

DUSTY THE ROBOT



BRIDGING THE GAP IN CONSTRUCTION WITH TECHNOLOGY

ACCURACY THAT SPANS MULTIPLE LANGUAGES AND CONSTRUCTION NEEDS

USING TOOLS TO ADVANCE JOBSITE ACCURACY

As technology evolves at a rapid rate, industries around the globe hustle to innovate their practices accordingly. The construction industry is no different when keeping up with advancements coming out of Big Tech companies. So much of the building process is done with the aid of computers, AI, and virtual planning. The traditional practice of moving the blueprint markings from paper to the jobsite takes time, skill, and accuracy, and if done incorrectly, can place the project's safety, budget and schedule at risk. Acknowledging this obstacle, The Weitz Company is constantly looking for ways to innovate and simplify this process.

At the turn of the century, BIM modeling gained rapid popularity in the construction industry and is now standard practice for most firms. Unfortunately, about 95% of the data captured by BIM modeling is under-used on the jobsite. In its search to leverage this data more effectively, Weitz's VDC team found its solution in Dusty the Robot. Our Mission Critical team immediately recognized the potential.

WHAT IS DUSTY THE ROBOT?

Dusty FieldPrinter was designed to take the blueprints for the jobsite and accurately print them on the layout. With full control of the operator, our team can program the robot to print all trade layouts in a fraction of the time it would take our team of experts. With Dusty, what would typically take five days, this robot can do in one. This allows Weitz to build more in less time, while increasing efficiency, quality control, communication with trades, and overall safety.

Dusty the Robot has been tested on hundreds of jobsites. Construction workers can visually see where to put walls, doors, fixtures; bringing the blueprint to life. Using the BIM model from the client, the accuracy of the robot is 1/16 inch. According to Dusty Robotics, using this robot speeds up this task by 10 times over.



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Hear from James Kirk at the Mexico site about using Dusty



HOW DUSTY IMPROVES THE JOBSITE

✓ ACCURACY

The FieldPrinter automates the transfer of the digital model directly to the construction site floor with 1/16" accuracy

✓ SPEED

Optimizations are not required to achieve Silver level certification, but create a flexible pathway towards Gold and Platinum level certification. These features include optional technologies, strategies, protocols and designs. IWBI recommends that all projects strive to achieve as many Optimizations as possible.

✓ COMMUNICATION

Enhances communication and collaboration among different project departments by printing layouts for all trades in a single task. This increases collaboration since all groups are working from the same data.

CASE STUDY: DUSTY AIDS MISSION CRITICAL

Mission Critical projects are complex, large, and typically have tight turn arounds for delivery. All of these factors equate to our team constantly searching for the new technology and techniques that eliminate waste, increase time efficiency, expand our team's QA/QC efforts, and reduce a jobsite's safety risk.

On these large scale data centers, Weitz aims to make each piece as smooth as possible. When you take these projects and put them in another country, in another language, and with another general contractor, you've just added three additional pieces to manage for every task. Mitigating these risks early on is one way the Mission Critical team stands out. On our first data center project in the Mexico region with a joint venture partner, Dusty was a clear fit to alleviate some of the challenges when marking on the slab.

The team was able to input the BIM model into Dusty and plans were drawn simultaneously. Our site teams were all able to walk through the frame of the building and assess the layout. With Dusty's ability to print in any or multiple languages, our team was confident everyone knew the plan laid out before them. The team was able to visually see an area that we needed to adjust in order to stay on schedule and on budget. By using this technology, our managing team members were able to avoid any miscommunication from language barriers and allow Dusty to improve the accuracy of the drawings at the site. We reduced risks, increase site communication, and accelerated our efficiency of this process that can take days to complete.

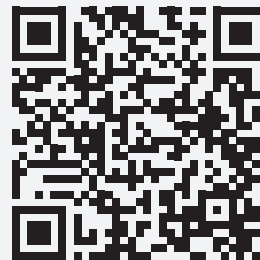
The old construction saying of "measure twice, cut once" might be outdated thanks to Dusty.

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SEE DUSTY ON THE MEXICO JOBSITE



HOW WEITZ USES DUSTY THE ROBOT



Josh Marriott
Director of VDC & Field Solutions

ABOUT THE WEITZ COMPANY

Founded in 1855, The Weitz Company is a full-service construction company, general contractor, design builder, and construction manager that serves all 50 U.S. states. Weitz is one of the oldest general contractors in the United States and an industry leader in industrial construction, senior living, student housing, mission critical construction, virtual design and more. Headquartered in Des Moines, Iowa, The Weitz Company annually ranks in the top tier of Engineering News-Record (ENR) magazine's Top 400 Contractors and Building Design+Construction's Giants 300 Contractors lists. You can read more about The Weitz Company at <https://www.weitz.com/>.

