along way since I reviewed our set of metal halide Wobble lights back in 2014. Good jobsite lighting isn't cheap, but it's a necessity, so buy the brightest and most convenient lighting you can. Remember to include tools as a line item on your job budgets and make sure you account for them come tax time. It takes the right tools to do our job and do it well, so don't cheap out on lights. milwaukeetool.com

Tim Uhler is a lead carpenter for Pioneer Builders in Port Orchard, Wash., and a contributing editor to JLC.

The Milwaukee MX Fuel Rocket Tower light extends to 10 feet **(1)** and puts out as much as 27,000 lumens, enough to fully illuminate the side of a house or a cavernous workspace **(2, 3)**.

Photos: Tim Uhler