



Mini MAC is a compact mixing and conveying bucket engineered for mini tracks and skid loaders.

Mini Mixer Works In Tight Spaces

Danuser Machine Company, LLC, of Fulton, Mo., is a family-owned manufacturer with more than a century of history.

“We’re recognized for innovative attach-

ments and equipment for agriculture and construction,” says Rhett Hillard, company representative. “Customers know us for our commitment to quality, durability and prac-

tical solutions—especially our post drivers, augers and material-handling buckets. Our products are designed to help operators work more efficiently and safely in challenging environments.”

The Danuser Mini MAC is a compact mixing and conveying bucket engineered for mini tracks and skid loaders.

“It’s designed and manufactured in the USA, backed by Danuser’s century-long reputation for quality and innovation,” says Hillard. “It’s compatible with a wide range of mini loaders.”

Standout features include a 1/4-yard (6.75-cu. ft.) capacity, making it ideal for small-batch applications and tight spaces such as basements, backyards and narrow job sites, thanks to its mini-skid-steer quick-attach mount.

“The hybrid auger (steel and rubber) allows for efficient mixing and reduced material seepage, while a rubber-sealed manual discharge gate minimizes leaks.”

An integrated safety grate with bag busters enables easy loading of bagged materials, and the standard 24-in. multi-linked chute and

hydraulic hoses include flush-faced couplers.

In this way, the Mini MAC can handle concrete, sand, agricultural grains and wildlife feed—transforming any mini loader into a precision machine with a compact footprint.

“The Mini MAC works for professionals and property owners who need efficient material mixing and handling in tight spaces,” Hillard says. “Our primary customers include construction contractors, landscapers and property managers. Anyone needing small-batch concrete or material mixing, or using a mini track or skid loader in confined or hard-to-reach areas.”

The Mini MAC with a hybrid auger is priced at \$3,325.00. It includes one 24-in. chute and hoses with flush-face couplers (ISO 16028). Accessories and freight are additional. Hillard requests that interested readers reach out directly.

“For the most accurate pricing and to order, customers can visit our website or call us.”

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Kiwifruit Used To Make Leather Alternative

Shelley Houston found a way to create a leather alternative from kiwifruit waste. Recognizing that alternative bio-based products were being explored elsewhere, she saw an opportunity at home in New Zealand.

“My son worked in the kiwifruit industry, and his job was getting rid of kiwifruits unfit for the market,” says Houston. “He’d send me videos of the waste, and I couldn’t believe the amounts. More than 50,000 lbs. are rejected in New Zealand every year.”

Houston began exploring alternative uses and experimenting in her kitchen. She developed a proprietary formula that has advanced to a prototype and is nearing the pilot-plant stage.

“We process the waste kiwifruit into a pulp and, through a controlled process, create flexible sheets that mimic the look, feel and durability of leather,” says Houston. “The material is non-toxic, largely bio-based, and designed to meet the performance requirements of fashion, automotive and upholstery markets.”

Houston worked with Scion, now the New Zealand Institute for Bioeconomy Science,

to develop the product.

“The goal is for the final product to be over 90% bio-based, as well as biodegradable,” says Angelique Greene of Scion.

Challenges included sugar content, flexibility, durability, and water resistance. The high sugar content can caramelize, preventing the absorption of other components. The researchers found that kiln-drying the pulp at low temperatures resolved this issue.

The team experimented with components such as soy and pea to increase the material’s strength. They also explored bio-based epoxidized soybean oil or cashew nut resin to achieve more plastic-like properties, and examined adding a fibrous backing to improve flexibility and enhance strength and resilience. Natural coatings are also being considered for water resistance.

Houston notes that the company is preparing for pilot-plant production and for regulatory and performance validation. In anticipation of approvals, product samples are being validated and tested by potential users. Early prototypes made with KiwiLeather include handbags, footwear

components and interior trims.

“At scale, our pricing is expected to be competitive with premium animal leather and high-end plant-based alternatives,” says Houston. “Because our raw material is agricultural waste rather than purpose-grown crops, we avoid many of the land, water and time costs associated with both livestock leather and other plant-based leathers.”

As production volumes increase, Houston anticipates further cost efficiencies. This will create an additional revenue opportunity for growers and packhouses that supply waste fruit.

Houston notes that although the company is still in the pilot-plant stage, discussions have already been held with international brands and partners in the U.S. and Canada.

Kiwifruit may be just the beginning for Houston and her leather-like product.

“While kiwifruit is our primary feedstock, as it’s particularly abundant here, the underlying platform technology can be adapted to other fruit and agricultural waste streams,” says Houston. “We see strong potential for regional customization, where different



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countries could use their own local waste crops while applying the same core process.”

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The research team believes the imPulse Una opens new possibilities for sheep producers worldwide by providing a fast, affordable and accurate way to detect health problems early without relying on a veterinarian.

Acoustic Technology Revolutionizing Sheep Care

Sheep health is often at the mercy of costly veterinary visits. Researchers at Olds College in Alberta are pioneering the use of artificial intelligence and acoustic technology to revolutionize the management of sheep health.

The innovation is the imPulse Una, a compact device no larger than a computer mouse, developed by Level 42 AI, Inc., a Silicon Valley start-up with Canadian ties through Vibrome in Edmonton.

Dr. Yaogeng Lei, a researcher at Olds College’s Technology Access Centre for Livestock Production (TACLPL), explains that the technology originated as part of a sheep parasite study.

“The non-invasive nature of the device was really important,” Lei explains. “We integrated it into our parasite program and found that it could classify healthy and infected animals based on how their bodies

responded to parasites, not by detecting the parasites themselves.”

What sets the imPulse Una apart is its ability to capture a panoramic spectrum of sound, from infrasound (frequencies below human hearing) to ultrasound (high-frequency waves used in medical imaging). When pressed against a sheep’s body, the device detects vibrations from internal organs, including those inaudible to the human ear. Using advanced machine learning algorithms, the imPulse Una analyzes these vibrations, filtering out environmental noise and focusing on subtle acoustic signals that reveal health status.

The AI’s analytical power enables farmers to monitor heartbeats, respiratory patterns, and intestinal activity through frequencies previously accessible only with sophisticated lab equipment.

For Canada’s sheep industry, which faces unique challenges due to its small scale and high veterinary costs, the imPulse Una holds particular promise. Pregnancy checking, crucial for farm planning, is often skipped because of logistical and cost constraints. Olds College’s pilot study used the device to identify pregnant ewes and count fetuses, providing valuable data that could help farmers improve productivity and animal welfare. The results are promising, and larger-scale studies are already being planned.

The research team believes the imPulse

Una opens new possibilities for sheep producers worldwide by providing a fast, affordable, and accurate way to detect health problems early without relying on a veterinarian.

“It gives farmers the power to test their sheep directly,” Lei says. “This could be a major advantage in Canada, where livestock vets are few and often specialize in cattle.”

Yet, as Dr. Lei cautions, further research is needed before the device can be widely adopted on farms, particularly in real-world settings. Olds College’s work is part of a global initiative led by Level 42 AI, spanning 13 countries and involving collaborations with the University of Alberta and the University of Saskatchewan. Their long-term goal is to refine AI models that diagnose not only sheep but also humans, dairy cows and horses.

Unlike traditional veterinary imaging equipment, which is often bulky and expensive, the imPulse Una is designed to be accessible and affordable, with a current manufacturing cost of about \$450 CAD. Prices are expected to continue falling as production scales up.

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