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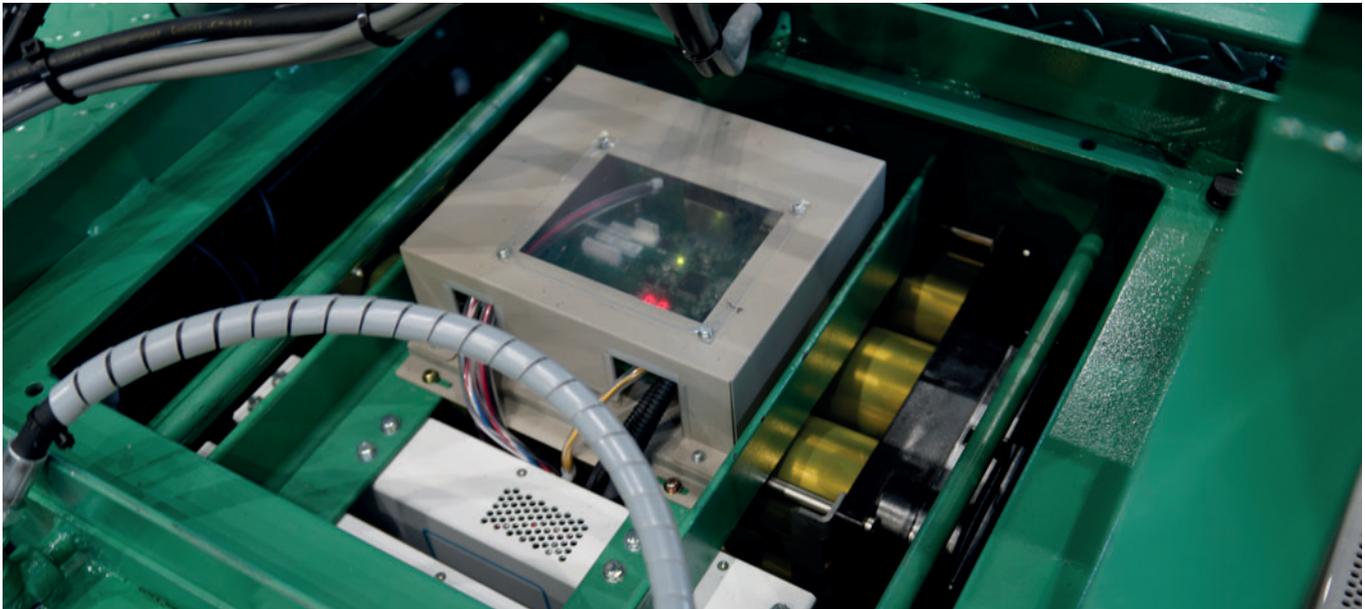
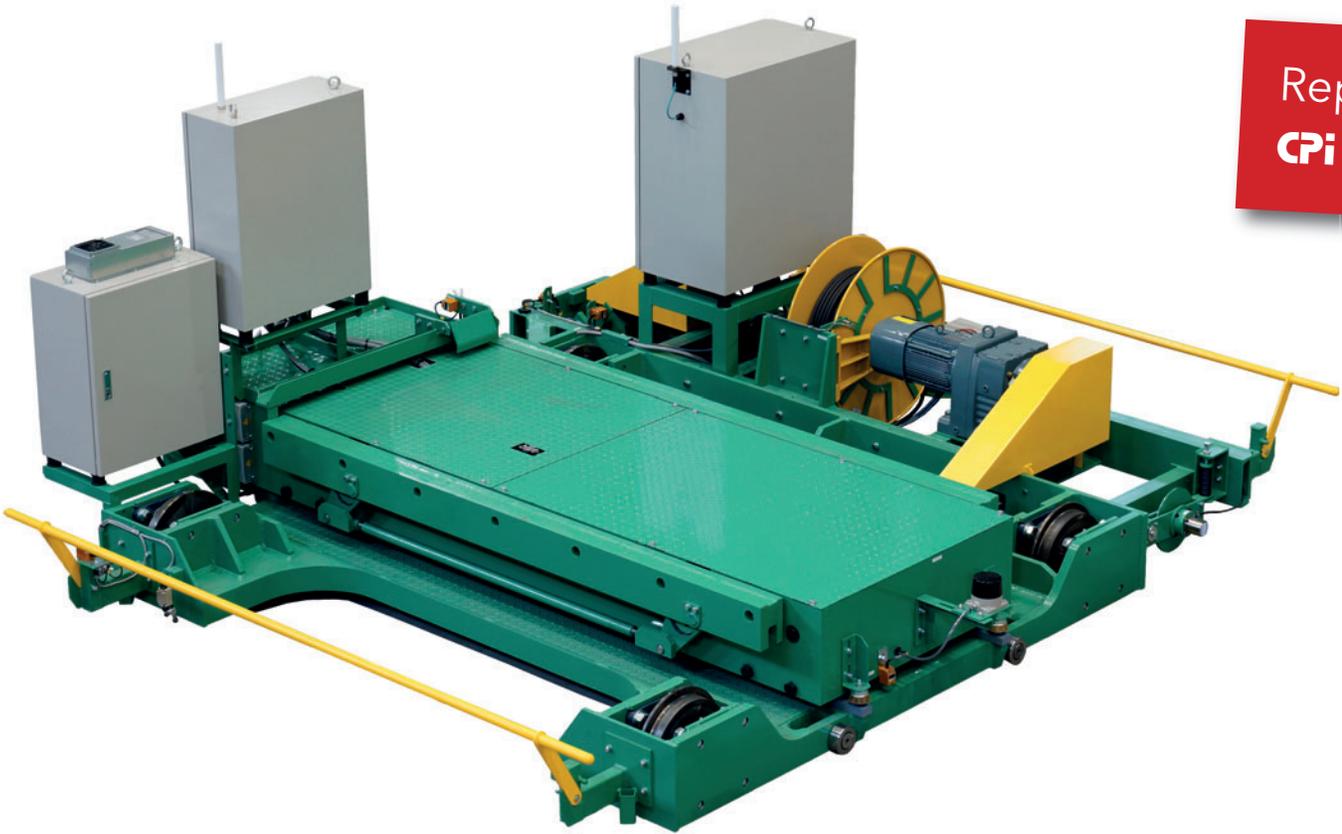
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# PATHFINDER

REPRINT | CONCRETE PRODUCTS & CAST STONE

New Battery-Operated Wireless Rack Crawler

Reprint  
CPI 1905

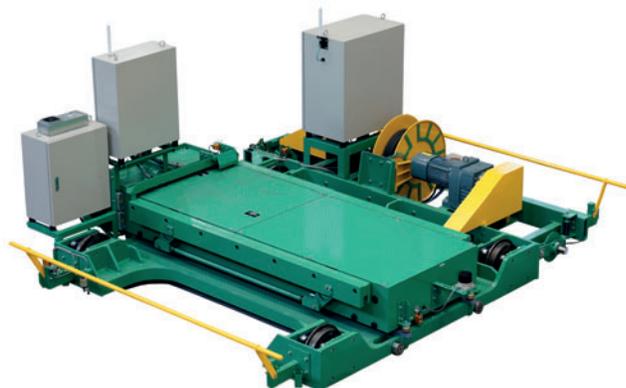


Pathfinder Systems, Holland, Michigan 49424, USA

# New Battery-Operated Wireless Rack Crawler

**The producers at Calstone in Gilroy, CA approached Tiger Machine with a problem. They wanted a rack crawler to use with their existing racks, but rather than the typical high-profile rack crawler that uses cable reels and requires a lot of concrete work for the installation, they wanted a solution that allowed for a low-profile rack crawler that used less concrete. Tiger Machine came up with an innovative solution - a Wireless Rack Crawler.**

In considering Calstone's problem and project requirements, Tiger identified that utilizing a low-profile crawler causes issues with the traditional festoon or cable reel designs as it would be harder to access and maintain the equipment, and other similar designs in the field from other suppliers have had some reliability issues, including snags and tangles. Eliminating concrete work requires a lower-profile machine, and the new more compact design allows the transporter to essentially ride on floor height and have minimal concrete work needed under the kiln to allow for the transport portion of the system to enter the kiln and discharge and pick up the racks. In order to allow for seamless and consistent charging they wanted to avoid needing a physical connection to charge the battery when the crawler returns to the transfer car. To solve this issue, Tiger took it upon themselves to get rid of the cable reel in the crawler, they decided that the best way to achieve this was to go to a battery-driven crawler, so they researched options for industrial wireless charging. This gives the crawler flexibility in stop position as well as allows for sensors to ensure that the charging modules are properly lined up. This also reduces maintenance items that might arise down the road associated with a physical connection and disconnection



The New Battery-Operated Wireless Rack Crawler



when the crawler is departing and returning to the transfer car. Tiger's Wireless Rack Crawler solves a number of problems in the form of one new piece of innovative equipment. The R & D engineers at Tiger were able to develop a Rack Crawler that is completely wireless and gets rid of the problematic cable reel, resulting in reduced upfront cost for concrete work, and created a machine that safely and effectively delivers and returns racks in and out of a big room type curing chamber. The Wireless Rack Crawler features Wi-Fi communication capabilities between the Rack Crawler, transporter and wireless charging control panels, and uses positional sensors to ensure that the Rack Crawler lines up properly with the transfer car to recharge quickly when docked to the transfer car. In developing the battery design for the Wireless Rack Crawler, Tiger R & D engineers did consider the time the crawler will typically be away from the transfer car to ensure the battery will hold enough charge and recharges quickly when docked in the home position. The lighted display notifies the operator of the status of the machine and allows the operator easy access to identify current charging status and makes for easy troubleshooting. ■

## FURTHER INFORMATION

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