Electric Grapple Built For Compact Tractors

"Our new bucket-mounted, electric-operated grapple is designed for compact tractors up to 75 hp. that don't have auxilliary hydraulics," says Henry Friesen, Eagle Industry LLC, Goessel, Kan.

The universal grapple is available in 45 and 55-in. models and is powered by a 12-volt electric motor mounted on back. The motor operates a hydraulic pump and a linear actuator. It comes with a wiring harness that connects to a rocker switch, which can be mounted on the tractor's loader joystick handle.

"Our electric grapple sells for $1,500 plus S&H, which is an economical alternative to buying a standard grapple and then adding hydraulics to the tractor," says Friesen. "It has about 380 lbs. of clamping force, which is enough to handle everything from loose debris and tree trimmings to small square bales and small logs. There are no hydraulic hoses to get tangled up and very little chance of an oil leak."

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No auxiliary hydraulics are required to operate Eagle Industry's new electric grapple. It's designed for compact tractors up to 75 hp.

Underground "Drone" Finds Drain Tile Plug-Ups

The Ferret "drone" from Indiana-based Davaus company will make field tile repair easy. The cordless, tracked, waterproof device is designed to explore 4-in. tile lines or bigger.

"Finding broken or blocked tile can be labor intensive and invasive, whether using a spade or a backhoe," says Dave Hockemeyer, Davaus, LLC. "We began by taking a prototype to farm shows and had good feedback. Now we have a short list of customers waiting for our beta units."

While specs are still being finalized, Davaus plans to have the beta versions ready in late May or early June. They will carry cameras front and rear, have a battery life of from 60 to 90 min., and have a handheld remote control unit and screen for viewing the tile.

"The controls give the operator a pair of eyes inside the tile lines and will work from up to 50 ft. away," says Hockemeyer.

The company is still determining the optimum weight. Hockemeyer points out that it needs to be heavy enough for traction. It will have to be able to travel through some flowing water, as well as over mud and roots.

The beta version will have a locating feature so the operator will know exactly where it is. It will also have a low battery alarm that warns the operator when to retrieve it.

Hockemeyer acknowledges there are corded alternatives in the market that will do much of what the Ferret will. However, he is confident the cordless, lightweight, simple unit will prove popular.

He points out that corded unit operation is limited to the length of the cable, which can weigh a couple hundred pounds and require a pickup box mounted reel.

"The Ferret will weigh no more than a 1/2-in. cordless drill," says Hockemeyer. "It will come in a carry case with the remote control and batteries. Throw it in the back of the pickup and drop it into a tile line wherever it's needed."

Cordless, tracked, and waterproof "drone" comes equipped with cameras front and rear, and has a handheld remote control and viewing screen.

Feedback from users of the beta-Ferret will be incorporated into a final design. Davaus plans to have it ready for introduction this coming fall. Plans are for the next generation Ferret to include the ability to map and track tile lines.

"We'll identify anything we need to work on and what we need to improve," says Hockemeyer. "Our suggested retail sales price will be $2,000 or less."

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Hay Baler Converted To Handle Cotton

A Kansas equipment maker and his Texas cotton-growing friend are saving time and money by using a cotton stripper and a large square baler to make bales of cotton. The $30,000 system is a great alternative to the $700,000 CP690 cotton harvester and baler from Deere.

"This idea lets cotton producers in the Great Plains use existing equipment to bale cotton," says Larry Matlack, Stinger Inc. "Great Plains growers have years where the cotton yield is so low that running a $700,000 machine through the field doesn't make sense."

Matlack acknowledges that the Deere stripper/baler is faster and requires less labor then a conventional system.

"You have guys waiting for the stripper basket to fill before it's dumped in the boll buggy. Then the cotton is fed into the module maker, and once the module is formed, it has to be tarped," explains Matlack. "It takes a lot of time and extra labor. With our setup, we bale directly off the stripper. We make a bale that is twice as dense as the module and appears to resist rain without tarping."

Matlack is an old hand at making things work faster and more economical for farmers. He and his brother Bill started Stinger to make big square bale retrieval equipment (Vol. 17, No. 5) and low-cost bale handling equipment (Vol. 23, No. 2). The company grew out of ideas they had for making hay handling easier on the family farm. The company expanded on their initial ideas and now has equipment in use from California to New York.

For cotton baling, Matlack teamed up with Heath Kimbrell, a Texas cotton grower and the son of an old friend. Kimbrell had been frustrated with existing equipment. Spending $700,000 on a new harvester was not an option when his year-to-year cotton acreage can vary from 600 to 2,000 acres.

Kimbrell's first idea was to mount a stripper header on front of a tractor pulling the baler. He and Matlack decided that wasn't practical and switched to the stripper/baler system. The concept is similar to using a grain cart with a combine.

When the stripper basket is full, the baler operator pulls alongside. A conveyor bed attached to the rear of the stripper sends the cotton bolls to a matching conveyor feeding the baler.

"We wanted to let producers get the job done more efficiently without spending a lot of money," says Matlack. "We used a Deere 7460 stripper and 3 by 4 or 4 by 4 big square balers from various AGCO brands."

Kimbrell and Matlack tested their concept on crops in 2018 and again in 2019. It worked great. Their 4 by 4 bales averaged around 14 lbs. per cu. ft. That's nearly twice as dense as the modules produced by conventional systems.

"We were using older balers with shorter chambers, and we were averaging 1,700-lb. bales," says Matlack. "We expect a newer baler with the longer chamber and restrictor plates to increase density. Then our 4 by 4 bale would run around 1,900 lbs."

Another advantage of the big square bales is that they are easy to load on a flatbed and can be stacked higher than modules for a bigger payload. This gives growers more options.

"You can take your cotton to a gin that pays a better price or does a better job," says Matlack. "During harvest, nearby gins may be full, but other gins farther away are open. With the cotton bales, you can take your cotton where you want and get it ginned, so you can get paid or get a loan on it."

Big square baler is used to bale cotton directly off the stripper, saving time and money compared to using Deere's $700,000 stripper-baler.

Another beauty of the Stinger modulator is the ability to remove the conveyors to return stripper and baler to their original designs.

Matlack plans to have some units available for sale in time for this season's harvest.

Check out the video of the baler in action at farmshow.com.

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