

## Innovative Products

### NForce-Fiber and NForce-Pro

Canadian Greenfield Technologies Corp. (CGT) manufactures hemp processing equipment, ranging from decorticators to specialized processors. CGT separates and refines hemp straw from baled field fiber to high-performance engineered products. CGT's HempTrain™ decorticator is a high efficiency, smaller footprint, lower energy consumption self-contained system, which does not rely on hammer mill action, leaving bast fiber structurally intact. The HempTrain system can separate hemp into fiber, hurd, and green microfiber, with ~33% cleaner separation than that achieved by conventional decorticators. CGT further processes this fiber, creating NForce-Fiber® and NForce-Pro™ for concrete. These products can be used for concrete structures requiring high-quality surfaces, such as in skateparks, pools, and bobsleigh tracks. NForce-Fiber is processed and treated using innovative technologies that prevent fiber degradation and increase performance in the strong alkaline conditions of cement matrices. NForce-Fiber features a chemical bond with the concrete matrix, as well as a mechanical one. NForce-Pro was engineered for high integrity decorative concrete materials to ensure superior strength, exceptional finishability, and high-quality surfaces.

—Canadian Greenfield Technologies Corp., <https://canadiangreenfield.com>



### DroneDeploy Map Engine

DroneDeploy's cloud-based Map Engine features built-in learning capabilities—the more the user maps, the smarter the Map Engine becomes. Users can manage flight, processing, and analysis from a single, easy-to-use platform, providing consistent and accurate results with software built for drone imagery. High-quality maps and three-dimensional models can be integrated into the software platform. Users connect via APIs for secure, cloud-scale integrations. Live Map can be used to get real-time results on mobile devices. The images can then be transferred to the cloud with mobile uploads (in Beta). Image processing can be jump-started by sending in-field flight intelligence to Map Engine.

—DroneDeploy, [www.dronedeploy.com](http://www.dronedeploy.com)

### Flyability

Flyability manufactures safe drones for inaccessible places. By allowing drones to be used safely inside cities, buildings, and in contact with people, it enables new interactions and services with UAVs and reduces collision and injury risks. The company's drones can be used for industrial inspection of systems that would otherwise require sending people into dangerous and confined spaces. Flyability drones are also used in search and rescue and security applications, to assess emergency situations without putting people at risk.

—Flyability, [www.flyability.com](http://www.flyability.com)

### Dakota Micro HD Commercial Mobile Camera Systems

Dakota Micro, Inc., announced its ruggedized, commercial rearview and surveillance AgCam and EnduraCam cameras and monitors are now available in analog high-definition (AHD). The AHD AgCam and EnduraCam systems provide clear images even in dusty, wet, or dark locations using existing coaxial cables. The AHD AgCam and EnduraCam systems endure harsh work environments, are 100% dampproof, and feature heavy-duty mounting magnets, anodized solid aluminum housing, and auto infrared (IR) night vision. The IR vision system has an effective range of 75+ ft (23+ m) in complete darkness, and it resists blooming and back reflection.

—Dakota Micro, Inc., <http://dakotamicro.com>

## ASSP VR Fall Protection Experience

With virtual reality (VR) training systems, organizations can provide impactful and effective training that mirrors workers' actual environment, without putting their personnel in potentially dangerous situations. The American Society of Safety Professionals (ASSP) created the VR Fall Protection Experience to help workers learn how to identify hazards, select and inspect appropriate equipment and anchorages, understand equipment restrictions and limitations, and understand fall clearances. The ASSP training system was developed based on the ANSI/ASSP Z359 Fall Protection and Arrest standard. The 3- to 5-minute immersive training experience will have trainees on the roof of a virtual two-story building, where they will be asked to locate common fall hazards at the scene. Based on their replies, they will then be asked to select proper fall protection equipment. Upon completion, each learner's performance is assessed.

—American Society of Safety Professionals, [www.assp.org](http://www.assp.org)

## Tuckerbilt T-644

Tucker's Machine & Steel Service's Tuckerbilt® T-644 harnesses its JCB EcoMax 320/50704 Stage IV/Tier 4 engine supplied by Mastry Engine Center. The concrete transport vehicle moves its 6 yd (5.5 m) payload 50% faster and 2 ft (0.6 m) higher than previous models. The JCB engine provides impressive torque without a diesel particulate filter. Additionally, everything needed is on one side of the engine for easy maintenance. The engine's location is on the rear of the T-644, and this positioning eliminates the need for a counterbalancing weight. The four-cylinder diesel provides 145 continuous bhp at 2200 rpm. Twin auxiliary power take-offs (PTOs) deliver high torque to power the hydraulic pumps, even at lower rpms. The 14 in. (356 mm) covered auger trough of the Tuckerbilt T-644 features adjustable speed for precise placing. The auger handles low-slump, standard, and self-consolidating concrete mixtures. The hopper has an integrated splash deflector and swings 90 degrees left and right on its centerless turntable for enhanced reaching capabilities. Onboard sensors, diagnostic systems, and controllers in the T-644 communicate via a controller area network, an internationally standardized serial interface bus developed for modern motor vehicles. The vehicle's sensors include cameras and radar to help ensure exceptional ground crew safety.

—Tucker's Machine & Steel Service, Inc., [www.tuckerbilt.com](http://www.tuckerbilt.com)



## Leica BLK3D

The Leica BLK3D captures images and allows users to take precise, in-picture three-dimensional (3-D) measurements using an unmatched combination of a calibrated stereo-camera, advanced algorithms, and real-time edge computing fused with leading electronic distance measurement technology. BLK3D's auto-snapping feature uses computer vision technologies to select the correct points for measurements. The BLK3D can also create or import existing floorplans. Images can be shared in multiple formats, so measurements can be viewed on the handheld imager or on computers at other sites. Measurable images can be tagged with searchable keywords for easy recall and sharing, and this enables users to create progressive project construction documentation by capturing critical moments throughout the life of a building project.

—Leica Geosystems, <https://lasers.leica-geosystems.com>