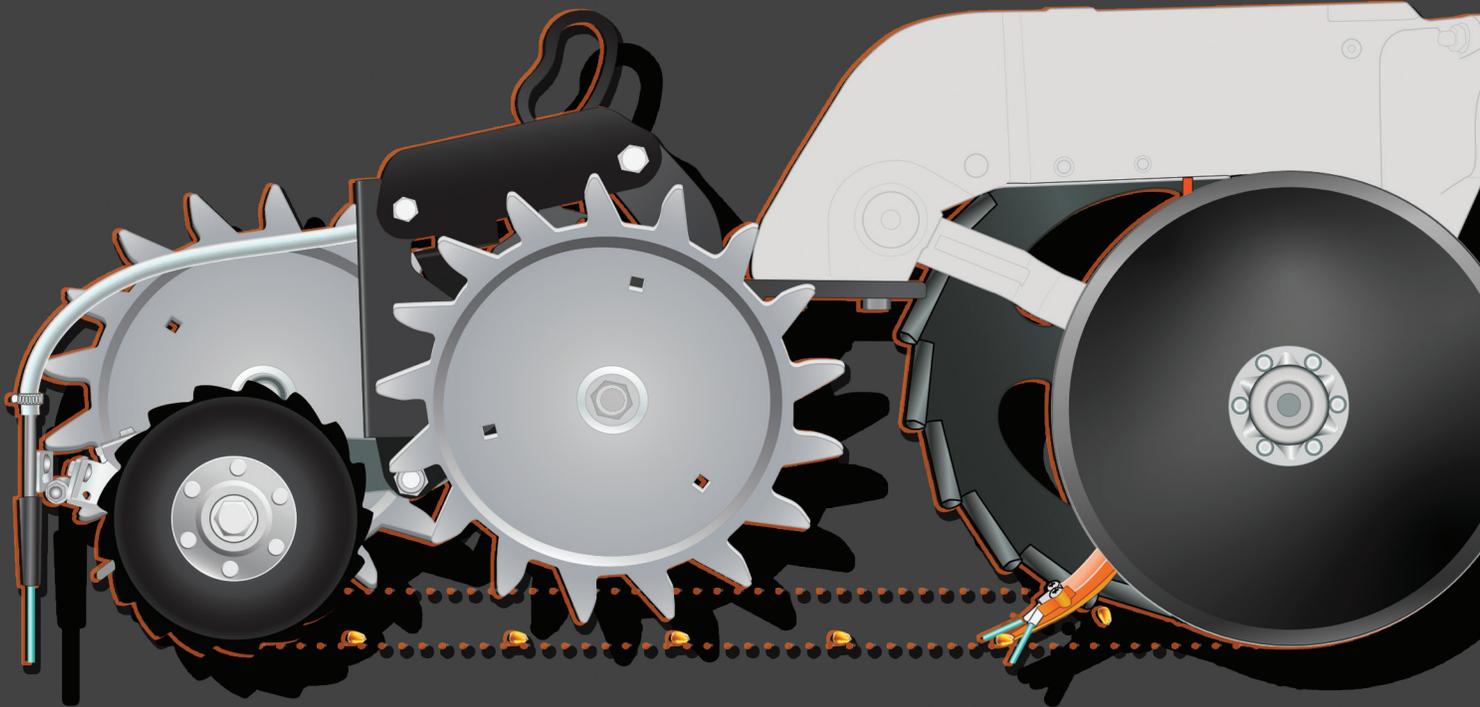


BREAKING NEW GROUND

*with
Cutting-Edge
Planting Attachments*



scan code to
visit website

THE REBOUNDER®

Over a decade ago, Paul Schaffert, CEO of Schaffert Mfg. and a producer himself, was confronted with the issue of seed bounce and inconsistent spacing in the furrow. He understood how critical these two aspects of planting were and how they effected overall yields. As one of the leading No-Till innovators in the Midwest, he made it his goal to engineer a product that would address these issues.

After years of testing prototypes and countless hours in the field, Paul invented the Rebounder Seed Cover, a simple, but sophisticated tool that addresses the issues of seed placement and spacing.

The Rebounder's unique, spoon shape design forms to the V shape of the furrow.

Paul recognized the importance of creating a product that would work in conjunction with this V shape and not against it. Many of the firming products on the market today work against this theory—especially in tougher clay type soils—by creating additional sidewall compaction, pressing in the seed V as they apply pressure.

The Rebounder's spoon shape design flows gently down the furrow without disturbing the soil or creating any additional compaction around the seed. The spoon shape design gradually narrows as it drops below the top soil surface to follow the V shape that is created by the double disc openers.

The Rebounder's unique half moon design on the bottom tip prevents the Rebounder from dragging the seed and allows it to run 3/8" off the bottom of the furrow.



You only have **1 chance** to get it right!

Rebounders eliminate seed bounce & tuck them in the bottom

BENEFITS OF THE REBOUNDER'S CONCAVE DESIGN

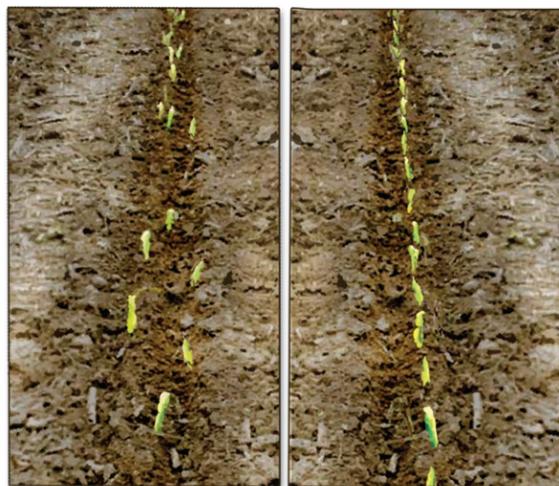
- Smooth concave design keeps the seed covered in the furrow and prevents seed bounce
- Built-in neck flex allows for flexibility of the Rebounder in all soils
- Upside down spoon shaped design forms to the seed V
- Unique half moon tip prevents seed drag
- Rebounder improves germination and consistent emergence

ELIMINATES COMMON PROBLEMS

- Rebounder will not build up with mud
- Will not leave seeds lodged or pressed into sidewalls
- Will not bunch seeds

EASE OF INSTALLATION

- Designed to fit planters and drills
- Easy to install, less than 5 minutes per row



PLANTED WITH:

Firming attachments Rebounders

SEED SPACING:

Inconsistent Consistent

EMERGENCE:

Uneven Uniform



Seed V

The Rebounder maintains consistent depth placement, generating higher yields through healthier plants. Without the Rebounder, inconsistent depth placement occurs with seeds landing 3/4" to 1-3/4" deep. Shallow planted seeds can cause poor root structure and reduced yields.

Using Schaffert's Dig-It Seed Finder to reveal seeds planted evenly and consistently in the furrow with the Rebounder



Case IH 1200



Case IH 2100



Great Plains Clear-Shot®



John Deere ExactEmerge®



Kinze EdgeVac®



Precision BullsEye® & WaveVision®



Firmer Replacement



White 9000

Uneven seed spacing and inconsistent depth placement are two of the top contributors to decreased yields. The Rebounder has been eliminating these two issues for over a decade.

Installing the Rebounder is easy. We have Rebounders that fit most planters and drills.

For most planters the Rebounder is attached to the seed tube. We've utilized this mounting method for years and have found it to be safe and effective. **The Rebounder is designed to work with the seed tube, not against it, serving as a stabilizer that keeps the seed tube in the center of the furrow.**

Other attachments move side to side and place approximately

1.5 pounds of pressure on the seed, causing uneven emergence. This pressure on the seed pushes it deeper in softer soils and leaves it shallower in firmer soils creating a wave effect in the depth placement.

The Rebounder moves up and down with the planter to funnel the seed to the bottom of the seed V. This ensures it will eliminate seed bounce, uneven spacing, and seeds flipped on top of the soil.

THE RESULTS

A product designed to give you **consistent seed placement** and **accurate depth control**, leading to **improved germination** and **consistent emergence**. The Rebounder Seed Cover keeps your seeds in check.

H.R., KS -



5 or 6 years ago I put one IH 800 Rebounder on my planter and planted 100 acres. I ran short of time and after 100 acres I put the other 5 rows of Rebounders on. When I went to spray the field, the one row planted with the Rebounder was 8" tall and the other 5 rows were only 4"-5" tall. What a difference the Rebounders made!

IN-FURROW FITTINGS

CHICKEN TRACKER™

Yellow Y has half size holes for placing lower volumes of fertilizer on the side walls



Y-NOT SPLIT-IT®

- Fertilizes sidewalls of seed V
- Ensures that the seeds won't be drenched
- Apply 6-12 gallons in-furrow with the original clear Y or 1-6 gallons with the new yellow Y
- Less than 5 minutes to install



STRAIGHT SHOT™

- Places liquid directly with the seed from under the Rebounder
- Keeps liquid off wheels and discs
- Secured with metal plate
- Works with planters and drills



HOSE HOLDER™

- Places liquids with the seed
- Keeps liquid off discs of planter or drill
- Hose is secured with molded-in tab
- Distributes liquids evenly in-furrow



STAINLESS STEEL TUBES

- Works with planters and drills
- Effective liquid placement
- Durable, rust-free stainless steel
- Easy installation
- Great for starter application
- Works with Rebounders



Chad's Tube™ for John Deere drills

Fertilizer placement in relation to the seed is the key to successful plant growth.

To accommodate your specific needs, each Rebounder has the option of allowing liquid fertilizer to be applied in various locations in relation to the seed.

We recommend you consult with your agronomist on which fitting will work best for your agricultural program.

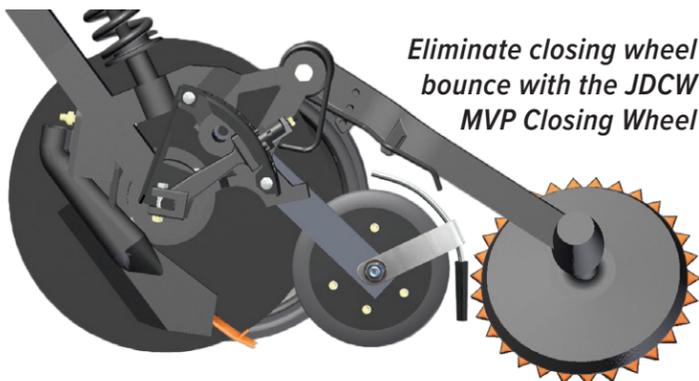
IT'S A FACT:

Plants require 14 essential nutrients for healthy growth. The absence of any one nutrient in the soil can limit plant growth, even when all other plant nutrients are present in adequate amounts.

The three micro-nutrients that are essential for food production and quality are nitrogen, phosphorus and potassium.



Tube for John Deere 9" & 10" Press Wheel



Eliminate closing wheel bounce with the JDCW MVP Closing Wheel



4" Chicken Tracker press wheel gives better seed to soil contact



16" Chicken Tracker gauge wheel handles heavy cover crops

PREPARES THE SEED BED

- Mulches and mellow the soil over the seed bed
- Firms soil over the row
- Does not smear soil like rubber press wheels can
- The tines apply 3 points of pressure at all times
- Eliminates air pockets
- Allows for better seed to soil contact

ELIMINATE COMMON PROBLEMS

- Helps eliminate mud build-up
- Will not plug with root balls
- On a hot windy day the trench will not crack back open

WHERE THEY WORK —SUITABLE FOR MANY SOILS

- Made to work in tough soils
- Works in no-till or conventional

EASE OF INSTALLATION

- Takes the place of your original press wheel
- Easy to install, less than 5 minutes per row

Standard press wheels can sometimes smear the seed V shut. When the soil dries out, the furrow cracks back open and you lose seed to soil contact.

Schaffert Mfg.'s 4" Chicken Tracker press wheel eliminates this by crumbling the top and side walls, mellowing the soil, and removing the air pockets. It helps eliminate mud buildup and plugging with trash. This leads to easier planting, better emergence, and higher yields.

The Chicken Tracker is a **direct bolt-on** replacement for your old closing wheels and mounts with the same hardware.

For Case IH planters and drills we have 6" and 4" Chicken Trackers. Both work well in no-till or minimum till fields. However, the 4" wheel has advantages over the 6" wheel, as it will work inside the 4" area

STANDARD 2x13 PRESS WHEEL



being tilled by the covering discs, rather than having the 6" press wheel ride up on firm soil and not compress soil down around the seed. We also have 4" and 2" Chicken Trackers to fit many other makes and models of planters and drills.

Schaffert Mfg.'s 16" Chicken Tracker gauge wheel offers many of the same advantages as the Chicken Track press wheel. It provides better traction and reduced plugging in wetter conditions, longer wear life, and works well in heavy cover crops as well as in no-till and conventional. The Chicken Track gauge wheel prevents mud from building up between it and the disc, cleans trash away from the discs, reduces compaction, and gives consistent seed depth control.

CHICKEN TRACKER

CLOSING WHEELS

MOHAWK™ & ZIPPER™ ANGLED SPIKED CLOSING WHEELS

FEATURES—DESIGN—BENEFITS

- Feathers the soil in the seed V with its wide track design
- Designed to break up compaction without being too aggressive
- 1" spike does not disturb seed placement
- Allows for better seed-to-soil contact

ELIMINATES COMMON PROBLEMS

- Compacts the soil better than straight-fingered wheels
- Rototills soil with minimal compaction into the furrow
- Eliminates air pockets
- In wet soils, the trench won't crack back open on a hot windy day

WHERE THEY WORK—SUITABLE FOR MANY SOILS

- Made to work in tough soils
- Work in no-till or conventional without having to change wheels

EASE OF INSTALLATION

- Can be used with or without the G2 liquid fertilizer disc or G3 walking beam arm
- Easy to install

The Mohawk and Zipper work in all soil types. These two 13" spiked closing wheels also work very well with the G2 liquid fertilizer disc.

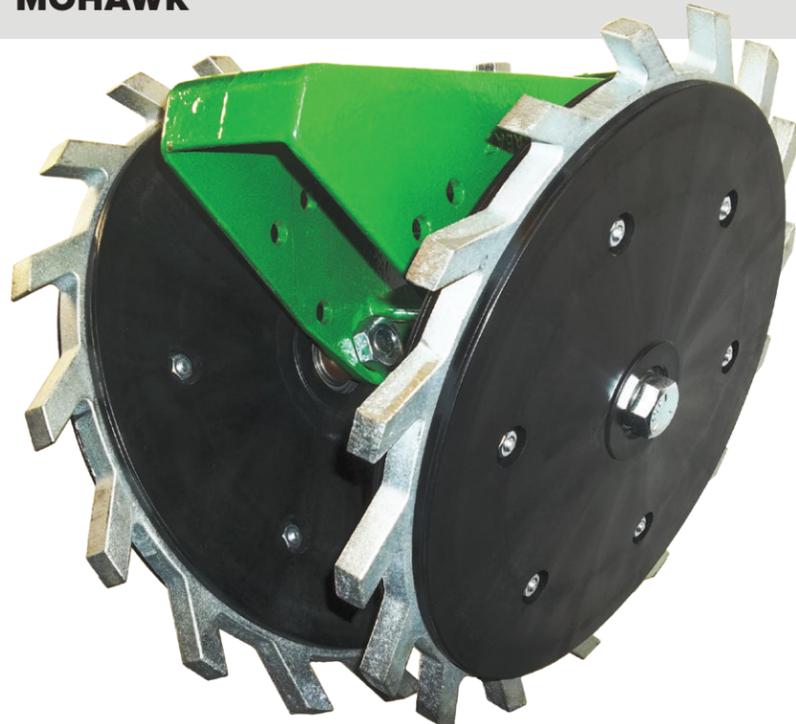


The "Old Reliable" Mohawk

B.M., SD -

I was having problems with rocks in the closing wheels last year and was getting mad... Called Schaffert Mfg. to get more Rebounders and fertilizer tubes. They asked if I would try the "Zipper" closing wheel. I was impressed with the Zippers, they didn't pick any rocks up!

MOHAWK™



FEATURES—DESIGN—BENEFITS

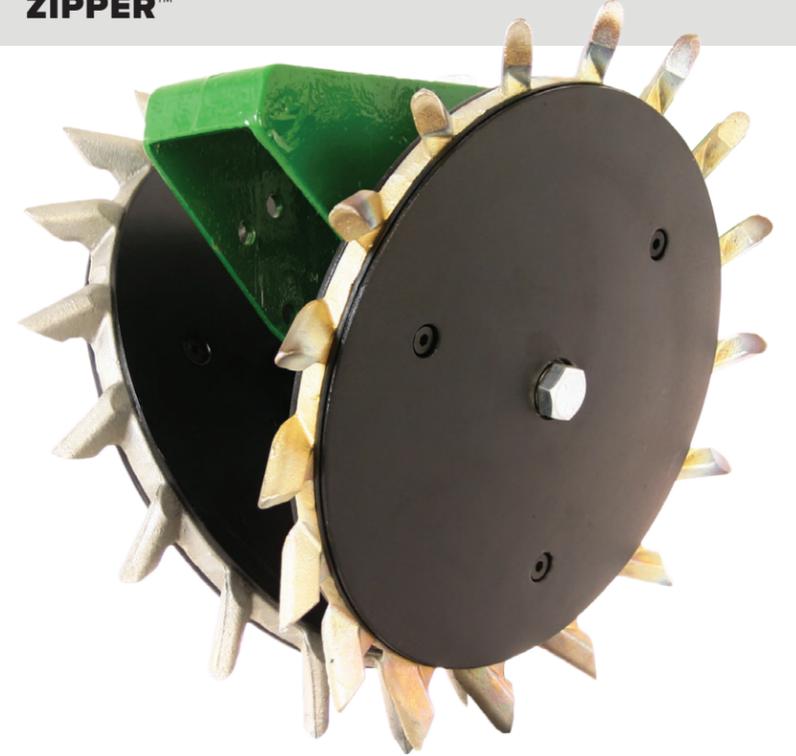
- Stitches seed V shut
- Uses existing wheels and bearings, and replaces tire with Mohawk ring, which saves you \$\$\$!
- Breaks down compacted sidewall and closes the furrow at the same time
- Longer wear, heavy duty cast steel spikes

Farm Journal agronomist Ken Ferrie conducted a three-year study examining closing wheel designs, including the Mohawk. He classified the Mohawk as a "firming spiked closing wheel", which are designed to provide both crushing action of the sidewall and firming above and around the seed. **Ferrie concluded that in the toughest no-till conditions, wheels like the Mohawk get the job done the best.**

FEATURES—DESIGN—BENEFITS

- Longer wear, heavy duty cast steel spikes
- Breaks down sidewall and zips seed V shut at the same time
- Tubular design of spike allows it to release soil and eliminate plugging while compacting the soil around the seed
- Angle design rototills the soil into the seed V
- As the Zipper closes it creates indentations which allow moisture to sink in

ZIPPER™



ZIPPER DISTINCT FEATURES OVER THE MOHAWK

- More aggressive
- Breaks up and rototills soil in for better compaction
- Pulls more soil from the sidewall in over the seed because the spikes are angled out and down
- Sheds mud better
- Rocks or root balls will not stick



Furrow left open with rubber closing wheels

Sidewall compaction left from double disc openers on planters makes it hard for standard closing wheels to close the seed V properly in all soil types and conditions. In wet heavy textured soils, standard press wheels tend to smear the soil over the seeds and do not break up the sidewall compaction left by the double disc openers. Then when a hot windy day comes after planting in wet soil conditions, the seed V will often crack back open, exposing the seeds.

If the seed V does stay shut after planting with standard closing wheels, many times the sidewalls of the seed V stay compacted, not letting the roots of the plants penetrate the sidewalls. If they cannot penetrate the sidewall, the roots will not build a good brace root system, and the plants will tend to fall over later in the season.

Schaffert Mfg.'s Mohawk and Zipper closing wheels eliminate these common problems.

CAST CLOSING WHEELS

All-cast Zipper and Mohawks eliminate buildup due to not having plastic rims catching mud on each side.

We have been testing these cast wheels since 2019 in very wet soils and **people have been impressed with how clean they stay in wet sticky soils.**

Eliminated plugging and wrapping with the **NEW** all-cast Zipper Max™ and Mohawk Max™. These wheels have a heavier, wider, closed-spoke design.

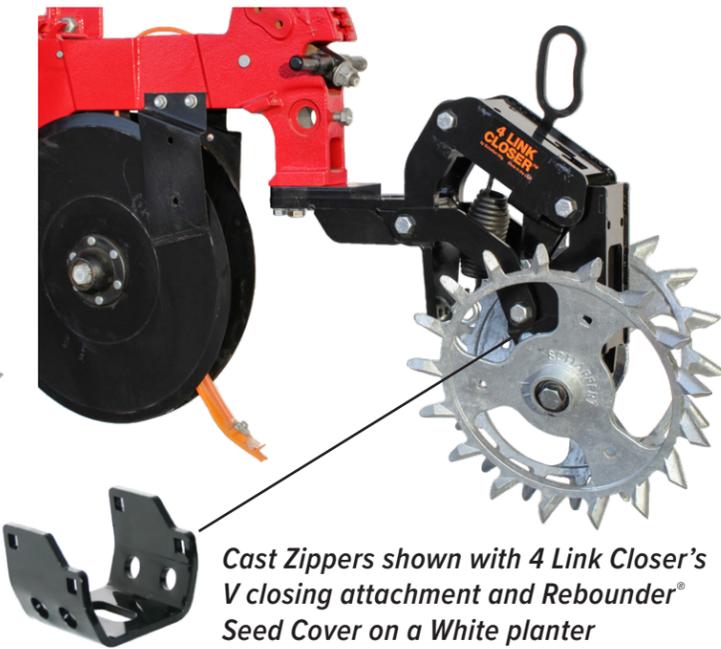
The Max design's angles help the wheel **shed mud better.** The added weight **keeps the wheel from bouncing** while **running less down pressure.**



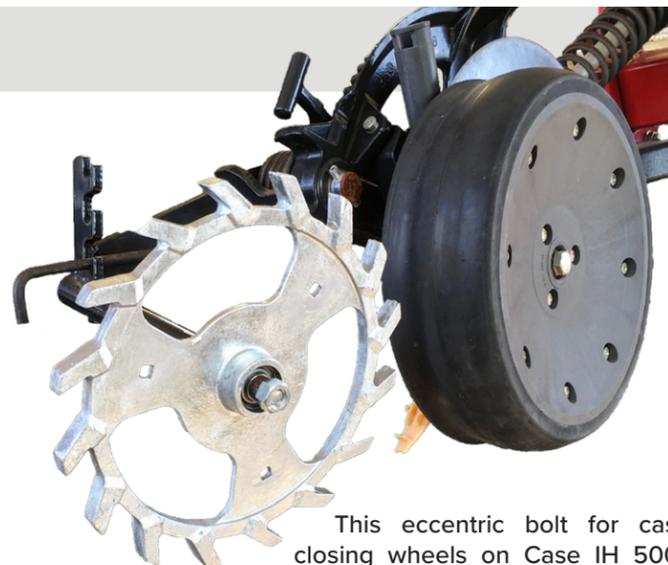
Standard Zipper vs. all cast Zipper vs. all cast Zipper Max



Cast Zippers shown with 4 Link Closer™ and G2™ fertilizer disc on a John Deere planter

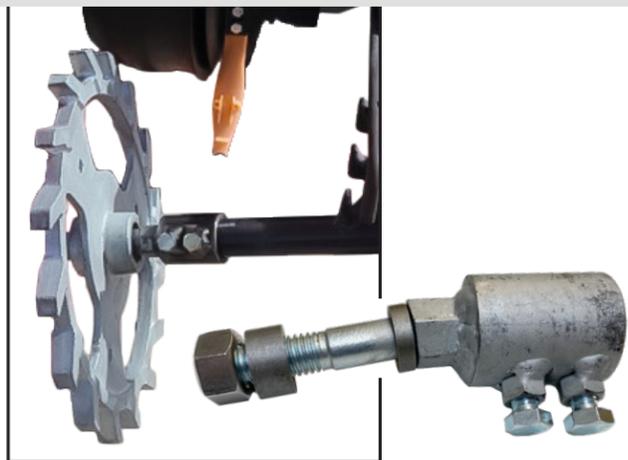


Cast Zippers shown with 4 Link Closer's V closing attachment and Rebounder® Seed Cover on a White planter



This eccentric bolt for cast closing wheels on Case IH 500, 500T, and New Holland drills **changes the pitch** in on the back side of the closing wheel. This **allows the wheel to bring soil in** into the furrow behind the wheel, compacting it down around the seed.

CASE IH 500 DRILL WITH ECCENTRIC BOLT



The updated **easy adjust** eccentric bolt makes it simple for the farmer to set all the rows the same. Once the pitch of one row is set to close the seed trench properly, the rest of the rows can then also be set to the same setting.

COVER CROPS

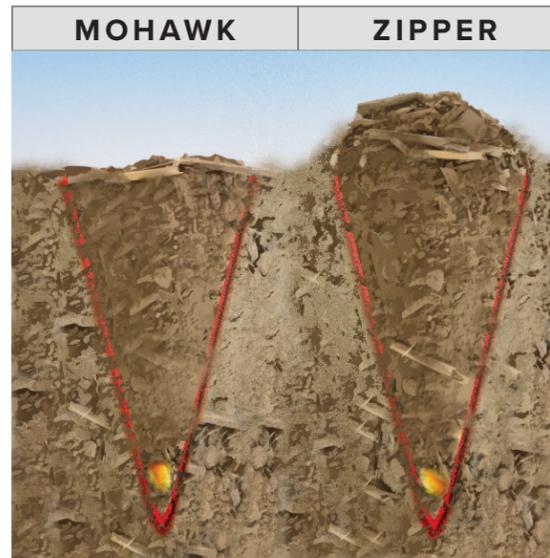


Many of the spiked wheels on the market wrap or plug in cover crops. The **Zippers and Mohawks are less likely to plug or wrap in heavy cover crops.** If they do start to wrap, one can order **cover plates** (shown to right) as an option to **prevent wrapping of cereal rye, vetch and other vining crops.**

We have even had farmers **switch the Zippers around** (shown to left) running the right on the left side of the planter and the left wheel on the right with the fingers turned inward to eliminate wrapping of cover crops.



DIFFERENCE BETWEEN MOHAWKS & ZIPPERS



Mohawk wheels crumble and firm the seed V shut, creating a flat ice cream cone shape with the soil in and above the seed V

Zipper wheels create an ice cream cone shape with the soil in and above the seed V

The **Mohawk won't pull quite as much soil as the Zipper** but it also does a good job in **slightly hilly and flatter ground.**

The **Zippers are more aggressive** as they put a little more soil over the furrow especially if you are in **hills or up and over terraces.** The Zipper works better on **contour planting** as your closing wheels won't be in the trench like regular closing wheels will.

Zippers rototill the soil, breaking up the side walls as they compact the soil around the seed, taking out the air pockets that other spiked closing wheels will leave, and creating **better seed to soil contact.**

Cast Mohawk Max



Cast Zipper Max

B.S., OH -

We feel the Zipper Wheels are the best choice for no till because they wipe out the sidewall compaction that is so critical to allow roots to easily penetrate soil in the sidewall area.

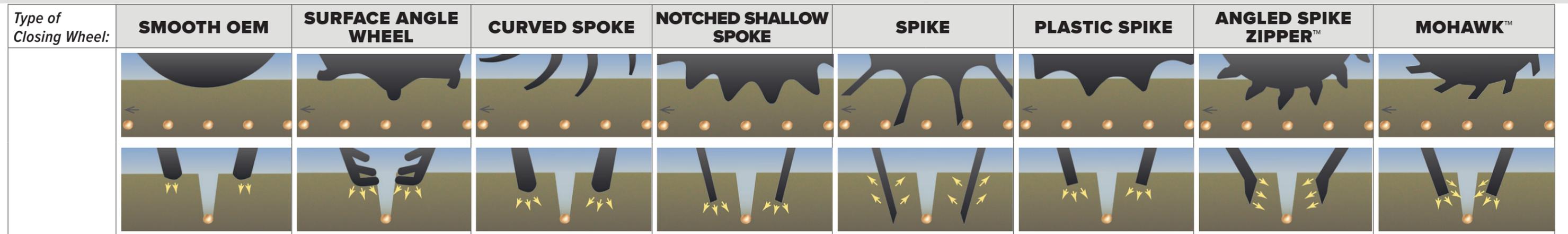
The last 220 pairs that went on planters this late spring were the new style all-cast Zipper. These

wheels eliminated the wet soil from sticking to the flat spots in-between the teeth. We witnessed these wheels going through impossible-to-close conditions with unbelievably good results in 2019.

These wheels zip the furrow shut and leave a slight dome of tilled soil on top of the seed.



COMPARING DIFFERENT TYPES OF CLOSING WHEELS



ON A SCALE FROM 1-10, 10 BEING THE BEST, LISTED IS HOW WELL EACH WHEEL PERFORMS ON THE FOLLOWING CATEGORIES:

Type of Closing Wheel:	SMOOTH OEM	SURFACE ANGLE WHEEL	CURVED SPOKE	NOTCHED SHALLOW SPOKE	SPIKE	PLASTIC SPIKE	ANGLED SPIKE ZIPPER™	MOHAWK™	
Sidewall breakup <i>shatters, chunks, smears, rototills</i>	1 smears in wet soil like a trowel on concrete	2 horizontal surface pack; can leave air pockets	7 stabs & releases	8 shatter & chunks *needs a drag chain to break up clods	2 Spikes 8 spades or chunks *needs a drag chain to break up clods	1 Spike 1 Rubber 1	6 stabs and leaves spade indents	9 rototills, compacts and releases *no drag chain needed	8 shatters, compacts and releases *no drag chain needed
Seed to soil contact <i>how well compacts soil</i>	1	4	3	2	0	2 *breaks soil only on one side	9 *spikes are angled, leaving the soil compacted while releasing soil as it exits beside the furrow	9	
Works in all soils <i>cover crop, no-till, conventional</i>	5 fair-poor in all 3	5 best in conventional	5 fair in all 3	5 fair in all 3	1 only no-till	4 no-till & conventional	8 good no-till & conventional fair cover crops	9 very good in all 3	9 very good no-till & conventional
Depth control	9	9	5	6	1	5	7	9 doesn't disturb the seeds	9 doesn't disturb the seeds
Wear life	8	9	9	6	6	7	1	10 excellent wear life	10 excellent wear life
Overall Average	4.8	5.8	5.8	5.4	3.2	3.8	4.8	9.2	9.0

RECOMMENDATIONS FOR RUNNING ZIPPERS OR MOHAWKS vs SPIKED OR CURVED CLOSING WHEELS

The Zippers put a little more soil over the furrow especially if you are in hills or up and over terraces. They keep a down pour of rain from running down the seed V. It won't crust as bad with the Zippers when you get a hard rain shortly after planting and before the soil has had time to dry some and settle in. **The Zipper closing wheels act like a rototiller as they break up the side walls, pulling in the soil while mellowing the soil around the seed to create an ideal seed bed for the seed to grow in.** As the Zippers rototill the soil they also compact the soil around the seed taking out the air pockets that other spiked closing wheels leave chunks of soil and air pockets in the seed trench with poor seed to soil contact.

The Mohawk won't pull quite as much soil as the Zipper but it also does a good job in slightly hilly and flatter ground. If you already

have plastic press wheels with tires on the planter now then you can save money by installing the Mohawks in the plastic rims you already have. **The Mohawk and Zipper are two of the most reasonably priced closing wheels on the market.** The Zippers pull soil about 1/2" to 3/4" farther away from the furrow than any other wheel on the market, which makes them the choice when farming contours or up and down hills.

Differences of Mohawks and Zippers compared to a straight fingered or curved finger wheel:

1: Some of the straight finger wheels will re-loosen the soil as they exit which can cause the seed V to dry out and create germination problems. **The Mohawks' and Zippers' wheel spokes are angled such and as they exit the soil the angle of the teeth on the Mohawks**

and Zippers release the soil leaving it compacted around the seed eliminating air pockets in the seed trench.

2: A lot of the straight finger wheel companies want you to run one rubber wheel and one spike wheel so the spike wheels don't spade up seeds. They can go too deep if you run both. Most of the straight fingered wheels chunk soil into the seed V leaving air pockets that can cause leaching out underground. You can run both Mohawks and Zippers because they don't go too deep and they don't chunk the soil in or spade up seeds in the seed V. **Why not break both sides of the seed trench by mellowing/compacting the soil over the seed,** rather than spading or chunking one or both side walls like most straight spiked wheels do, **thus giving you better seed to soil contact by rototilling both sides in of the row with the Zippers and Mohawks.**

3: Many of the straight finger closing wheels have to drag a chain behind the closing wheels to smooth up or level out the row and crumble clods left behind by the spading or chunking wheels. **Drag chains are not needed behind the Zippers or Mohawks because they leave the seed V area compacted and smooth.**

4: Many of the plastic made spiked wheels wear out within a couple of years running. **The Zippers and Mohawks will wear out several planters before they need to be replaced.**

5: Many of the spiked wheels on the market wrap or plug in cover crops. **The Zippers and Mohawks are less likely to plug or wrap in heavy cover crops and we have a solution if they start to plug.**

CLOSING WHEELS WEIGHT CHART



MOHAWK™ PLASTIC
5.9#



ZIPPER™ PLASTIC
5.9#



4" CHICKEN TRACKER™
10.6#



COPPERHEAD AG FURROW CRUISER & YETTER TWISTER
2.85#



COPPERHEAD AG CRUISER EXTREME
21#



DAWN CURVETINE™
12.25#



CAST IRON WHEEL
23#



MOHAWK CAST
8.05#



ZIPPER CAST
7.25#



6" CHICKEN TRACKER™
11.5#



GREAT PLAINS
11.3#



MARTIN 13"
10.7#



PRO-STITCH
3.85#



SCHLAGEL POSI-COSE
4.18#



MOHAWK MAX
12.6#



ZIPPER MAX
11.8#



SPYDER™ CAST
11.6#



SI DISTRIBUTING FINGER-TILL
16.1#



EXAPTA THOMPSON™
7.4#



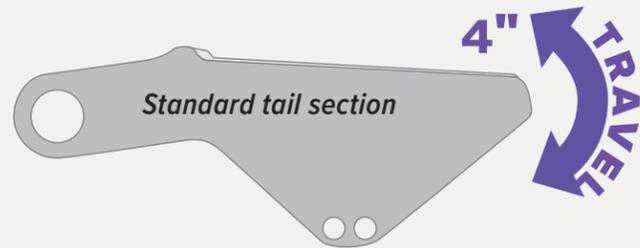
YETTER SPIKE
16.28#



RUBBER TIRE
3.15# - 3.8#

4 LINK CLOSER™

Schaffert Mfg. Co.'s 4 Link Closer will eliminate these common problems:



Whenever the press wheels flex up, the contact points on the press wheels get wider, and when the press wheels go down past center, they get narrower (too close to the seed furrow). This causes the seed V to not close properly.

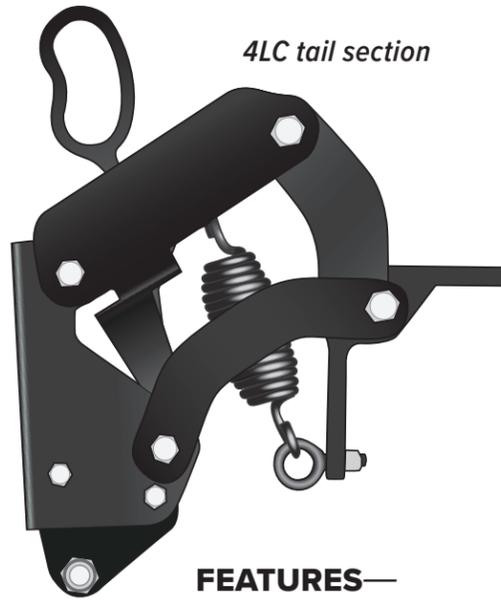
Also, when you max out the wheels on the top side, it can raise the planter unit out of the ground, causing seed depth to change. By running extra spring pressure on the press wheels you create up pressure on the row units. Thus, as the planter travels through the field, the swing arm closing system is constantly moving up and down along with the parallel linkage of the planter unit itself, causing uneven seed depth.

When planting up and over terraces or through ditches, seeds get planted on top of the ground, leaving blanked out areas in the field.

Take the bounce out of your planter units by adding the 4LC



4LC and G2 fertilizer disc on a White planter



4LC tail section

FEATURES— BENEFITS

- Works with the G2 fertilizer disc and G3 walking beam arm
- Keeps press wheels parallel to the seed trench at all times
- Allows you to run less down pressure and enables faster planting speeds without sacrificing depth control
- Ensures excellent seed to soil contact in any condition
- Walking action of closing wheels eliminates air pockets
- Allows 9" up & down travel—standard OEM closers have 4" total travel
- Better closure of the seed furrow in tough soils
- Eliminates planter bounce in the field
- Fits most double disc opener planters
- No more blank planted rows



YCam closing system with serrated discs, Chicken Tracker, & optional 2x2x2



Case IH
800-1200

John Deere
7200-1700



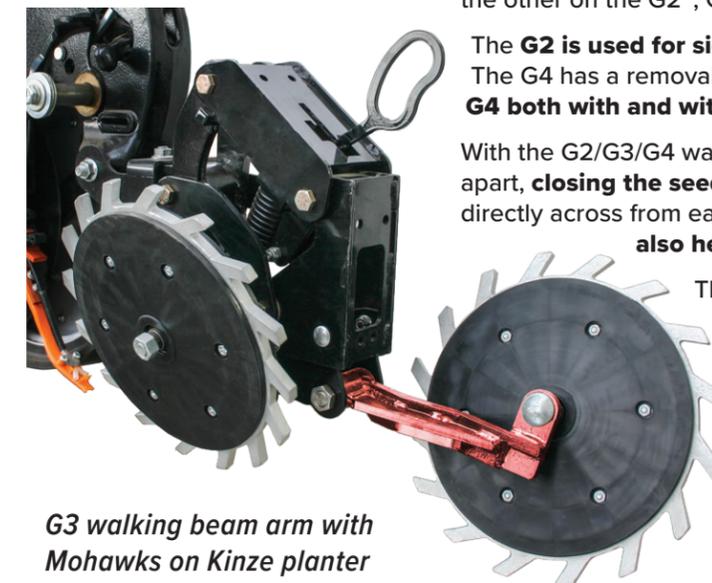
5 DIFFERENT GROUND ATTACHMENTS

The 4LC offers five ground attachments to choose from. Closing wheels can be attached directly to the 4LC V closing bracket, or they can be staggered one after the other on the G2™, G3™, or **NEW G4™** walking beam axle.

The **G2** is used for side fertilizer placement, or use the **G3** without fertilizer. The G4 has a removable disc mounting plate so therefore farmers can **use the G4 both with and without fertilizer.**

With the G2/G3/G4 walking beam, the wheels are spaced apart, **closing the seed furrow better** than if the wheels were directly across from each other. This **walking beam** also helps eliminate air pockets.

The fifth attachment option is the **NEW Y-CAM Closer.**



G3 walking beam arm with Mohawks on Kinze planter



Kinze 4LC with V closing bracket

4 LINK CLOSER

The OEM tail section found on planters built today has a limited amount of travel up and down (roughly 4") throughout full movement when planting. Whenever the press wheels flex up, the contact points on the press wheels get wider, causing them to toe out and they tend to over cover the width of the seed V. When the press wheels go down past center, they under cover or toe in, causing the seed V to not close properly.

Also, when you max out the wheels on the top side, it can raise the planter unit out of the ground, causing seed depth to change. The length of the OEM tail section is 1/3 the length of the overall row unit. When increasing the down pressure by one notch on the closing system, you have to increase the front parallel linkage down pressure by more than 30% to keep the planter at the same depth. With this lever actioned tail section controlled only by one parallel linkage, one would need to run more down pressure up front to keep the planter in the ground.

By replacing the OEM tail section with a 4 Link Closer, the closing system is no longer a lever, but moves parallel with the ground instead of in an arc. This change enables one to use far less down pressure to close, causing little up draft on the overall row unit.

The 4 Link Closer busts up compaction, resulting in the best seed to soil contact equaling the best net effective plant stands.



Customer Tim B. of Illinois sent these photos of his Kinze planter using the 4 Link closing system on one row in comparison with the factory set-up on the rest of the rows. Tim attributed the improvements made to not having to run as heavy down pressure on this row, which meant there was far less sinking and compacting of the soil with this row, leading to better emergence.



Beans planted without trash whippers into 260BPA corn residue



T.B., IL -

The 4 Link Closer has allowed us to back off on seeding populations to get our desired plants per acre, saving us money. It makes my stands even throughout the whole field (ear height, root structure, stability) which makes dry down and harvesting much easier. Unlike OEM's, the 4 link closer makes seeding possible through wash outs, keeping them from getting worse as time goes on.

4 LINK FORCE™



Add Zipper™ or Mohawk™ closing wheels to the 4-Link Force



Schaffert Manufacturing Co., Inc. and Graham Electric Planter partnered to introduce the **new 4-Link Force**. This is an active furrow closing system, utilizing our patented 4-Link Closer™ tail section with Graham's patented wireless Samsung control solutions.

Schaffert Mfg. has taken the nine-inch travel of the 4-Link Closer and added the Graham 12-volt actuator that provides 125 pounds of closing force. Adding in a 1000-pound load cell, and a torsional dampener makes the 4-Link Closer even smoother running!

With the Graham Command Pro™ active management system, we can set the entire planter closing system from the cab and watch individual row performance on the wireless tablet.

Unlike other systems, the 4-Link Force has no air lines or hydraulic hoses going to the rows. The 4-Link Force offers automatic down force management on the closing wheels through a prescription map or settings through the tablet in your cab.

Add the G-Series 2x2 fertilizer system to the 4-Link system and place your fertilizer behind the planter, eliminating mess on the planter.

The 4-Link Force adapts to fit most OEM planters today.

FEATURES—BENEFITS

- **Simple Design**—2" electric actuator with 100% wireless control
- **Bi-Directional Pressure**—125 pounds
- **Graham Torsion Control™**—Smooths the ride and provides more consistent ground contact through changing soil conditions.
- **Individual Row Unit Management**—Load cells on each row instantly adjusts to manage weight on closing wheels.
- **No Hydraulic Hoses**
- **No Air Bags**—More responsive than pneumatic down pressure.
- **Replaces Existing Springs**
- **Single Harness**—For power supply
- **Versatile**—Installs on any brand of row unit
- **Active Management**—Automatic weight management on the closing wheels. Simply click a button on Graham Command Pro for instant pressure change, or utilize prescription maps (.SHP) for automatic adjustments based on GPS location.
- **Up-Pressure**—Graham Torsion Control provides over 125 pounds of stored energy for necessary up-pressure or other necessary adjustments through various soil conditions in order to maintain a smooth ride of the closing wheels and row units.
- **Graham Command Pro™**—Android tablet wireless row level control and monitoring
- **Maximize Planter Performance**—Pair with Graham Force and Graham Pro electric drives and/or Graham Force



SIDE PLACEMENT

Schaffert Mfg. Co. offers a revolutionary method of applying larger quantities of starter or nitrogen fertilizers, 2"-4" to the side of the row and into moist soil, with the G2 and G4 fertilizer disc behind the planter.

The G2/G4 fertilizer 8" or 9" single disc opener is mounted on the press wheel brackets of John Deere, Kinze, White, Great Plains, Monosem, and Yetter planters.

The G2/G4 liquid disc is designed on a walking beam axle with 3 points of contact in the soil at all times.

This patented walking beam design gives stability and balanced pressure to both press wheels in closing the seed V, better and more even depth of fertilizer in uneven terrains, and features a compact easy-to-mount design.

This compact design eliminates having to find room in front or behind the planter for much larger, heavier, and more expensive fertilizer solutions.

In a 3-year fertilizer application study (2011-2013) by Ken Ferrie of Farm Journal Magazine the G2 fertilizer disc topped their yield trials.

Right and left hand row units available.



G2 working with new fertilizer bracket

G2™ & G4™ FERTILIZER SYSTEMS

G4 with removable fertilizer kit and cast Mohawk wheels



The G Series works great with Mohawk & Zipper closing wheels



FEATURES—DESIGN—BENEFITS

- Unique one piece design that equalizes down pressure on press wheels and liquid disc
- A heavy duty triple sealed bearing in the disc
- Powder iron oil impregnated bushings in walking beam
- Stainless axle in center pivot walking beam = no corrosion
- Single disc design for better penetration
- Adds only 11 lbs per row
- Easy to install

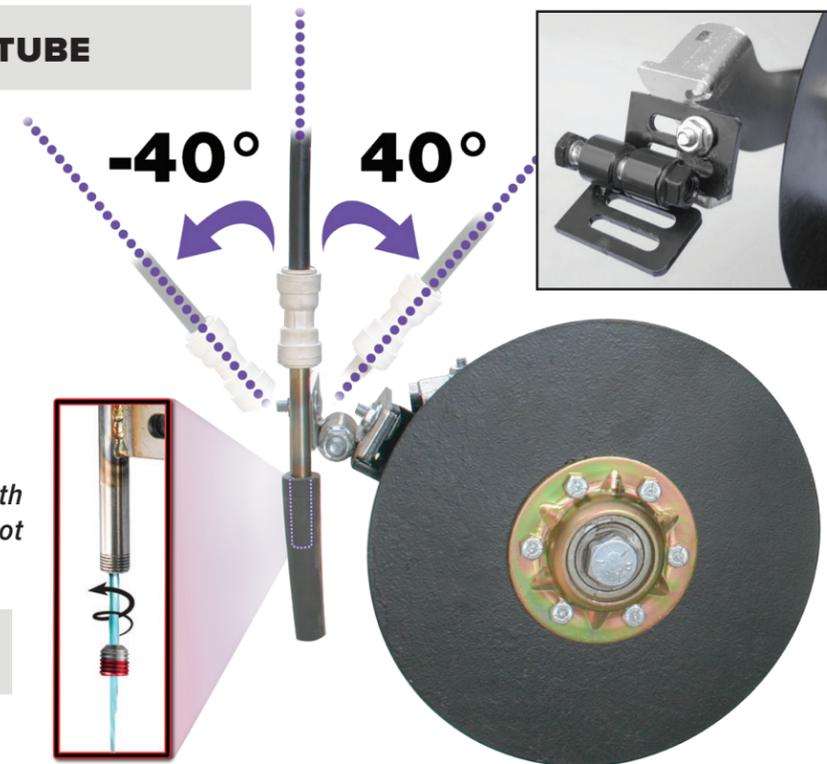
ELIMINATES COMMON PROBLEMS

- New liquid disc is tucked in behind the gauge wheel to keep it from plugging in heavy residue
- No drilling of holes on newer style JD, Kinze, White, Monosem & Great Plains planters
- Won't disturb the seed—adjustable 2"-4" away
- No need for heavy duty down pressure springs

ADJUSTABLE FERTILIZER TUBE

- Disc adjustable 2"-4" from furrow
- Stainless steel high pressure tube injects fertilizer directly into the slice cut by the G2 fertilizer disc
- Fertilizer bracket pivots closer or further from disc blade
- Adjustable trash deflector
- Heavy duty rubber boot

Pivotable G2 fertilizer bracket with injector orifice and rubber boot



INJECTOR ORIFICE

SIZE & INSTALLATION

- Screws inside 3/8" stainless tube
- Easy to install with an Allen wrench
- Orifice OD is 5/16"

FEATURES—DESIGN—BENEFITS

- Stainless steel compact design
- 13 color coated orifice sizes
- Injects high pressure, 2-40 GPA
- Universal models—fits many machines
- Allows tube to be closer to soil surface, eliminating trash buildup

Schaffert Mfg. now offers a pivotable fertilizer bracket on their G2 fertilizer disc. This new bracket replaces the curved fertilizer tube and can be **used on existing G2s**. The bracket pivots 40 degrees in and out from center so you can adjust and control where the fertilizer is injected, **closer or further away from the disc blade**. It can be used for both low and high pressure.

To run high pressure, simply screw in one of Schaffert Mfg.'s stainless steel **high pressure injector orifices** into the bottom of the threaded tube. This injector orifice **works on our stainless steel Case IH fertilizer tubes** as well.

The orifice is **easy to install with an Allen wrench**. They are offered in **13 different color coded sizes** to put on from 2-40 GPA.

We've also added a **new heavy duty rubber boot** to the bottom of the fertilizer tube. This boot is specially made for our fertilizer tubes, designed to immediately **snap back into place** after hitting trash. It works better than the drag hose previously used. The rubber boot also helps **eliminate fertilizer on the row unit**.

Notched disc for cover crops



NOTCHED DISC FOR HIGH RESIDUE

- The notched G2 fertilizer disc works well when planting into wet or dry heavy residue field conditions (such as soybean stubble and heavy corn residue)
- The notches in the blade help it "walk" through the residue, keeping the disc rolling in the field instead of plugging or stopping
- This specialized G2 is a true mud hog. In many conditions, using the notched style blade will allow you to eliminate the residue scraper

SIDE PLACEMENT

FERTILIZER TUBE FOR CASE IH

Our new fertilizer tube mounts directly to Case IH planter units and moves independently of the covering disc bracket. Its compact design injects fertilizer directly into the slice opened by the IH leading cover disc. Fertilizer can be placed 2" to one or both sides of the row, giving crops early access to the nutrients needed for optimal plant growth.

The fertilizer is incorporated into moist soil, so it will not splash on the planter, press wheels, or on top of the ground. This keeps the standard or Chicken Track press wheels from building up with mud.

The tubes come with optional high pressure tips and are available for Case IH 800-2100 series planters.

SIDE PLACEMENT OF FERTILIZER

- Injects fertilizer on one or both sides of the row
- Incorporates fertilizer into moist soil
- Puts fertilizer in slice or opening made by cover disc
- Optional to add high pressure tips (see *Injector Orifice* on previous page)

HOW IT MOUNTS

- Formed compact tube bolted to unit
- Mounted directly to planter, NOT to cover discs
- Fertilizer hose attaches high up on planter
- Lefts and Rights available



ELIMINATES COMMON PROBLEMS

- Eliminates fertilizer on planter, press wheels, and on top of ground
- Helps eliminate trash build-up



DUAL SIDE PLACEMENT

For dual side placement of nitrogen, phosphate, potash, and micro-nutrients when planting row crops

Placing fertilizer 2" to each side of the row is quickly becoming a popular method of increasing yields. Traditionally, side fertilizer placement has occurred on one side of the furrow. But with our new dual tube options, farmers can now apply liquid fertilizer on both sides of the furrow.

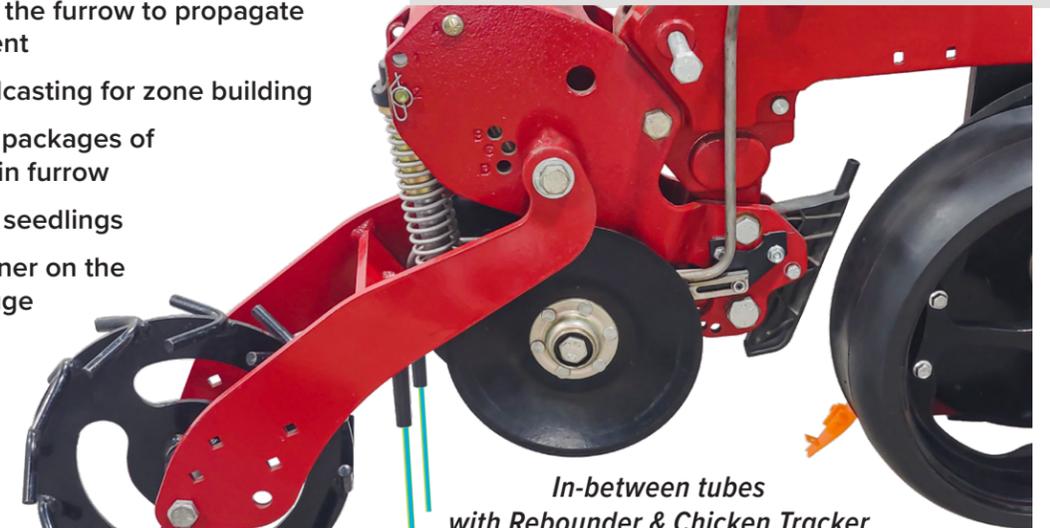
CASE IH 800-1200 SERIES



BENEFITS OF DUAL FERTILIZER PLACEMENT

- Double your rate of fertilizer while keeping it in two separate bands close to the furrow to propagate downward root movement
- Lower rate versus broadcasting for zone building
- Great for micro-nutrient packages of fertilizer that cannot go in furrow
- Safer at higher rates for seedlings
- Located behind the opener on the planter, keeping the gauge wheels clean for better depth control—no build-up from opener in front of the row unit

CASE IH 2100 SERIES



Tubes out the back with Chicken Tracker & scraper



Out-the-back tubes with Rebounder & Chicken Tracker press wheel



PUMP SYSTEMS

FOR USE WITH

- Complete planter & drill fertilizer application systems for all OEMs
- In-furrow starter, fungicide, & insecticides
Rebounders, optional fittings, stainless steel tubes
- Side placement for high-volume nitrogen
G2 fertilizer disc, fertilizer tubes for Case IH

FEATURES—BENEFITS

- Hassle free assembly
Pre-built tower so you can bolt on and go
- Easy adjust controller
- Made in the USA

STANDARD KITS INCLUDE

- Pump(s) & filters
- Manifold & distribution center
- Fertilizer placement options
- Controller & wiring harnesses
- Automatic shut-off



GX2™ double pump distribution center



GX1™ single pump distribution center

*You imagine it—
we build it*



TeeJet diaphragm check valve



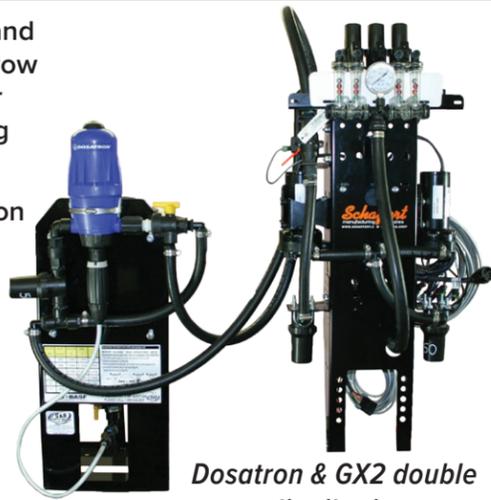
PVC piping manifold



Visual Wilger manifold

DOSATRON® DIRECT INJECTION KIT

- Apply fungicide and insecticide in-furrow along with starter without premixing in a single tank
- The direct injection kit is designed to be a simple cost effective way to apply fungicide and insecticide in-furrow with the seed



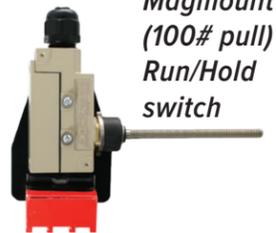
Dosatron & GX2 double pump distribution center with GPS



GX2 fertilizer application system on a Landoll drill

C.P., MS -

The pump systems are really simple—worked just like they said and were easy to install.



Magmount (100# pull) Run/Hold switch



ManX Controller



5.3 GPM REMCO pump



View your pressure with our Remote Gauge mounting kit closer to the cab

WHEEL SCRAPERS

BENEFITS

- Keeps the gauge wheel clean even in loose, muddy soil
- Keeps gauge wheel clean so seed depth does not change
- Affordable & economical

FEATURES—DESIGN

- Welds or bolts on most planters
- Scrapers adjustable in and out, up and down to fit any tire
- Designed shape to fit contour of tire
- Flips out of the way when not needed
- Scrapers made of high molecular poly for wearability



Strip Cat

John Deere, Kinze & White gauge wheel scraper



Muddy press wheels



Case IH 1200 gauge wheel scraper



Case IH press wheel scraper

Our side placement fertilizer tubes for Case IH will also help eliminate mud build-up by placing liquid fertilizer directly into the ground, keeping it off your planter and wheels.

B-TOEM™ BLADES

Better-Than OEM (B-TOEM) disc blades allow you to **seed into hard soils covered in heavy, tough residue**, while **maintaining flexibility to resist breakage** in rocky and high foliage conditions.

As these blades are used, their doubled rolled beveled edges wear sharper and hold their edge longer, **retaining 20% more diameter** on average than standard and competitor blades. The core of the B-TOEM blades is about **10% harder** than other blades.

FEATURES—BENEFITS

- Rockwell hardness: B-TOEM 55-58 OEM 48-50
- Rivets: B-TOEM 5/16" OEM 1/4"
- Hub metal: B-TOEM 3/16" OEM 1/4"
- Bearing: B-TOEM 205 HD OEM 204
- 20%-40% longer wear life = Reduced cost per acre
- Domestic components—Assembled in the USA
- Maintains its sharp cutting edge, even in rocks

B-TOEM blades provide **better blade to soil contact**, as they do not roll over or break in rocky soils. These **patented, heat treated blades** have a **heavy duty hub** and are made of materials superior to those found in standard disc blades, giving them an improved and longer life.



Testing methods: To test their durability, the B-TOEM blades were run across rocks at 8mph with full down pressure.

Better-Than OEM heavy duty double disc openers

SHORT-LINE EQUIPMENT

Schaffert Mfg. is one of the largest cultivator dealers in North America, and our two large lots contain a variety of new and used farm implements and parts. We have an extensive assortment of Buffalo cultivators, Tye drills, and parts.

Cultivators are a great aid in organic and hemp production. Alongside Buffalo, we carry various models of B&H, Hiniker, Sukup, Orthman, and more.



*Buffalo
Cultivators*



PAUL SCHAFFERT CEO Schaffert Mfg.



Tye Drills

In addition to Tye, we carry Landoll and other drills. Many of our drills have been modified to include SMC fertilizer systems and attachments.

Other short-line equipment we carry includes subsoilers, bale beds, bale movers, bale feeders, creep feeders, hay rakes, stalk choppers, box scrapers, forced ejection scrapers, guidance systems, Buffalo planters, v-cutters, paratills, rotary hoes, and flatbed trailers.



*EZ-Haul
Hay Haulers*



Blu-Jet Rippers



Besler Bale Beds



Henke Buffalo Scrapers

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