



# The Next Generation of Cordless Concrete Tools

DEWALT® takes on gas with

**DEWALT POWERSHIFT™**

**A**t World of Concrete in January, DEWALT declared in a big way that it was taking on gasoline-powered tools in concrete work with the official launch of DEWALT POWERSHIFT, a full range of electric equipment powered by a 554 WH battery – equivalent to 6.5 HP\* – that is designed with the concrete user top of mind.

Concrete work is complex, it's a delicate dance of timing and precision. Anything that disrupts that dance can lead to a lesser-quality pour or a need to redo the job. As with all things, in concrete time is money, so contractors want to get it right the first time. With DEWALT POWERSHIFT, these needs are addressed head on, while also tackling concerns contractors have with gas-powered tools.

### DEVELOPMENT AND DESIGN

The DEWALT POWERSHIFT product line was born from user feedback. DEWALT's team spent countless hours on jobsites observing how users worked and learning what they needed and wanted to do their jobs better.

"We were out on the jobsite seeing users [work on concrete], and we would hear 'couldn't you guys help us with this? There has to be something better you can do,'" said Ricky Cacchiotti, Director of Product Development and General Manager for DEWALT POWERSHIFT.

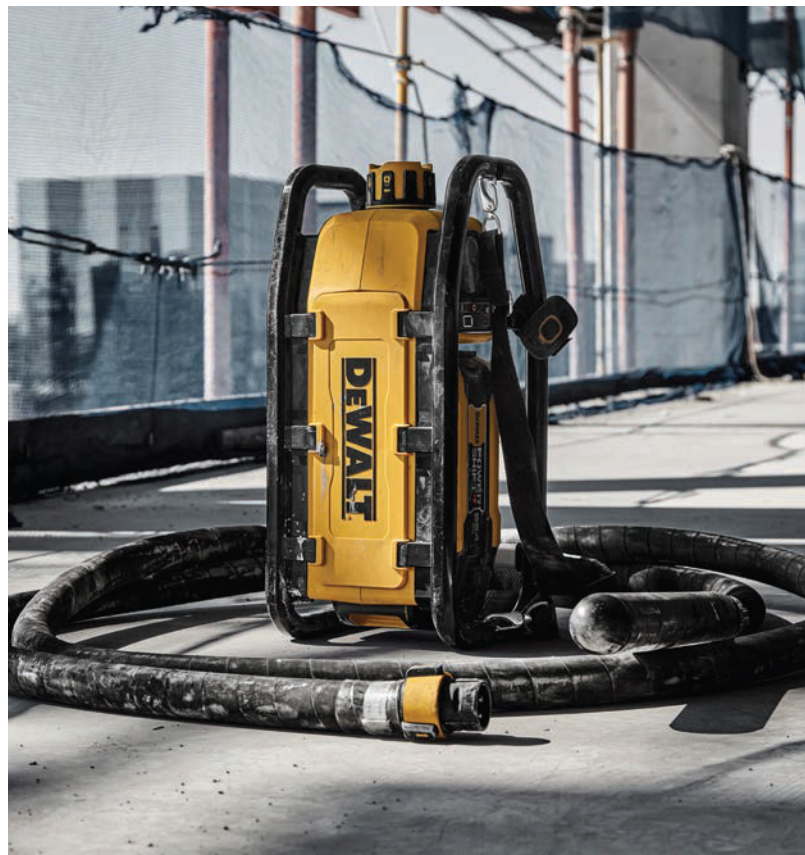
In early exploration of battery-powered concrete tools, Cacchiotti said the product couldn't meet user expectations on runtime, power and ergonomics, so the project was shelved until battery technology developed in a way that allowed the idea to go forward. DEWALT was adamant that users will not convert if a battery solution could not meet or exceed the performance of gas equipment – this was a non-negotiable.

"There's this expectation that if you're going to have the DeWalt name on [a tool], it's going to deliver," Cacchiotti said.

With the introduction of pouch cell technology, the company felt confident developing the system and launched the DEWALT POWERSHIFT line this year. The full line is available for preorder now, with tools expected to ship in September.

### ADVANTAGES OVER GAS

To get cordless tools on the concrete jobsite, contractors have had to rely on heavy, noisy gas equipment. DEWALT's mission to make the jobsite cordless started more than three decades ago, said Dave Veprek, Vice President of Product Development for batteries and chargers. That focus has been on eliminating cords, but with DEWALT POWERSHIFT, Veprek said, the company is looking to the next frontier – to eliminate gas as well.





Gas tools require a lot of maintenance to run correctly. Concrete tools can sit for days or weeks at a time while crews wait for a job; that downtime is rough on gas tools, which need to be periodically run to maintain their motors. Gas tools also need new filters and oil changes regularly.

"The concrete worker is known to use their tools until they fail and then go get another. Preventive maintenance is not always top of mind," Veprek said. "[DEWALT POWERSHIFT] tools are always ready with a charged battery. It's super consistent. You got your charged [battery] pack, you put it in, turn [the tool] on and go to work. That's really all you have to do with the equipment."

We also wanted to design the DEWALT POWERSHIFT line of tools to be quieter than gas tools, creating a better environment for workers.

"When we look at concrete placement with screeds and vibrators, it's so dramatic when our gear is onsite versus gas," Cacchiotti said. "Most gas engines blare at around 130 decibels and some of them are right next to the ears." Add in ear protection, and it can be difficult for contractors to communicate on the jobsite.

Concrete teams that tested DEWALT POWERSHIFT prototypes have been able to have conversations without yelling or shutting down equipment to be heard. This is a major advantage not only for improved orchestration of the pour, but as the construction industry works to close

a skills gap, less noise and improved communication creates a better learning environment for new comers.

"Think about how much easier it's going to be to bring people up to speed, flatten the learning curve when you can communicate at a normal level with them," Cacchiotti said. "Can you imagine always being yelled at if you were new? [Foremen aren't] yelling because they're mad, but because they've got to get over the noise of the engine because they can't stop working. We believe the opportunities to coach, train and develop talent are much better now using DEWALT POWERSHIFT tools."

Quieter tools could also mean a safer environment overall, as crews can better hear when other equipment is in motion or if a bucket is passing overhead for a new pour.

Some DEWALT POWERSHIFT tools have a longer runtime than their gas counterparts. For example, the POWERSHIFT vibrator and screed run longer than gas\*\*, Veprek explained.

Then there's the refill needs. Gasoline must be safely stored on the jobsite, so when a tool runs low, if there isn't another tool nearby, work must halt to go get a gas can from storage, refill the machine and then store the can again. The 554WH batteries powering the DEWALT POWERSHIFT line reach a full charge in less than an hour and every tool comes with two batteries and a charger, so teams can always have a full battery ready to go.

The DEWALT POWERSHIFT line of tools cuts down the

high consumption of tools due to mechanical failure and missed maintenance, as well as the cost of gas Veprek said. DEWALT equates the investment to buying your energy upfront.

### DESIGNED WITH ERGONOMICS IN MIND

Concrete work can be punishing on the body. The tools workers use should help minimize that impact. The DEWALT POWERSHIFT team set out to design tools that meet this need, starting with the battery.

The DEWALT POWERSHIFT battery is made of lithium-ion pouch cells which are also used in the automotive industry to cut weight and boost performance of electric vehicles. Pouch cell batteries have most of the components encased in a protective aluminum film, versus a hard plastic case cutting weight significantly.

The backpack vibrator is a point of ergonomic pride for the team, Cacchiotti said, highlighting the adjustable harness that helps distribute the vibrator's weight. Rather than being concentrated on the back and shoulders, the backpack was designed to put weight at the neutral center of gravity – the hips. Not to mention, it's lighter than gas.<sup>‡</sup>

"The harness is so thoughtfully put together. Where they're putting the weight on the body, how they're doing it, how they're managing the weight," Cacchiotti said. "We have [an adjuster] that's really easy to use. You size it to yourself based on the size jacket you wear, from extra small to XXXL. That's a great starting point for you to think about your torso and then you just adjust it up and down based on what's comfortable."

DEWALT POWERSHIFT tools like the power screed feature fully adjustable heights and angles of the handle grips, allowing for better comfort and control for those who run the equipment.

"It was so critical to understand how [contractors] would hold it, what they would do with it," Cacchiotti said. "We did so much observational work with ergonomic studies with the team and really obsessed over how the user's going to live with the equipment. What does that look and feel like? It drove everything because ergonomics doesn't just wait."

### SAFETY COMES STANDARD

The DEWALT POWERSHIFT line of tools aims to help make the concrete jobsite safer overall.

"You can include features that may not be possible with gas-powered equipment," Cacchiotti said. "The amount of control over how the tools operate and how they function is incredible."



DEWALT POWERSHIFT tools feature brushless motors and electronics that control safety features in the tools.

The core drill has anti-rotation technology built in to avoid unexpected bind-ups when obstacles like old concrete or rebar are hit. If the core drill binds up, it automatically shuts down. The rammer and plate compactor both have soft start functions, allowing for more control at the beginning of work.

"How it feels and functions is actually patented," Cacchiotti said. "We looked at the operator and the impact on them. We don't want a stop work incident because that affects the schedule and the owner and the client. It should just be go to work, get your work done, come home safe."

### ORDER TODAY

With the official launch of DEWALT POWERSHIFT at World of Concrete, contractors can now order any of the tools or request additional information at [dewalt.com/systems/powershift](https://dewalt.com/systems/powershift). Production is underway with tools expected to ship in September.

\*Not in application. Based on preliminary data as of 1/23/24.

\*\*In regard to DEWALT POWERSHIFT Vibrator: using DCBP50554 battery vs. Oztec BP50A Gas Backpack Concrete Vibrator with full tank of gas. Based on preliminary data as of 1/11/24. Oztec Industries, Inc. has not endorsed or approved this comparison; In regard to DEWALT POWERSHIFT Screed: using DCBP50554 battery vs. Multiquip® DSGPULW gas-powered concrete screed with full tank of gas. Based on preliminary data as of 1/12/24. Multiquip® is a registered trademark of Multiquip, Inc., which has not endorsed or approved this comparison

‡In regard to DEWALT POWERSHIFT Vibrator: operating weight vs. Oztec BP50A Gas Backpack Concrete Vibrator. Not including vibrator shafts and heads. Based on preliminary data as of 1/11/24. Oztec Industries, Inc. has not endorsed or approved this comparison.