



2023

PRODUCT CATALOGUE



**Seeding & Fertilizer Openers
Tillage Tools | Specialty Parts**



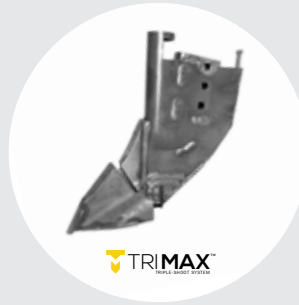
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**Paired Row
Replaceable Tip**
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**Bourgault TriMax™
Triple Shoot System
Replaceable Tip**
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**Bourgault TriMax™
Triple Shoot System Opener**
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**Fertilizer Knives
to fit Bourgault MRS**
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**Fertilizer Knives
to fit Salford**
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**Titan Opener System
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**Speed-Loc™
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**Fertilizer Knives
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to fit Degelman, Rite Way and
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**Max Life™ Weldable
Wear Strips**
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Share Your Experience

Customer feedback is important and if you're running BTT products you may have some thoughts to share! Hearing what our customers think provides valuable insight on what we're doing right, where we can improve, and what new opportunities we should explore.

Fill in our short customer feedback form and your name is also entered into our monthly draw for BTT swag!

A member of our team may contact you using the information you provide to further discuss your comments.

Access The Feedback Form

Fill out the short feedback form online by visiting tillagetoools.ca/company/customer-feedback/

OR

Scan the QR code below.

1. Open the camera app on your smart phone.
2. Point your phone at the QR code and hold steady for a few seconds to scan it.
3. When a notification appears at the top of your screen, tap on it. This will take you to the online entry form.
4. If a notification doesn't appear, go to Settings on your phone, enable QR code scanning under Camera, and then scan the QR code again.



SCAN USING YOUR SMART
PHONE CAMERA

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Joseph Bourgault (Left), President, and Ryan Olson (Right), General Manager, in front of the new robot weld cells at the BTT plant in St. Brieux, Saskatchewan, Canada.



Expanding our business while serving fellow Canadians.

On behalf of our team at Bourgault Tillage Tools, I want to thank you for making our 30th-anniversary year the best one yet! Over the past 12 months, we introduced 50+ new products and tested many more that we are now ready to launch.

2022 was a challenging year for manufacturing with supply shortages, rising inflation, and increased demand. The BTT team did an excellent job managing the situation and ensuring customers could get crops in the ground come spring. We focused on expanding our business while simultaneously taking an active role in representing hard-working Canadians by having BTT President, Joseph Bourgault, run for the Leadership of the Conservative Party.

Many political challenges are impacting the Ag industry. Carbon taxes, inflation, and now the Federal Government getting heavy-handed with unnecessary agricultural practices. We feel the responsibility as leaders in this industry to stand up against the constant attack by our Federal Government. So much so that we've dedicated our company President and CEO to defending the rights of all Canadians through the non-profit organization Canadians for Truth.

There are many challenges ahead, but we are optimistic that we will continue to deliver innovation to our farm customers through our products and serve them as a voice to protect their livelihoods and ensure that unconstitutional regulations do not cause further harm to our industry. Our industry has been recognized for being the top agriculture innovator in the world, where we have not only enhanced crop production but done so in a way that continues to challenge pollution by optimizing fertilizer and chemical use.

Here are some highlights of what you can expect from us this year:

Enhancing Forges De Niaux Disc Supply

The strong market for High-Speed Disc machines has stressed our supply chain, making it difficult to deliver *Niaux* 200 products to dealers and customers. In 2022, Forges de Niaux will significantly expand its manufacturing capacity to satisfy growing demand. Those facility upgrades along with investments in our own warehousing will allow us to get back to normal supply conditions for 2023.

Bourgault Product Innovations

New to the product offering in 2023 is our ½" Mid Row Shank Fertilizer Knife. This product was tested successfully in various conditions, and customers were very satisfied with the performance of this product line regarding placement and soil flow. In 2022, these were sold in limited quantities, but we are opening the market for additional machines in 2023.

We also had excellent success with the TriMax™ Triple-Shoot System Side Band Tip, which was used on multiple machines in 2022. This allows customers to triple shoot product on 10" spacing without the fear of straw plugging. This product is now available on the new Bourgault TriMax™ Drills or as an aftermarket option through your local dealer.

MAX LIFE™ Innovations

MAX LIFE enhances the life of products in a way that is much more economical than carbide. With the continued expansion of

the MAX LIFE line, we identified and tested several new products in 2022, including Threshing Pins, Power Hiller Tines, and Scrapers. New MAX LIFE Harrow Tines to fit Degelman, Rite Way, and Summers have also been added to the line-up.

A unique product we're launching is MAX LIFE Weldable Wear Strips. These strips can be applied to any high-wear situation across construction, forestry, mining, and farm equipment.

Fertilizer Knives & Replaceable Tips

In 2022 we developed and tested several new fertilizer knives and replaceable tips. Keep your eye out in the catalogue for these additions. This product line continues to innovate with testing in 2023 for several exciting product releases in 2024.

Made in North America

Our company was well positioned to weather the strained supply chain storm in 2022 because of how we purchase our raw materials. While many companies scrambled to get their products from China and overseas markets, we continued to purchase from our North American Suppliers (>95% of raw materials).

Our largest suppliers, such as LethIron and S3 Group Ltd., stepped up to the challenge, although their workload increased significantly due to strong economic growth conditions. They worked hard to effectively minimize supply disruptions and cost increases for our customers. Thank you!

Investing in the Future

As our company has grown, we have continued to reinvest in ways to be more efficient. In 2022, we finished our warehouse expansion which allowed us to stock more products for our busy times. Immediately after it was built, we got to work filling it with products to ensure availability for our dealer network.

We also added two robotic weld cells to our plant to help improve efficiency, especially during peak periods when demand is high. We have our sights on several new capital investments that will improve our customer experience in the coming years, but I will save these for next year's message.

Thank a Farmer

On behalf of all our staff, we want to thank you for your hard work in 2022. One would wish that weather was the only challenge we faced, but unfortunately, many factors are making it more difficult to be a farmer this year. Our team will continue to do everything we can to not only support you in the field but to be a strong voice for the farming community.

Many of us are farmers too, and we know the importance of being united in our efforts to protect our livelihood and ensure that our children and grandchildren have a future where Canadian Agriculture is allowed to keep innovating. Many of our customers are 4th or 5th-generation farms, and we support your freedom to farm.

Thank you for your continued support, have a great 2023, and we'll see you in the field!

Ryan Olson,
General Manager

Helping You Succeed

At Bourgault Tillage Tools (BTT), we think you should expect a lot. We strive to deliver that with exceptional customer service, on-farm visits, high-quality North American-made products, and the best Warranty and Performance Guarantee in the market.

The demands and needs of each farm are unique. Our objective with on-farm visits is to help farmers become more efficient and profitable. We take the time to learn about your operation, discover what products you're currently using, and discuss seeding, fertilizing, and tilling challenges.

After getting a clear picture of existing practices, we review our product line to discuss options and solutions for your operation. Talking directly with our customers is valuable for our team also as it influences product development and helps us uncover opportunities for new projects and innovations.

We call this The BTT Difference, and these are just a few of the ways we go the extra mile to keep your operation growing.

BTT Performance Guarantee

BTT guarantees the product you purchase will perform to its designed specification under normal conditions. Under some adverse conditions, the performance of the product may be affected.

If the product does not perform its designed task within the first season of use, please inform us of the issue immediately and grant us the opportunity to visit your farm to assess the situation.

If we cannot correct the situation, we will guarantee you a 100% refund.

Failure to follow our recommendations will render the Performance Guarantee void.

To learn more about adverse seeding conditions, see page 18.



Located in St. Brieux,
Saskatchewan, Canada.



Dealer network stretching
across 500+ locations.



An independent business,
separate from Bourgault
Industries since 1991.



Global distribution across
Europe, UK, Australia, and
North America.



A team of 77 employees
located across Canada,
USA, and the UK.



Warranty

Warranty only covers defects in materials and workmanship and is limited to replacement of the failed part. It does not cover any consequential damages.

Warranty will not be provided on any BTT parts that have been used with non-original BTT parts.

To obtain warranty, the part must be returned to the dealer to complete the warranty claim form. An invoice must be provided.

All products (with the exception of harrow tines and disk blades) have a 3 Year Limited Warranty, at our discretion, from the date of purchase as follows:

- 1st year prorated to a maximum of 100%
- 2nd year prorated to a maximum of 70%
- 3rd year prorated to a maximum of 40%

Sweeps, Chisels & Spikes

These parts are warrantied (prorated based on wear) against failure due to breakage or bending unless worn excessively.

Excessive wear means:

- The wing of the sweep measures 60% or less of its original width.
- The material thickness is 60% or less of the original thickness. (Example: a new Bourgault sweep that is 0.250" thick x 0.60 = 0.150. At this point, and after that, warranty is void).

Quick Change Products

Effective January 1st, 2001, all products used on the 100 and 400 Series adapters will not be warrantied against loss. All products used on 200 and 410 Series adapters will be warrantied against loss.

Chrome & Carbide Tips

Carbide is warrantied for loss only. Chipping of carbide is normal. If the brazing fails and the carbide falls off, return the part to the dealer.

Products with a chrome or carbide tip will not be warrantied against chipping related to installation issues unless the appropriate driver has been used.

Niaux 200 Disk Blades

Our disk blades have a lifetime warranty on breakage due to manufacturer defect.

MAX LIFE™ Harrow Tines

Harrow tines are warrantied from the date of purchase against breakage for three years, prorated to a maximum of 100%.

Trip Strength Considerations

Our seed openers need to perform in some challenging conditions, and we design our products with durability in mind. The end-user has the responsibility to make sure the machine is best suited to the operating conditions.

Proper trip strength will save you time and money. When determining the appropriate trip strength, some factors to consider are soil type, amount of rock, and type of seed opener used.

A heavy trip is not "one size fits all." Buying a seeding machine with heavier trips than required for proper penetration may result in:

- broken or damaged seed openers
- broken or bent shanks
- more rocks pulled to the surface

BTT reserves the right to limit warranty claims on trip strengths greater than 400 pounds.

Questions?

Please ask your Territory Manager or contact our Service & Warranty Manager directly at 1.800.878.7714.

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High Quality. Superior Wear.

NORTH AMERICAN-MADE

High Chrome Material

Replaceable tips are cast with high chrome material, increasing the life span of the tip.

Tungsten Carbide Inserts

The highest quality tungsten carbide is placed on our tips in-house. Extra-long carbide is used in extremely abrasive conditions, ensuring the longevity of the tip while maximizing seed bed utilization.

North American-Made

All primary wearing replaceable tips are cast by Leth Iron in Lethbridge, Alberta, Canada using the best materials available.

Easy Installation

Quickly and easily install new tips with our bolt and nut combos, proven to work when roll pins won't.



LOOK FOR THE
LETHIRON MARK ON
BTT PRODUCTS!

SINGLE SHOOT (PG 12) | PAIRED ROW (PG 14) | SIDE BAND (PG 16) | FERTILIZER (PG 17)

Replaceable Tips

Single Shoot Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation.



200-TIP-0511

CARBIDE TIP

1/2" (13mm) tip with carbide insert on the nose. **Not recommended in highly abrasive conditions.**



200-TIP-0800

CHROME TIP

3/4" (19mm) tip. **Not recommended in highly abrasive conditions.**



200-TIP-0801

CARBIDE TIP

3/4" (19mm) tip with carbide insert on the nose.



200-TIP-0802

CARBIDE TIP

3/4" (19mm) tip with extra long carbide on the nose for highly abrasive conditions.



200-TIP-0803

CARBIDE TIP

3/4" (19mm) tip with extra long carbide on the nose and sides for highly abrasive conditions. Identical to 200-TIP-0802 with the addition of side carbide inserts.



200-TIP-0811

VERTICAL CARBIDE TIP

3/4" (19mm) vertical tip with extra long carbide on the nose for highly abrasive conditions.



200-TIP-1011

VERTICAL CARBIDE TIP

1" (25mm) vertical tip with double carbide insert. Recommended for rocky and highly abrasive conditions.



200-TIP-2011

CARBIDE SPREAD TIP

2" (51mm) tip with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings to maintain a sharp cutting edge.



200-TIP-3000

CHROME SPREAD TIP

3" (76mm) tip. **Not recommended in highly abrasive conditions.**



200-TIP-3001

CARBIDE SPREAD TIP

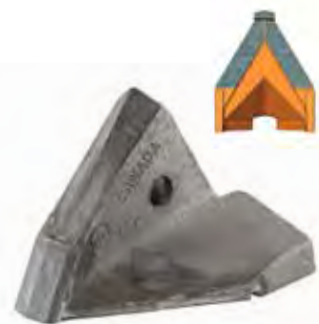
3" (76mm) tip with carbide insert on the nose and hard facing on the underside of the wings.



200-TIP-3011

CARBIDE SPREAD TIP

3" (76mm) tip with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings to maintain a sharp cutting edge.



200-TIP-4011

CARBIDE SPREAD TIP

4" (102mm) tip with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings to maintain a sharp cutting edge.



610-TIP-0802

CARBIDE SPREAD TIP

3/4" (19mm) long-wearing single shoot tip with extra long carbide on the nose for highly abrasive conditions. Used for seeding or fertilizing (not for double shooting).

Fits VOS (Versatile Opener System).
See page 56-57.



200-BNC-3100

BOLT & NUT COMBO

Bolt and nut combo used to secure single shoot, paired row and side band tips onto holders.

The bolt and nut should be replaced when changing the tip to maintain locking ability of the nut. See page 113 for installation and removal instructions.



200-TIP-0802 is 20% more in price, compared to 200% more in wear.

Anyone that has tried the 0802 in their wheel tracks can confirm what I'm saying. If you're in high or somewhat high wear conditions, 0802 is hands-down the best choice. Amazing point, great job BTT, well done. Any producer would be happy to the 10th degree. Keep up the good work.

Scott Biss, Saskatchewan, Canada

Paired Row Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation (see page 13).



610-TIP-4041

CARBIDE TIP

4" (102mm) paired row cast chrome tip with carbide insert on the nose for excellent penetration and wear resistance.

Carbide inserts on the underside of the wing to maintain a sharp cutting edge.

This paired row liquid or granular double shoot tip has no vertical seed/fertilizer separation.



610-TIP-4030

CARBIDE TIP

4" (102mm) paired row cast tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have a 3/4" (19mm) vertical drainage trench.

Carbide inserts on the underside of the wing to maintain a sharp cutting edge. This paired row liquid or granular double shoot tip has no vertical seed/fertilizer separation.

Fits VOS (Versatile Opener System).
See page 56-57.



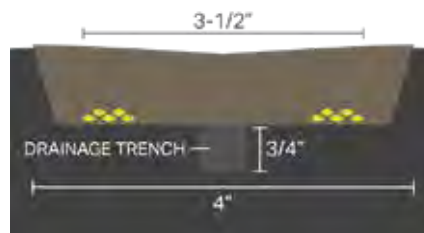
610-TIP-4035

CARBIDE TIP

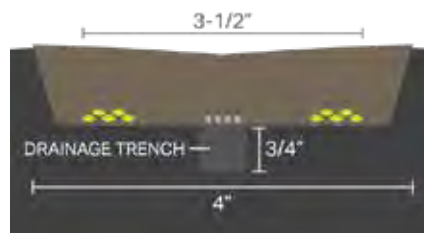
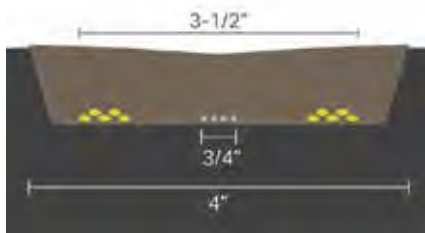
4" (102mm) paired row cast tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have a 3/4" (19mm) vertical drainage trench.

Carbide inserts on the underside of the wing to maintain a sharp cutting edge. This paired row liquid or granular double shoot tip has no vertical seed/fertilizer separation.

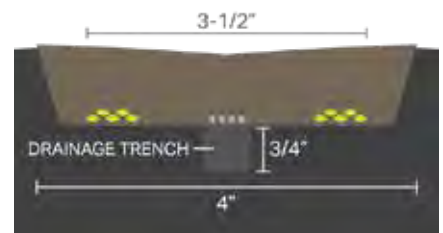
Fits VOS (Versatile Opener System).
See page 56-57.



SHOWN WITH SINGLE SHOOT HOLDER 688-HLD-1000



SHOWN WITH DOUBLE SHOOT HOLDER 688-HLD-2000



SHOWN WITH HOLDER 688-HLD-2080

SEED
FERTILIZER

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, fan speeds, application rates, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.



610-TIP-3581

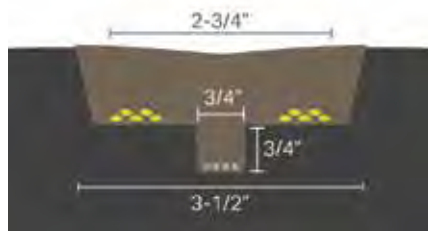
CARBIDE TIP

3-1/2" (89mm) paired row cast chrome tip with 3/4" (19mm) vertical separation of liquid, granular, or aqua NH3 fertilizer.

Carbide insert on the nose for excellent penetration and wear resistance. Carbide inserts on the underside of the wing maintain a sharp cutting edge.

Carbide inserts at the back underside of the wings seal the fertilizer trench prior to seed placement.

Fits VOS (Versatile Opener System).
See page 56-57.



610-TIP-4081 / 4082 / 4085

CARBIDE TIP

4" (102mm) paired row cast chrome tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have 3/4" (19mm) vertical separation of granular, liquid, aqua NH3 or aqua NH3 + phosphorous fertilizer.

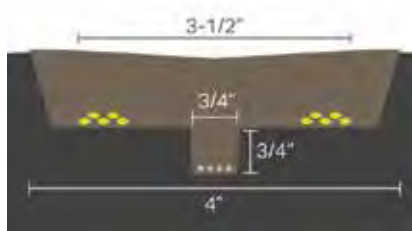
Carbide inserts on the underside of the wing maintain a sharp cutting edge. Carbide inserts on the back underside of the wings seal the fertilizer trench prior to seed placement.

610-TIP-4082 has additional carbide below the wings, along the sides of the fertilizer trench, to provide extra-wear life.

Not recommended for use on Case IH 800/900 or NH P2070.

610-TIP-4085 for Europe only.

Fits VOS (Versatile Opener System).
See page 56-57.



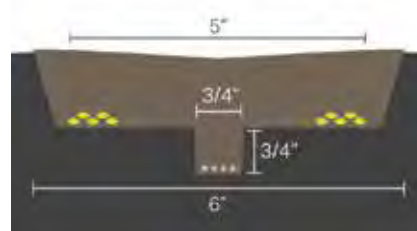
610-TIP-6082

CARBIDE TIP

6" (152mm) paired row cast tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have 3/4" (19mm) vertical separation of liquid, granular, aqua NH3 or aqua NH3 + phosphorous fertilizer.

Carbide inserts on the underside of the wing maintain a sharp cutting edge. Carbide inserts on the back underside of the wings seal the fertilizer trench prior to seed placement. Additional carbide is placed along the sides of the fertilizer trench, below the wings, to provide extra-wear life.

Fits VOS (Versatile Opener System).
See page 56-57.



Side Band Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation (see page 13).



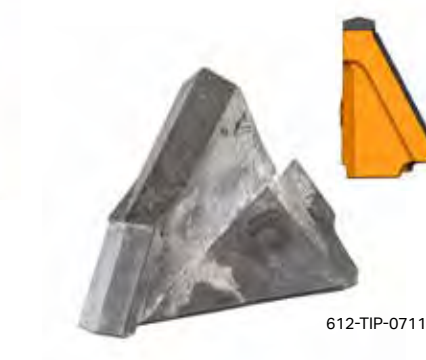
612-TIP-0211
612-TIP-0212

CHROME TIP

Side band cast chrome TriMax™ Triple-Shoot System tip with carbide inserts on the nose and the underside of the wing for excellent penetration and wear resistance.

The seed is placed in a 3/4" (19mm) band onto a firm seedbed. The starter fertilizer is placed to the side onto a slightly lower shelf than the seed.

612-TIP-0211 LEFT WING
612-TIP-0212 RIGHT WING



612-TIP-0711
612-TIP-0712

CHROME TIP

Side band cast chrome tip with carbide inserts on the nose and the wing for excellent penetration and wear resistance.

The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. Fertilizer is delivered in a band off to the side (right or left) on the same level as the seedbed.

612-TIP-0711 LEFT WING
612-TIP-0712 RIGHT WING



614-TIP-2711
614-TIP-2712

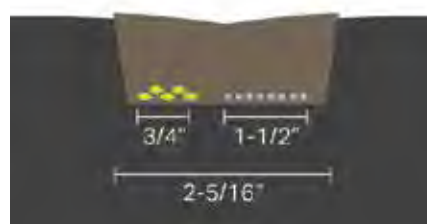
CARBIDE TIP

Side band cast chrome tip with carbide inserts on the nose and the wing for excellent penetration and wear resistance. A carbide wafer on the bottom of the fertilizer trough prevents bottom wear and keeps the fertilizer trench open.

The seed is placed in a 1-1/2" (38mm) band 3/4" (19mm) above and to the side of the fertilizer row after the fertilizer trench has been closed by the wing.

614-TIP-2711 LEFT WING
614-TIP-2712 RIGHT WING

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



SEED
FERTILIZER

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, fan speeds, application rates, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

Fertilizer Replaceable Tips

These tips use bolt and nut combo 600-BNC-5000 for installation.



600-TIP-7500

CARBIDE TIP

3/4" (19mm) chrome tip with carbide on the nose.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.



600-TIP-7501

CARBIDE TIP

3/4" (19mm) chrome tip with extra long carbide on the nose.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.



600-TIP-7502

CARBIDE TIP

3/4" (19mm) chrome tip with extra long carbide on the nose.

Fits 410, 599, 600, 602 & 607 Series fertilizer knife holders.



600-TIP-7507

CARBIDE TIP & WING

3/4" (19mm) carbide tip and wing for liquid application. This allows vertical and horizontal separation when double-shooting with liquid.

Only used with side band opener 600-KNH-7562.
See page 25.



600-BNC-5000

BOLT & NUT COMBO

Used to secure 600 series tips onto the 410, 599, 600 & 602 Series fertilizer knife holders.

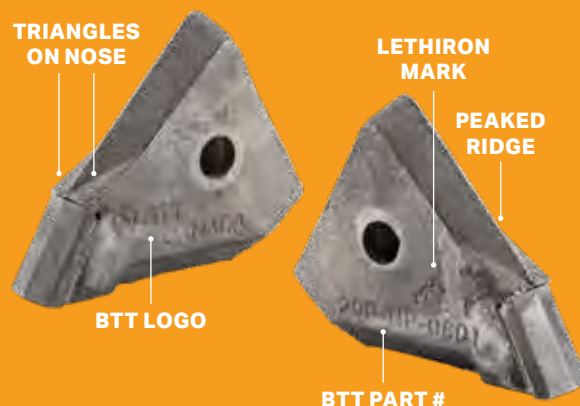
The nut (600-NUT-3754) and bolt (600-BLT-5004) can be ordered separately.

The bolt and nut should be replaced when changing the tip to maintain locking ability of the nut.

There is only one BTT replaceable tip.

Know what you're getting on your next replaceable tip purchase.

Look for a combination of these key identifying features found only on authentic BTT tips.



For guaranteed delivery of multi-shoot openers, place order by January 31st.

Multi-Shoot Opener Precautions & Risk Factors

The development and increased use of multi-shoot openers for one-pass seed and fertilizer placement often brings up the question of how much fertilizer can be safely placed with the seed without causing germination problems or seedling damage. The answer to this question is very complex. In less than ideal conditions, mixing between seed and fertilizer may occur.

It is our company's policy not to recommend or endorse specific "safe" rates of fertilizer for multi-shoot openers due to the wide variance in the precautions and risk factors listed below. Most of our openers are tested at independent research facilities to verify only the placement of seed and fertilizer. We suggest that producers consult their local agronomist to establish acceptable fertilizer rates for their unique seeding conditions.

Consider These Factors When Using Multi-Shoot Openers:

FERTILIZER SOURCE: Depending on the type of fertilizer used, damage can occur either through NH₃ toxicity, salt effects, or a combination of both, as in the case with blended fertilizer.

FERTILIZER RATES: Typically, the risk of crop seedling injury increases with higher fertilizer rates.

CROP TYPE: Crops vary in their ability to tolerate seed-placed fertilizer with cereals being able to withstand more than oilseeds, and pulses falling somewhere in between.

SEED QUALITY: With everything else being equal, seed with poor vigor will suffer more damage from seed-placed fertilizer than seeds with high vigor. If seed vigor is questionable, have it tested.

SOIL MOISTURE: With soil at or near saturation point, the toxic effects of fertilizer are diluted and seeds can germinate, and develop, with few problems. If conditions are very dry, reduce the amount of fertilizer placed near the seed.

SOIL TEXTURE: Fine textured soils such as clay or clay loam tend to reduce toxic effects over coarse or sandy soils because of their ability to hold more water and absorb toxic free NH₃.

ORGANIC MATTER: Higher levels of organic matter (OM) in a soil lessen the risk of damage. For example, when there are reduced levels of OM on dry, eroded hilltops, seedlings are more prone to injury.

SEEDBED UTILIZATION (SBU): This is the proportion of the seedbed used for seed and fertilizer placement. As SBU increases, the crops tolerance to higher rates of seed-placed fertilizer increases. Ex: 2" openers on 10" row spacing have a SBU of 20%.

SEEDING DEPTH, PACKING & SPEED: These may compromise seed and fertilizer placement as well as the overall quality of the seeding operation.

ADVERSE SEEDING CONDITIONS: Excessively wet or dry soil at time of seeding can cause erratic seed placement, poor seed-to-soil contact and poor separation, which will also affect the amounts of seed placed fertilizer you can apply.

EXCESS AIR VOLUME: Higher air volumes can result in seed and fertilizer being blown out of the trench or mixing of seed and fertilizer in the trench.

If any of the above conditions are less than ideal, it is advisable to reduce your fertilizer rate accordingly.

FERTILIZER TYPES



GRANULAR N



LIQUID N



LIQUID PHOS



NH₃



NON-FREEZE NH₃

Openers

Openers to Fit C-shank

Single & Multi-Shoot Options

047-ASY-1000



047-KNH-1000

047-ASY-1000 047-KNH-1000

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44-64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Seed is delivered through the precision funnel opening. The front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts sold separately.** 047-ASY-1000 uses Grade 8 carriage bolts and 047-KNH-1000 uses plow bolts. See page 112. For an expanded view of this opener see page 119.

047-KNH-1000 is only used directly beside the Bourgault MRB® for improved trash clearance. **Not sold as a complete set, must be ordered separately.** Customers must look at the machine to determine what quantity of shanks are directly beside the MRB®.

50° shanks require 880-WDG-0300 or 880-WDG-0301. See page 110.

P



047-ASY-1005P

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

Can be converted to work with 1/4" (6mm) I.D. delivery hose with 880-ASY-1010. See page 110.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44-64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Liquid phos is delivered onto the seed bed, below the seed. Seed is delivered through the precision funnel opening. Front delivery provides precise placement and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases holder life.

NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 112.

50° shanks require either 880-WDG-0300 or 880-WDG-0301. See page 110.

For an expanded view of this opener see page 119.

047-VRT-1040

SINGLE SHOOT OPENER

FITS: 47° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

BOLT HOLE SPACING: 1-3/4" (44mm)

TIP OPTIONS: 1" (25mm) weld-on tip with extra carbide for long-lasting wear life.

OVERVIEW: The vertical approach of this opener reduces rock pulling and soil throw.

NOTES: **Installation bolts sold separately.** Use plow bolts. See page 112.



050-KNH-0812

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing provides the ability to fit many different makes and models.

TIP OPTIONS:

- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3000
- 200-TIP-3001
- 200-TIP-3011
- 200-TIP-4011

Tips sold separately. See pages 12-13.

OVERVIEW: The rear delivery of this opener provides extra trash clearance.

NOTES: Installation bolts sold separately. Use Grade 8 hex head bolts. See page 116.

Due to plugging, this opener is not recommended with tips:

- 200-TIP-0511
- 200-TIP-0800
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811



599-KNH-7540

SINGLE SHOOT OPENER

FITS: 47° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

BOLT HOLE SPACING: 1-3/4" (44mm)

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately. See page 17.

OVERVIEW: This opener is designed for a better fit on the Bourgault shank. The larger tip provides extra long wear while reducing wear on the holder.

NOTES: Installation bolts sold separately. Use Grade 8 hex head bolts. See page 114 and 117.



600-KNH-7540 600-KNH-7640

SINGLE SHOOT OPENER

FITS: 47° and 50° C-shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE:

600-KNH-7540: 1-1/4" (32mm) O.D.

600-KNH-7640: 1-1/2" (38mm) O.D.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing provides the ability to fit many different makes and models.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately. See page 17.

OVERVIEW: The larger tip on these holders provides extra long wear while reducing wear on the holder.

NOTES: Installation bolts sold separately. Use Grade 8 hex head bolts. See page 114 and 117.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.

**610-ASY-4020***

PAIRED ROW OPENER

SEED PLACEMENT: Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44-64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Replaceable cast chrome tip (610-TIP-4041) with carbide inserts on the nose and narrow carbide on the cutting edges of the wings for great penetration.

Assemblies on this page include the tip.

PACKER RECOMMENDATION: 4" (102mm) or wider.

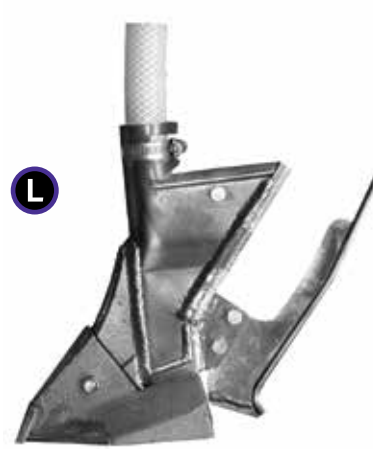
OVERVIEW: Ultra-low draft, low disturbance and smoother fields. Hard facing is placed on critical wear points to ensure a long-lasting holder. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for smaller hoses.

These openers provide the flexibility to easily switch between Granular and Liquid fertilizer. The above openers are available with Liquid Phos options. Please call the factory for more information.

NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 112.

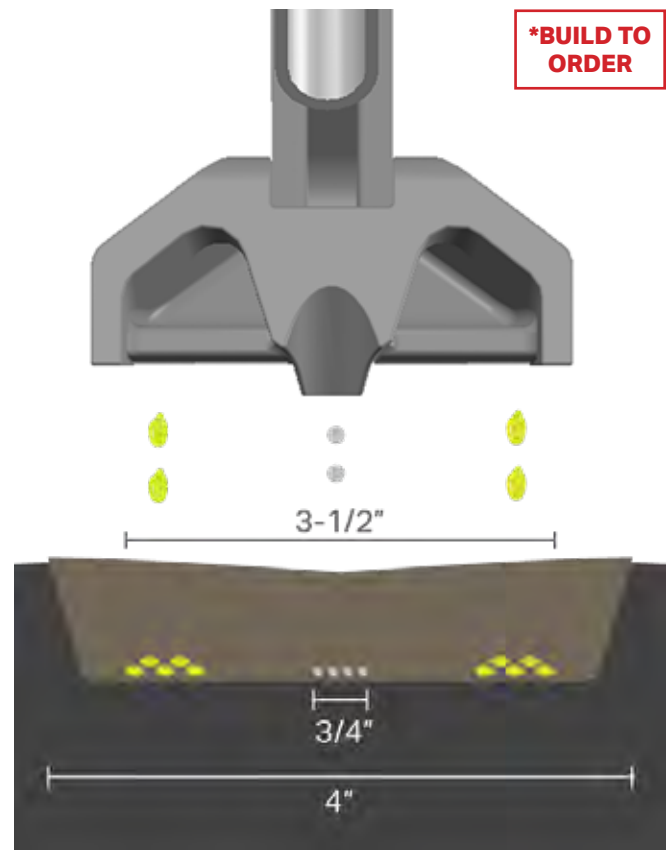
When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 110.

For an expanded view of these openers see page 123.

**610-ASY-4026***

PAIRED ROW OPENER

***BUILD TO ORDER**



Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.



610-ASY-2712G



610-ASY-2712L

610-ASY-2711G 610-ASY-2712G

SIDE BAND OPENER

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

BOLT HOLE SPACING: 1-3/4" to 2-1/2" (44-64mm) slotted hole spacing provides the ability to fit many other makes and models.

TIP OPTIONS: Replaceable cast chrome tip with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts providing excellent wear resistance. **Assemblies on this page include the tip.**

PACKER RECOMMENDATION: 3" (76mm) or wider.

V-Packer not recommended with these openers.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for smaller hoses.

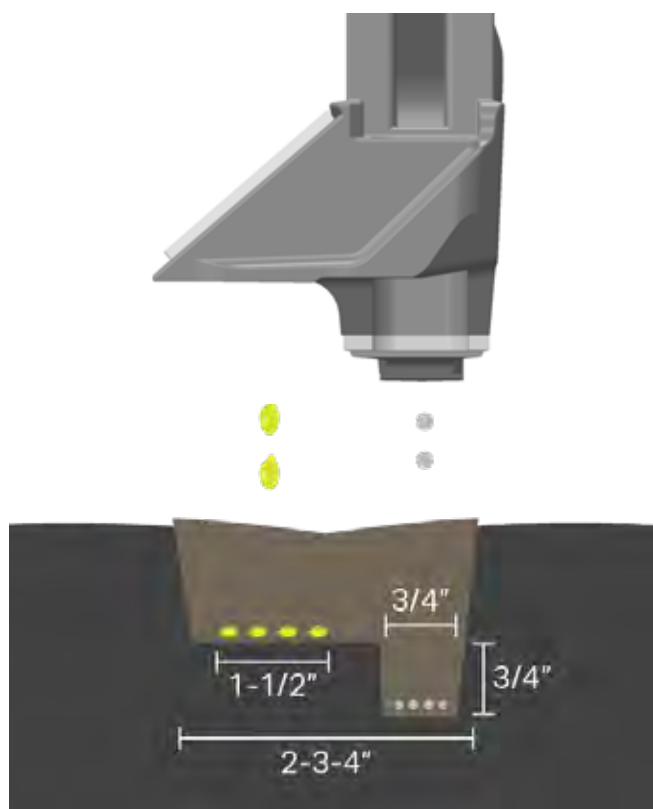
NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 112.

When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 110

For an expanded view of these openers see page 125.

610-ASY-2711L 610-ASY-2712L

SIDE BAND OPENER



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



612-ASY-0711



610-ASY-0711GP



612-ASY-0711LP

<div>G</div> NOT AVAILABLE	<div>G P</div> 610-ASY-0711GP* 610-ASY-0712GP*	<div>L</div> NOT AVAILABLE	<div>L P</div> 610-ASY-0711LP* 610-ASY-0712LP*
612-ASY-0711 612-ASY-0712	612-ASY-0711P 612-ASY-0712P	612-ASY-0711L 612-ASY-0712L	612-ASY-0711LP 612-ASY-0712LP

SIDE BAND OPENERS

SEED PLACEMENT: The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. The 610 GP & LP openers deliver the liquid phosphorus below the seed. The 612 GP & LP openers deliver the liquid phosphorus on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered in a band off to the side (right or left) on the same level as the seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

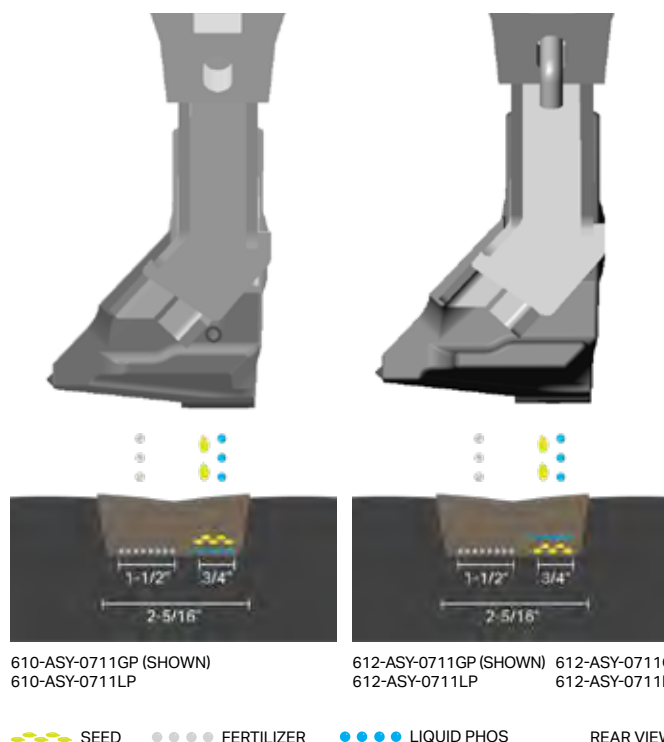
TIP OPTIONS: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose of the tip and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration. **Assemblies on this page include the tip.**

PACKER RECOMMENDATIONS:
2-1/4" (57mm) or wider.

OVERVIEW: Unique design of the tip provides low disturbance, low draft and smoother fields. Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for smaller hoses.

NOTES: **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 112. **When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301.** See page 110.

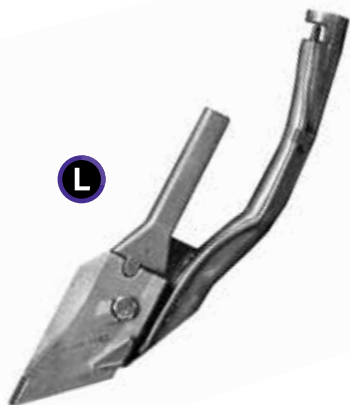
For an expanded view of these openers see page 124.

***BUILD TO ORDER**610-ASY-0711GP (SHOWN)
610-ASY-0711LP612-ASY-0711GP (SHOWN) 612-ASY-0711L
612-ASY-0711LP 612-ASY-0711L

SEED FERTILIZER LIQUID PHOS REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.

**600-KNH-7562**

SIDE BAND OPENER

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Liquid N**TUBE SIZE:****Granular:** 1-1/4" (32mm) O.D.**Liquid:** 1/4" (6mm) O.D.**BOLT HOLE SPACING:** 1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing provides the ability to fit many different makes and models.**TIP OPTIONS:** Replaceable high-chrome tip (600-TIP-7507) is protected with a carbide insert on the nose and a solid carbide wing. The carbide placement provides sharp cutting edges for excellent penetration. **Tips sold separately.** See page 17.**OVERVIEW:** These unique side band openers provide good horizontal separation with a slight vertical seed/fertilizer separation. They work well when used with a pressurized liquid system. The replaceable tips ensure high-wear points can be replaced at a lower cost.**NOTES:** **Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 114.SHOWN WITH
610-TIP-4081**610-HLD-2080HD**

VOS (VERSATILE OPENER SYSTEM)

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Multiple options. See pages 56-57.**OVERVIEW:** This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs.

Designed for use in rocky conditions, this opener has two plates welded to the sides of the funnel to help strengthen it, making it stiffer and less prone to bending in extreme conditions.

Components and tip sold separately. See pages 56-57.**NOTES:** **Installation bolts sold separately.** Use Grade 8 carriage bolts. See page 112.**When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301.** See page 110.SHOWN WITH
620-TIP-0510 & 620-SSH-1000**620-HLD-5000**

TITAN OPENER SYSTEM

FITS: 47° and 50° C-shank**FERTILIZER TYPE:** Multiple options. See pages 54-55.**OVERVIEW:** This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs.**Components sold separately.** See pages 54-55.**NOTES:** **Installation bolts sold separately.** Use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 114.**Interested in
BTT Products?**Try before you buy with
the BTT Demo Program.
See page 53.**For guaranteed delivery of multi-shoot openers, place orders by January 31st.**

Openers to Fit Bourgault

Bourgault PHD, 3330SE Series PLD & 3335QDA Series PLD, TriMax™ Triple-Shoot System



333-KNF-1000

333-KNF-1010



333-KNF-1000 333-KNF-1010

FERTILIZER KNIFE

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS: N/A

OVERVIEW: This is the replacement fertilizer knife portion as supplied by the OEM for this drill. Carbide applied to the nose for longer wear.

333-KNF-1000 replaces OEM #9366-49.

333-KNF-1010 has extra hard surfacing on the sides for long wear and replaces OEM #9366-99.

NOTES: Installation bolts sold separately. Use 5/8" x 2-1/2" Grade 8 hex head bolts and locking nuts. See page 114.

333-KNF-2000

SINGLE SHOOT
SEED OPENER

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS: N/A

OVERVIEW: This is the replacement seeding knife portion as supplied by the OEM for this drill. Replaces OEM #9366-25.

Long wear back swept carbide approach angle for minimal soil disturbance around the opener.

NOTES: Installation bolts sold separately. Use 1/2" x 1-3/4" Grade 8 hex head bolts and locking nuts. See page 114.

333-KNF-0511 333-KNF-0512

INLINE BENT OFFSET SINGLE
SHOOT SEED OPENER

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS: N/A

OVERVIEW: This inline fully welded replacement single shoot seeding opener has carbide and hard surfacing for extra long wear life.

333-KNF-0511 LEFT
333-KNF-0512 RIGHT

NOTES: Installation bolts sold separately. Use 1/2" x 1-3/4" Grade 8 hex head bolts and locking nuts. See page 114.

333-ASY-0711 333-ASY-0712

INLINE OFFSET SINGLE
SHOOT SEED OPENER

FITS: Bourgault 3330 & 3335

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP OPTIONS:

- 612-TIP-0711 (LEFT)
- 612-TIP-0712 (RIGHT)

OVERVIEW: This inline single shoot seeding opener has a replaceable tip with extra long wear life. Seed is placed to the side of the opener.

333-ASY-0711 LEFT
333-ASY-0712 RIGHT

NOTES: Installation bolts sold separately. Use 1/2" x 1-3/4" Grade 8 hex head bolts and locking nuts. See page 114.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



680-ASY-1000

680-ASY-1000 680-HLD-1000

SINGLE SHOOT OPENER

FITS: Bourgault PHD

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Seed is delivered through the precision funnel opening. Front delivery provides precise seed placement and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder and reduces breakage in rocky conditions.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112. When installing use bolt holes pictured in Fig. 1.

680-HLD-1000 does not have a bushing.

For an expanded view of this opener see page 121.



FIG. 1



680-ASY-1000P

680-ASY-1000P 680-HLD-1000P

SINGLE SHOOT OPENER

FITS: Bourgault PHD

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D. Can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: Liquid phos is delivered onto the seed bed, below the seed. Seed is delivered through the precision funnel opening. Front delivery provides precise seed placement and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder and reduces breakage in rocky conditions.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112. When installing use bolt holes pictured in Fig. 1.

680-HLD-1000P does not have a bushing. For an expanded view of this opener see page 121.



Check out scraper options to fit Bourgault packers on page 95.





680-ASY-0712G



680-ASY-0711GP

G

L

G

P

L

P

680-ASY-0711G
680-ASY-0712G

680-ASY-0711L
680-ASY-0712L

680-ASY-0711GP
680-ASY-0712GP

680-ASY-0711LP
680-ASY-0712LP

SIDE BAND OPENERS

FITS: Bourgault PHD

SEED PLACEMENT: Seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. The GP & LP openers deliver the liquid phosphorus below the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered in a band off to the side (right or left) on the same level as the seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration.

Assemblies on this page include the tip.

PACKER RECOMMENDATIONS:

2-1/4" (57mm) or wider.

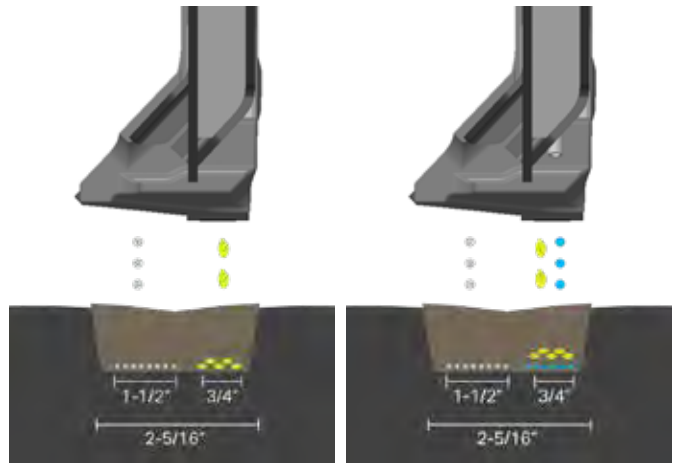
OVERVIEW: Unique design of the tip provides low disturbance, low draft and smoother fields. Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

NOTES: **Installation bolts sold separately.**

Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112.

When installing use bolt holes pictured in Fig. 2.

For an expanded view of these openers see page 124.



680-ASY-0711G (SHOWN)
680-ASY-0711L

680-ASY-0711GP (SHOWN)
680-ASY-0711LP

SEED FERTILIZER LIQUID PHOS REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.



FIG. 2

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.

680-ASY-2711G



680-ASY-2711LP

**G**

680-ASY-2711G
680-ASY-2712G

G P

680-ASY-2711GP
680-ASY-2712GP

L

680-ASY-2711L
680-ASY-2712L

L P

680-ASY-2711LP
680-ASY-2712LP

SIDE BAND OPENERS

FITS: Bourgault PHD

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench. The GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Replaceable cast chrome tip (614-TIP-2711 & 614-TIP-2712) with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts and heel of fertilizer trench has a u-shaped carbide wafer, providing a longer wear life.

Assemblies on this page include the tip.

PACKER RECOMMENDATION: 4-1/2" (114mm) Semi-Pneumatic Packer recommended. **V-Packer not recommended with these openers.**

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

NOTES: Installation bolts sold separately.

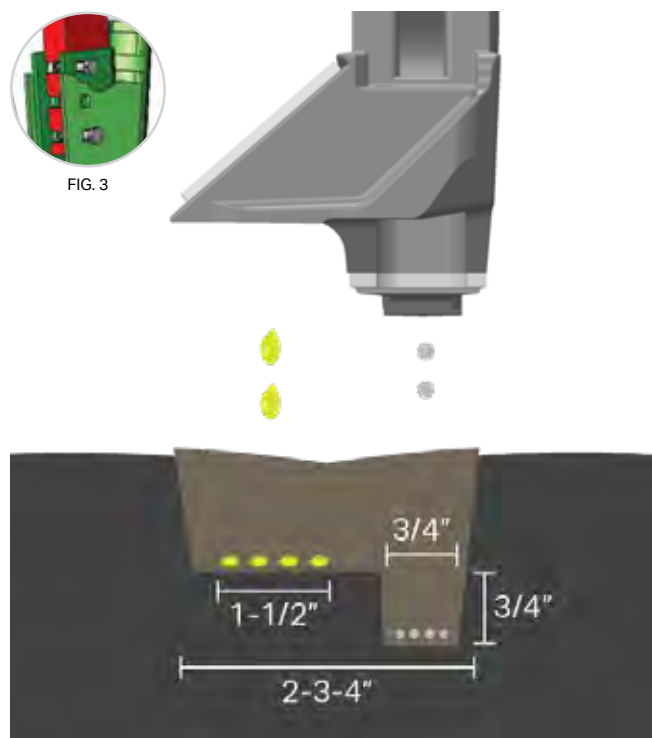
Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112.

When installing use bolt holes pictured in Fig. 3.

For an expanded view of these openers see page 125.



FIG. 3



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



682-ASY-2063

682-ASY-2063
682-ASY-2064

SIDE BAND OPENER

FITS: Bourgault PHD

FERTILIZER TYPE: Double Shoot Liquid N.

SEED PLACEMENT: The slim body provides low draft and low soil disturbance for better trash clearance while ensuring great seed placement. The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Liquid N or Pressurized NH₃ openers are fitted with a 1/4" (6mm) O.D. stainless steel tube which places fertilizer behind the wing and 1-1/2" (38mm) outward to the side away from the seed band. This provides increased separation of seed and fertilizer. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Cast chrome tip with extra long carbide inserts on the nose of the tip provides excellent penetration and wear resistance. Top face of the wing is covered with two carbide inserts providing a longer wear life. The tip is non-replaceable and welded to the seed boot.

PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

LIQUID PHOS OPTIONS: The P opener delivers liquid phos on top of the seed row. A 1/4" (6mm) stainless steel tube is welded to the back of the seed boot.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112. When installing on a Bourgault PHD use bolt holes pictured in Fig. 4. For an expanded view of these openers see page 122.



FIG. 4



680-ASY-0211

680-ASY-0211
680-ASY-0212

SIDE BAND OPENER

FITS: Bourgault TriMax™ Triple-Shoot System

FERTILIZER TYPE: Starter Fertilizer or Granular Phos

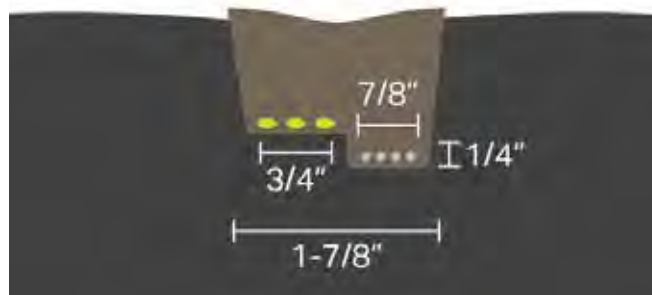
SEED PLACEMENT: The seed is placed in a 3/4" (19mm) band onto a firm seedbed. The starter fertilizer or Granular P is placed to the side onto a slightly lower shelf than the seed.

FERTILIZER PLACEMENT: Granular openers are fitted with a 1-1/4" (32mm) O.D. tube which places the granular phos or starter fertilizer to the side and slightly lower than the seed bed.

TIP OPTIONS: Replaceable cast chrome TriMax tip (612-TIP-0211 & 612-TIP-0212) with carbide inserts on the nose and the underside of the wing for excellent penetration and wear resistance. **Assemblies on this page include the tip.**

PACKER RECOMMENDATIONS: 4-1/2" (114mm) round or 5" (127mm) "U" and "VU" packers. The 4-1/2" V packer is not recommended.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112. When installing on a Bourgault PHD use bolt holes pictured in Fig. 4. For an expanded view of these openers see page 122.



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



1/2" WIDE
050-MRA-5130

050-MRA-5130 050-MRA-5131

MID ROW SHANK FERTILIZER KNIFE

FITS: Bourgault MRS

FERTILIZER TYPE: Granular + NH₃, Granular + Liquid

TUBE SIZE:

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D. stainless steel

Granular: 1-3/4" (44mm) O.D.

BOLT HOLE SPACING: 1-3/4" (44mm) shank bolt hole spacing.

TIP OPTIONS: N/A

OVERVIEW: This 1/2" wide low disturbance MRS fertilizer knife is a low maintenance alternative to Mid Row Banders. It has double carbide on the nose as well as hard facing above the carbide and on the sides for longer wear.

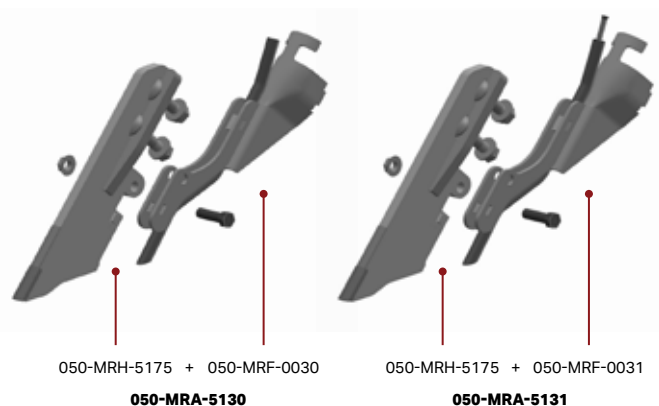
050-MRA-5130 applies both NH₃ and Granular.

050-MRA-5131 applies both Liquid and Granular.

NOTES: Installation bolts included.

For an expanded view of this opener see page 120.

Modular design allows you to replace worn parts instead of the entire opener.



050-MRH-5175 + 050-MRF-0030

050-MRA-5130

050-MRH-5175 + 050-MRF-0031

050-MRA-5131



MAX LIFE

HARROW TINES

Harrow tines to fit most makes and models
whether it's grey, blue, red, yellow or green.

6X

LONGER WEAR

3YR

LIMITED WARRANTY



Improved Wear. Exceptional value.

The *MAX LIFE™* process infuses tungsten carbide onto the harrow tine creating the toughest and most economical option available. BTT applies its *MAX LIFE* coating to tines manufactured by S3 Wireform, which are known for consistency and longer coil life. Field tests have proven that *MAX LIFE* tines outlast regular tines by a minimum of 6X.

SEE MAX LIFE HARROW TINE OPTIONS ON PAGE 96-97.



Openers to Fit CNH

Case IH, New Holland, Flexi-Coil & Concord



684-KNH-1010

SINGLE SHOOT OPENER

FITS: Case IH 800 / 900, New Holland P2070 / 2075, Flexi-Coil PD5700 / 7200

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: This single shoot opener is designed to clear heavy trash build up, the narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder. This holder has an extra set of bolt holes on the body for deeper seed placement where required.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

Standard installation uses the bottom holes (pictured red in Fig. 5). For 1.5" more depth use the top holes (pictured yellow in Fig. 5).

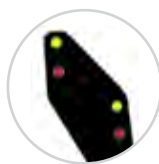


FIG. 5



694-KNH-1000

SINGLE SHOOT OPENER

FITS: (84° Shanks Only) Case IH ATX 700, Flexi-Coil 5500, New Holland P2060

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE: Granular: 1-1/4" (32mm) O.D.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. Tip should not be wider than packer. **Tips sold separately.** See pages 12-13.

OVERVIEW: This single shoot opener applies Liquid Phosphorous on top of the seed, the narrow design allows for more accurate seed placement behind the tip. Extra-hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 114.

684-ASY-2711G



684-ASY-2711L



G

684-ASY-2711G
684-ASY-2712G

G P

684-ASY-2711GP
684-ASY-2712GP

L

684-ASY-2711L
684-ASY-2712L

L P

684-ASY-2711LP
684-ASY-2712LP

SIDE BAND OPENERS

FITS: Case IH 800 / 900, NH P2070 / P2075, Flexi-Coil PD5700 / 7200

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench and firms up the seed bed. The GP & LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is placed in the center 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Replaceable cast chrome tip with extra long carbide inserts on the nose of the tip for excellent penetration and wear resistance. Top face of wing is covered with two carbide inserts and heel of fertilizer trench has a u-shaped carbide wafer, providing a longer wear life. **Assemblies on this page include the tip.**

PACKER RECOMMENDATION: 3" (76mm) or wider. **V-Packer not recommended.**

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

When installing 684 openers use bottom holes for standard installation (pictured red in Fig. 6). Use top holes to add 3° more pitch (pictured yellow in Fig. 6). For an expanded view of these openers see page 125.



FIG. 6

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



Check out scraper options to fit CNH packers on page 95.



SHOWN WITH
620-TIP-0510 &
620-SSH-1000



694-HLD-5000

TITAN OPENER SYSTEM

FITS: (84° Shanks Only) Case IH ATX 700, Concord, New Holland P2060, Flexi-Coil 5500

FERTILIZER TYPE: Multiple options. See pages 54-55.

OVERVIEW: This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs. **Shown with 620-TIP-0510 and 620-SSH-1000.**

Components sold separately. See pages 54-55.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2-12" Grade 8 hex head bolts. See page 114.



We are very happy with our openers and follow-up service from Roger at Bourgault Tillage Tools. We farm 7,000 acres of wheat, barley, and canola in Rockyview County, AB. The separation of the 4" split-seed row from the fertilizer is impressive. After five years and over 30,000 acres of use, the tips still had a few acres left in them. When we traded off our old drill for a new one there was no question, we were going to use Bourgault Tillage Tools again.

John Konschuk, Alberta, Canada



Sustainable Farming. Reduced Input Costs.

VOS (Versatile Opener System) Fits Horsch Sprinter & Co

1

Drill into a wide variety of situations across a range of soil types.

2

Minimal draft and soil disturbance due to low rake angle design.

3

Less draft and reduced wear rates at a lower cost per hectare.

4

More consistent seed and fertilizer placement for an even crop establishment.

5

Increased soil moisture retention.



“

In 2018 we changed to VOS and it was a real game changer! We thought that the knock-on points we were using previously created low disturbance, but the VOS single shoot is something else. I had to check that the field had been drilled and even questioned the student to make sure he had done the job! The main reason we changed was because of how VOS distributes the fertilizer. Alternative openers just spray the fertilizer on the soil after the coulter. I wanted the fertilizer to be under the seed or at least under the soil. VOS does just this, plus I can go straight from rape seed to beans without changing anything on the drill leg.

Leigh Donger, Peacock Farms, United Kingdom

Openers to Fit Horsch

Horsch Sprinter & Co



SHOWN WITH
200-TIP-0802

688-HLD-1000 W/ 200-TIP-0802

SINGLE SHOOT SEED OPENER

FITS: Horsch 84° Shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

TIP OPTIONS:

- 200-TIP-0802
- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3011
- 610-TIP-4030

Tips sold separately. See pages 12-14.

OVERVIEW: This single shoot opener has a narrow design allowing for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder. This holder comes with a second set of holes allowing you to adjust the pitch by 3° when required.

NOTES: **Installation bolts sold separately.** Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 7), for 4° more pitch use the top holes (pictured yellow in Fig. 7).

Hose clamps used to secure seed hoses from drill are sold separately.

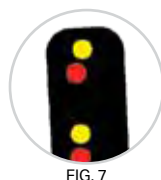


FIG. 7



SHOWN WITH
610-TIP-4030

688-HLD-1000 W/ 610-TIP-4030

SINGLE SHOOT SEED OPENER

FITS: Horsch 84° Shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TIP OPTIONS:

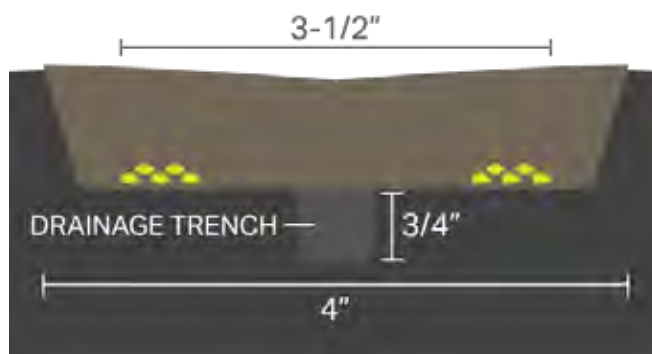
- 200-TIP-0802
- 200-TIP-1011
- 200-TIP-2011
- 200-TIP-3011
- 610-TIP-4030

Tips sold separately. See pages 12-14.

OVERVIEW: This single shoot opener has a narrow design allowing for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder. This holder comes with a second set of holes allowing you to adjust the pitch by 3° when required.

Components sold separately. See pages 56-57.

NOTES: **Installation bolts sold separately.** Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 7), for 4° more pitch use the top holes (pictured yellow in Fig. 7).



SEED FERTILIZER

610-TIP-4030

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

SHOWN WITH
610-TIP-4030



688-HLD-2000

PAIRED ROW OPENER

FITS: Horsch 84° Shank

SEED PLACEMENT: Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

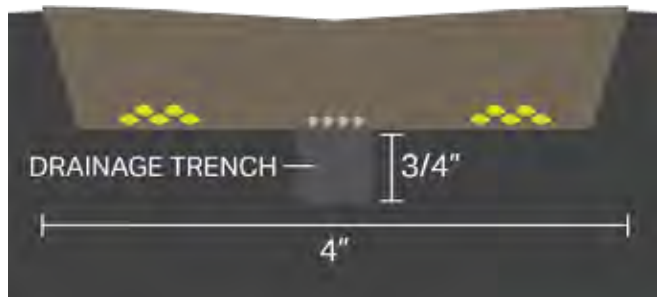
TIP OPTIONS:

- 610-TIP-4041
- 610-TIP-4030

Tips sold separately. See pages 14.

OVERVIEW: Hard facing is placed on critical wear points. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (32mm) O.D. hose. These openers provide the flexibility to easily switch between granular and liquid fertilizer.

NOTES: **Installation bolts sold separately.** Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts. Standard installation uses the bottom holes (pictured red in Fig. 8 on page 39), for 4° more pitch use the top holes (pictured yellow in Fig. 8).



SEED
FERTILIZER

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, fan speeds, application rates, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

SHOWN WITH
620-TIP-0510 &
620-SSH-1000



688-HLD-5000

TITAN OPENER SYSTEM

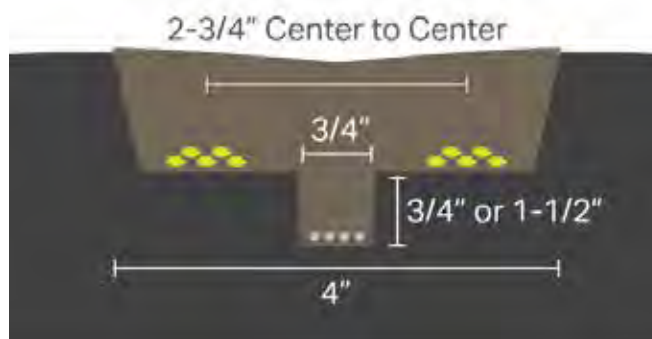
FITS: Horsch 84° Shank

FERTILIZER TYPE: Multiple options. See pages 54-55.

OVERVIEW: This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs.

Components sold separately. See pages 54-55.

NOTES: **Installation bolts sold separately.** Purchase through your local dealer. Use M16 x 55 10.9 hex head bolts.



SHOWN WITH
610-TIP-4082



688-HLD-2080 W/ 610-TIP-4082

VOS (VERSATILE OPENER SYSTEM)

FITS: Horsch 84° Shank

FERTILIZER TYPE: Multiple options. See pages 56-57.

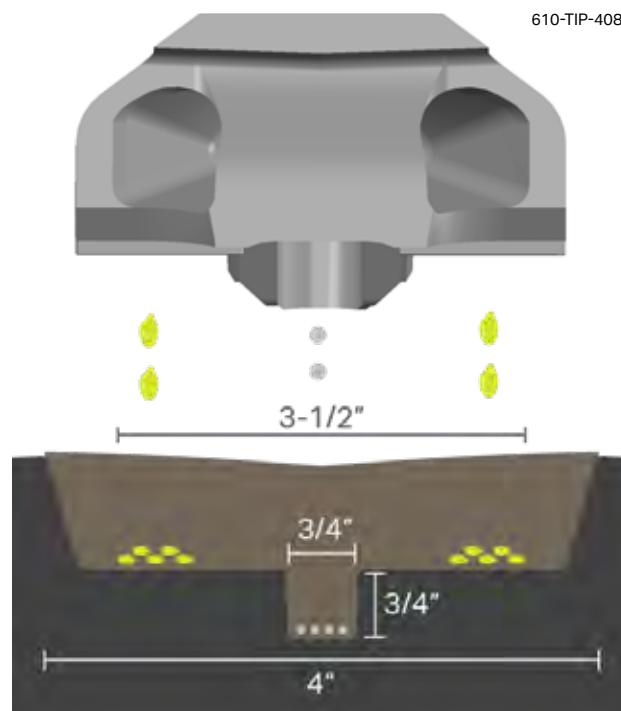
TIP OPTIONS:

- 610-TIP-0802
- 610-TIP-3581
- 610-TIP-4035
- 610-TIP-4081
- 610-TIP-4082
- 610-TIP-4085
- 610-TIP-6082



FIG. 8

610-TIP-4082



Tips sold separately. See pages 13-15.

OVERVIEW: This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs. This holder comes with a second set of holes allowing you to adjust the pitch by 3° when required.

Components sold separately. See pages 56-57.

NOTES: **Installation bolts sold separately.** Use M16 x 55 10.9 hex head bolts. Purchase through your local dealer.

Standard installation uses the bottom holes (pictured red in Fig. 8), for 4° more pitch use the top holes (pictured yellow).



Fertilizer Knives to Fit John Deere

John Deere P500 & 1870 Conserva Pak Air-Hoe Drill

TIP OPTIONS:

- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

Tips Sold Separately. See page 12.

OVERVIEW: The body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

650-ACC-1000 bracket is required on single fertilizer knives and limits the tripping distance of the knives.

650-ACC-1010 bracket is required for 650-HLD-1000GN and 650-HLD-1000GL. Required on units prior to 2017.

Brackets sold separately.

Mounting bolts included.

See page 126.

NOTES: Use roll pins to install. Must be purchased through your John Deere dealer.

For an expanded view of these openers see page 126.

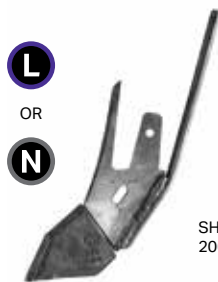
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650-ACC-1000



650-ACC-1010



SHOWN WITH
200-TIP-0802

650-HLD-1001

FERTILIZER TYPE: Liquid or NH₃
TUBE SIZE: 0.4" O.D. stainless steel pipe
NOTES: Use with 650-ACC-1000.



650-HLD-1000L

FERTILIZER TYPE: Liquid
TUBE SIZE: 1/4" (6mm) O.D. stainless steel pipe
NOTES: Use with 650-ACC-1000.



650-HLD-1000G

FERTILIZER TYPE: Granular
TUBE SIZE: 1-1/4" (32mm) O.D.
NOTES: Use with 650-ACC-1000.



650-HLD-1000N

FERTILIZER TYPE: NH₃
TUBE SIZE: 1/2" (12mm) O.D. NH₃ pipe
NOTES: Use with 650-ACC-1000.



650-HLD-1000GL

FERTILIZER TYPE: Granular + Liquid
TUBE SIZE: 1/4" (6mm) O.D. stainless steel and 1-1/4" (32mm) O.D. granular pipe
NOTES: Use with 650-ACC-1010.



650-HLD-1000GN

FERTILIZER TYPE: Granular + NH₃
TUBE SIZE: 1/2" (12mm) O.D. NH₃ and 1-1/4" (32mm) O.D. granular pipe
NOTES: Use with 650-ACC-1010.

Seed Openers to Fit John Deere

John Deere P500 & 1870 Conserva Pak Air-Hoe Drill



650-ASY-0711

***BUILD TO ORDER**

650-ASY-0711
650-ASY-0712

650-ASY-0711P*
650-ASY-0712P*

SIDE BAND OPENER

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D. **Liquid Phos:** 3/16" (5mm) O.D. This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: Cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose and the wing for excellent penetration and wear resistance. The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seed bed. **Assembly includes the tip.**

OVERVIEW: The seed is directed to the side through the holder which places the seed in one row off to the side on a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder.

For Liquid Phos option order 650-ASY-0711P / 0712P.

NOTES: **Installation bolts sold separately.** Use M8x30 Class 10.9 carriage head bolts. Purchase through your John Deere dealer. For an expanded view of this opener see page 127.



650-ASY-3011

***BUILD TO ORDER**

650-ASY-3011
650-ASY-3011P*

PAIRED ROW OPENER

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D. **Liquid Phos:** 3/16" (5mm) O.D. This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: 3" (76mm) cast chrome tip (200-TIP-3011) with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings maintain a sharp cutting edge. **Assembly includes the tip.**

OVERVIEW: The seed is directed rearward through the holder which places the seed in two rows onto a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder. **For Liquid Phos option order 650-ASY-3011P.**

NOTES: **Installation bolts sold separately.** Use M8x30 Class 10.9 carriage head bolts. Purchase through your John Deere dealer.

For an expanded view of this opener see page 127.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.



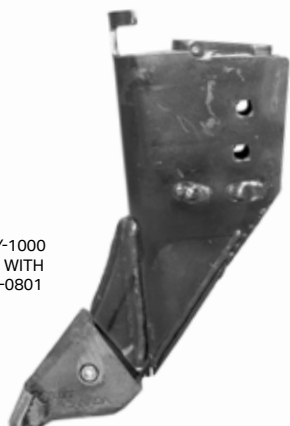
Check out scrapers to fit John Deere packers on page 95.



Openers to Fit Morris

Morris Maxim Edge On, Contour I, Contour II & Quantum

680-ASY-1000
SHOWN WITH
200-TIP-0801



680-ASY-1000P
SHOWN WITH
200-TIP-0802



680-ASY-1000
680-HLD-1000

680-ASY-1000P
680-HLD-1000P

SINGLE SHOOT OPENER

FITS: Morris Maxim Edge On

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D. Can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions.

Tips sold separately. See pages 12-13.

OVERVIEW: Liquid phos is delivered onto the seed bed, below the seed. Seed is delivered through the precision funnel opening. Front delivery provides precise seed delivery and reduces plugging with better soil flow. Extra hard surfacing on critical wear areas increases the life of the holder and reduces breakage in rocky conditions.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112.

680-HLD-1000 and 680-HLD-1000P do not have bushings. For an expanded view of this opener see page 121.



***BUILD TO
ORDER**

683-ASY-1000P*



P

693-ASY-1000P



**683-ASY-1000P^{1,*}
683-KNH-1000¹**

**693-ASY-1000P^{2,3}
693-KNH-1000^{2,3}**

SINGLE SHOOT OPENER

FITS: ¹Morris Contour I, ²Morris Contour II, ³Morris Quantum

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D. Can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions.

Tips sold separately. See pages 12-13.

OVERVIEW: This single shoot opener applies liquid phos on top of the seed, the narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder.

683-KNH-1000 and 693-KNH-1000 are available without the liquid phos tubes.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.

680-ASY-0711GP



680-ASY-0711LP



680-ASY-0711G
680-ASY-0712G



680-ASY-0711GP
680-ASY-0712GP



680-ASY-0711L
680-ASY-0712L



680-ASY-0711LP
680-ASY-0712LP

SIDE BAND OPENERS

FITS: Morris Maxim Edge On

SEED PLACEMENT: The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed. The GP and LP openers deliver the liquid phosphorus below the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered in a band off to the side (right or left) on the same level as the seed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration. **Assemblies on this page include the tip.**

PACKER RECOMMENDATIONS:

2-1/4" (57mm) or wider.

OVERVIEW: Unique design of the tip provides low disturbance, low draft and smoother fields. Hard facing is placed on critical wear areas to ensure a long-lasting holder and proper seed placement.

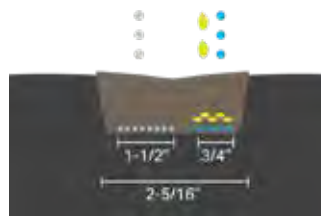
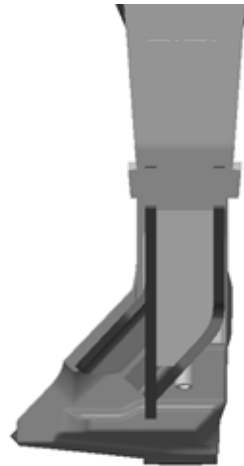
The streamlined holder design reduces plugging and allows for better trash clearance.

Designed for use with 1-1/4" (31mm) O.D. hose. Bushings available for larger hoses. See page 110.

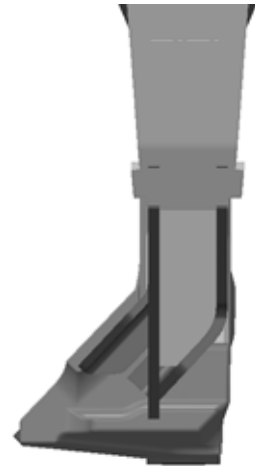
NOTES: **Installation bolts sold separately.**

Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112.

For an expanded view of these openers see page 124.



680-ASY-0711GP (SHOWN)
680-ASY-0711LP



680-ASY-0711G (SHOWN)
680-ASY-0711L

SEED FERTILIZER LIQUID PHOS REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.

680-ASY-2711LP



683-ASY-2711G



G	G P	L	L P
680-ASY-2711G ¹ 680-ASY-2712G ¹	680-ASY-2711GP ¹ 680-ASY-2712GP ¹	680-ASY-2711L ¹ 680-ASY-2712L ¹	680-ASY-2711LP ¹ 680-ASY-2712LP ¹
683-ASY-2711G ² 683-ASY-2712G ²	683-ASY-2711GP ² 683-ASY-2712GP ²	683-ASY-2711L ² 683-ASY-2712L ²	683-ASY-2711LP ² 683-ASY-2712LP ²

SIDE BAND OPENERS

FITS: ¹Morris Maxim Edge On, ²Morris Contour I

SEED PLACEMENT: The seed is placed 3/4" (19mm) above and to the side of the fertilizer row, the tip's wing seals the fertilizer trench. The GP and LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is placed in the center, 3/4" (19mm) below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

TIP OPTIONS: Replaceable cast chrome tip with extra long carbide inserts on the nose for excellent penetration and wear resistance (614-TIP-2711 & 614-TIP-2712). Top face of wing is covered with two carbide inserts and heel of fertilizer trench has a u-shaped carbide wafer, providing a longer wear life. **Assemblies on this page include the tip.**

PACKER RECOMMENDATION: 3" (76mm) or wider.

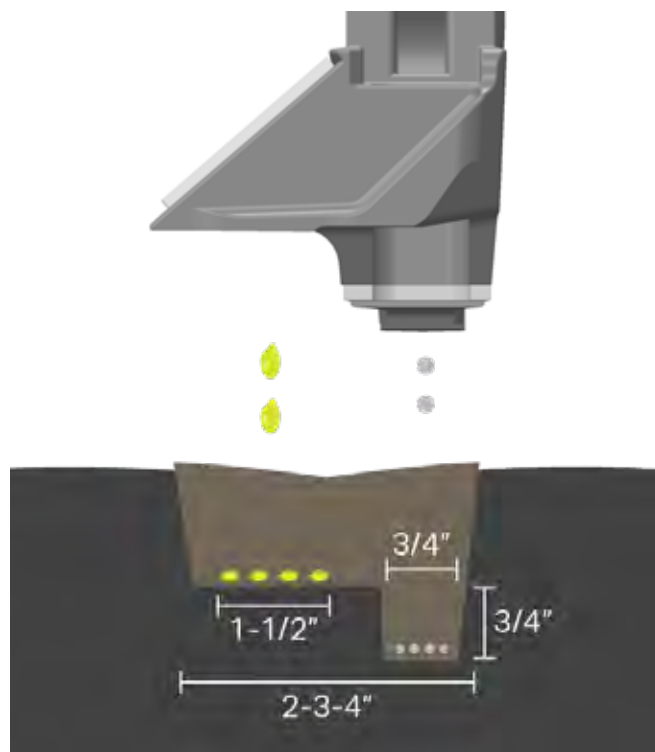
V-Packer not recommended.

OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (31mm) O.D. hose. Bushings available for larger hoses. See page 110.

NOTES: **Installation bolts sold separately.**

680 openers use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112. **683 openers** use 1/2" x 2" Grade 8 hex head bolts. See page 114.

For an expanded view of these openers see page 125.



SEED FERTILIZER

REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.

693-HLD-2080
SHOWN WITH
610-TIP-4081



693-HLD-2080

VOS (VERSATILE OPENER SYSTEM)

FITS: Morris Contour II, Morris Quantum

FERTILIZER TYPE: Multiple options. See pages 56-57.

OVERVIEW: This holder is part of the VOS (Versatile Opener System) which gives you the flexibility to choose the right tip and fertilizer tubes for your needs.

Components sold separately. See pages 56-57.

NOTES: **Installation bolts sold separately.**
Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

682-ASY-2063



682-ASY-2063 682-ASY-2064

SIDE BAND OPENER

FITS: Morris Maxim Edge On

FERTILIZER TYPE: Double Shoot Liquid N. **For pressurized NH3 please see your pressurized system dealer for more information on tube sizing and inserts.**

SEED PLACEMENT: The slim body provides a low draft and low soil disturbance for better trash clearance, while ensuring great seed placement. The seed is placed in a 3/4" (19mm) band onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Liquid N or Pressurized NH3 openers are fitted with a 1/4" (6mm) O.D. stainless steel tube which places fertilizer behind the wing and 1-1/2" (38mm) outward to the side away from the seed band. This provides increased separation of seed and fertilizer. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 18.**

TIP OPTIONS: Cast chrome tip with extra long carbide inserts on the nose provides excellent penetration and wear resistance. Top face of the wing is covered with two carbide inserts providing a longer wear life. The tip is non-replaceable and welded to the seed boot.

PACKER RECOMMENDATIONS: 2-1/4" (57mm) or wider.

LIQUID PHOS OPTIONS: This opener delivers liquid phos on top of the seed row. A 1/4" (6mm) stainless steel tube is welded to the back of the seed boot.

NOTES: **Installation bolts sold separately.**
Use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 112.
For an expanded view of these openers see page 122.

Interested in BTT Products?

Try before you buy with
the BTT Demo Program.
See page 53.

ALL WINGS ON SIDE BAND OPENERS MUST BE POINTING INWARD TO CENTER OF SEEDING UNIT to prevent plugging when turning. Customers should order half left wing and half right wing openers.

**683-ASY-4020G^{1*}****693-ASY-4020G²****PAIRED ROW OPENERS**

FITS: ¹Morris Contour I, ²Morris Contour II & Morris Quantum

SEED PLACEMENT: Seed is directed rearward through the tip which places the seed in two rows onto a firm, unfractured seedbed.

FERTILIZER PLACEMENT: Fertilizer is delivered on the same level, between the rows of seed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 18.

TIP OPTIONS: Replaceable cast chrome tip (610-TIP-4041) with carbide inserts on the nose and narrow carbide on the cutting edges of the wings for great penetration.

Assemblies on this page include the tip.

PACKER RECOMMENDATION:

4" (102mm) or wider.

OVERVIEW: Ultra-low draft, low disturbance and smoother fields. Hard facing is placed on critical wear points to ensure a long-lasting holder.

The streamlined holder design reduces plugging and allows for better trash clearance.

Designed for use with 1-1/4" (32mm) O.D. hose. Bushings available for larger hoses. See page 110.

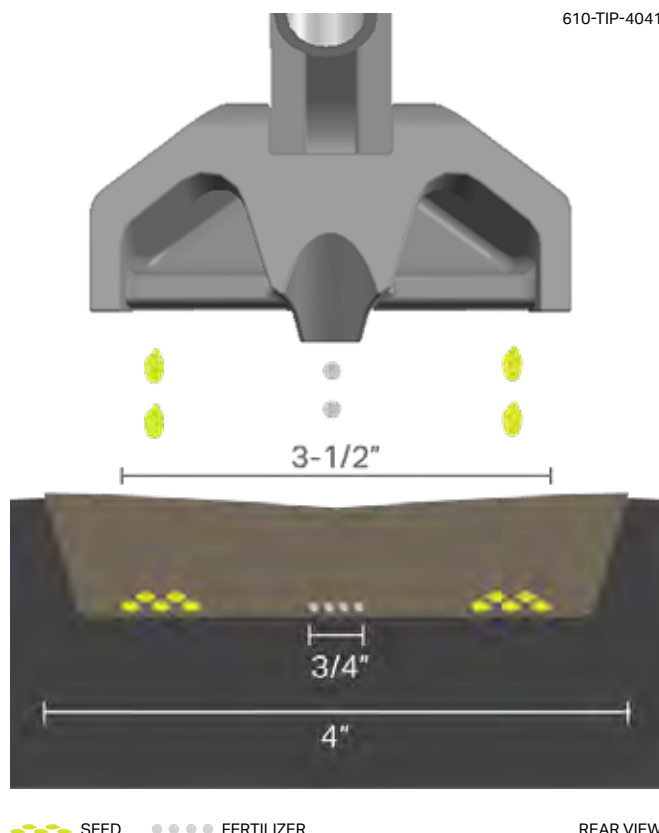
These openers provide the flexibility to easily switch between Granular and Liquid fertilizer. The above openers are available with liquid phos options. Please call the factory for more information.

NOTES: **Installation bolts sold separately.**

Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

For an expanded view of these openers see page 123.

610-TIP-4041



REAR VIEW

Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

Salford Independent Series

NON-FREEZE VERSION: NH3 is delivered through a nylon insert, insulating the NH3 from the knife. This prevents the moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off. Designed to work with Cold Flow NH3 units.



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Openers to Fit Seed Master

Fertilizer Knives & Single Shoot Seed Openers

G N
689-HLD-1000GN*
SHOWN WITH
200-TIP-0802

***BUILD TO
ORDER**



G **G L** **N** **L**
689-HLD-1000G 689-HLD-1000GL 689-HLD-1000N 689-HLD-1000L



689-HLD-1000G
689-HLD-1000GL

689-HLD-1000GN*
689-HLD-1000L

689-HLD-1000N

FERTILIZER KNIVES

689-KNF-1000

SINGLE SHOOT SEED OPENER

FERTILIZER TYPES: Granular N, Granular N + NH₃, Granular N + Liquid N, NH₃, Liquid N

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D. **NH₃:** 1/2" (12mm)

Liquid: 1/4" (6mm) O.D. stainless steel

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: These fertilizer knives are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

NOTES: **Installation bolts included.** Use 3/8" lock nut and 3/8" x 1-3/4" Grade 8 carriage bolts. See page 114. For an expanded view of these openers see page 128.

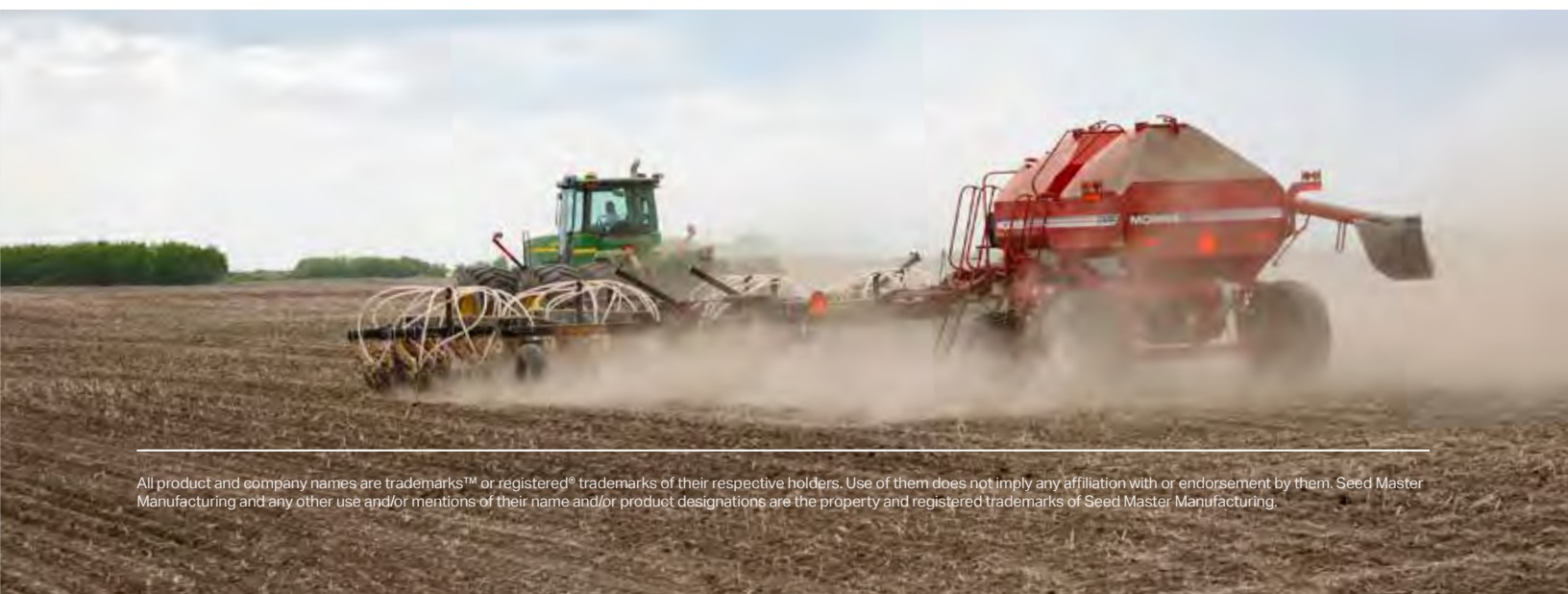
FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE: 1-1/4" (32mm) O.D.

OVERVIEW: The narrow design allows for more accurate seed placement behind the tip. Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts included.** Use 3/8" lock nut and 3/8" x 1-1/2" Grade 8 carriage bolts. See page 114.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.



Fertilizer Knives to Fit Väderstad Seed Hawk

Granular N, Liquid N, NH₃, Granular + Liquid N, Granular + NH₃

FERTILIZER TYPES:

Granular N, Granular + Liquid N,
Granular + NH₃, Liquid N, NH₃

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D.

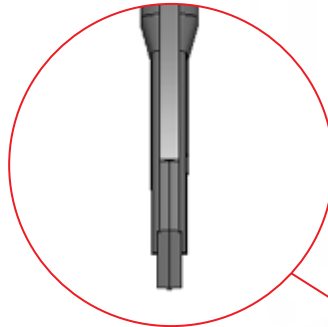
TIP OPTIONS: N/A

OVERVIEW: Dual carbide insert on the nose to fracture the ground.

Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

NOTES: Installation bolts sold separately. Use 7/16" x 1-3/4" Grade 8 carriage bolts. See page 114.

G
1/2" WIDE
686-KNH-5020G



G L
1/2" WIDE
686-KNH-5020GL



L
1/2" WIDE
686-KNH-5020L



N
1/2" WIDE
686-KNH-5020N



G N
1/2" WIDE
686-KNH-5020GN



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**G**

686-HLD-1020G*
SHOWN WITH
200-TIP-0802

***BUILD TO
ORDER**

**G L**

686-HLD-1010GL*

L

686-HLD-1020L*

**N**

686-HLD-1020N*

G N

686-HLD-1010GN*

FERTILIZER TYPES:

Granular N, Granular + Liquid N,
Granular + NH₃, Liquid N, NH₃

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D.

TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0801
- 200-TIP-0802
- 200-TIP-0803
- 200-TIP-0811

Tips sold separately. See page 12.

OVERVIEW: Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

686-HLD-1010 holders will apply Granular + Liquid N or NH₃.

NOTES: **Installation bolts sold separately.** Use 7/18" x 1-3/4" Grade 8 carriage bolts. See page 114.

For an expanded view of these openers see page 129.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.



We have had BTT tips on our Vaderstad Seedhawk for one season and we really like the depth control. They seem to stand up very well. They're more rounded for better trash flow, that was the main reason we went with Bourgault Tillage Tools. BTT was so good to us sending three free demo units to try. I really appreciate the service!

Ben Walter, Spring Point Colony, Alberta, Canada



Seed Openers to Fit Väderstad Seed Hawk

Single Shoot & Paired Row Options



686-KNH-5010
686-KNH-5010P

1/2" WIDE SINGLE SHOOT OPENER

FITS: Väderstad Seed Hawk

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: N/A

OVERVIEW: This 1/2" opener directs seed downward through the holder, placing the seed in a single row onto a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder.

686-KNH-5010 is available without the liquid phos tube.

686-KNH-5010P is the liquid phos opener.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 114.



686-KNH-1001*
686-KNH-1001P*

SINGLE SHOOT OPENER

FITS: Väderstad Seed Hawk

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos or just Liquid Phos

TUBE SIZE:

Seed Tube: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

OVERVIEW: The seed shank is offset to the fertilizer shank.

686-KNH-1001 is available without the liquid phos tube. **686-KNH-1001P** is a single shoot opener that applies liquid phos on top of the seed. The narrow design allows for more accurate seed placement behind the tip.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

For an expanded view of this opener see page 129.



686-ASY-3011
686-ASY-3011P

PAIRED ROW OPENER

FITS: Väderstad Seed Hawk

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only + Liquid Phos

TUBE SIZE:

Granular: 1-1/4" (32mm) O.D.

Liquid Phos: 3/16" (5mm) O.D.

This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010. See page 110.

TIP OPTIONS: 3" (76mm) cast chrome tip (200-TIP-3011) with carbide insert on the nose to fracture the ground. Carbide inserts on the underside of the wings maintain a sharp cutting edge.

Assembly includes the tip.

OVERVIEW: The seed is directed rearward through the holder which places the seed in two rows onto a firm, unfractured seed bed. Extra hard surfacing on critical wear areas increases the life of the holder.

686-ASY-3011P is the liquid phos opener.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts. See page 114.

For an expanded view of this opener see page 129.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.

BTT Demo Program

TRY BEFORE YOU BUY!

Through the BTT Demo Program, we offer you the opportunity to try a few of our parts and compare how they perform against products you're currently using.

No pressure. No obligation to buy.

Talk to a BTT dealer or contact our team at 1.800.878.7714 or info@tillagetools.ca



**MAX LIFE™
Harrow Tines**



**Seed Openers
Fertilizer Knives**



**Replaceable
Tips**



**Speed-Loc™
Adapters**



**RBE Tillage
Tools**



Seed Boots



**MAX LIFE™
Scrapers**



**Specialty
Parts**



Titan Opener System

This system provides both horizontal and vertical separation between seed and fertilizer.

1 CHOOSE YOUR HOLDER



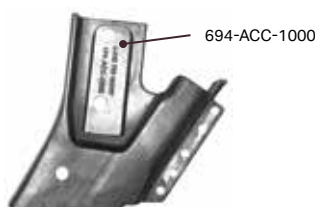
620-HLD-5000

FITS: 47° and 50° C-shank
Installation bolts and nuts included.



688-HLD-5000

FITS: Horsch 84° shank. See note on page 130.
Installation bolts and nuts included.



694-HLD-5000

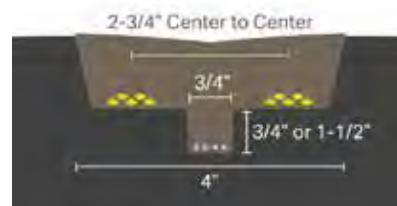
FITS: Case IH ATX 700, NH P2060, Flexi-Coil 5500 & Concord Edge On (84° shanks only). When installing on units other than Concord, insert **694-ACC-1000** is needed. See page 110. Installation bolts and nuts included.

2 CHOOSE YOUR SEED SHOE



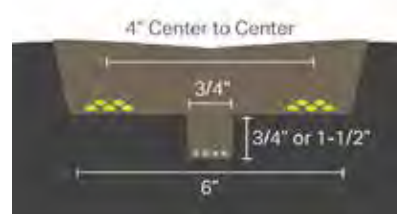
620-SSH-1000

4" outside to outside (2-3/4" center to center) seed spread is placed above the center placed fertilizer trench.



620-SSH-4000

6" outside to outside (4" center to center) seed spread is placed above the center placed fertilizer trench.



620-SSH-6000

7-3/4" outside to outside (6" center to center) seed spread is placed above the center placed fertilizer trench.



Use bolt and nut combo 620-BNC-3100 to install shoes to holder.
For a more detailed view of these components see pages 130-131.



Before using BTT openers, we were running an OEM opener and having issues with excessive component wear and breakage. We switched to the Titan Series Openers and have changed one assembly in about 7,000 acres. Which is remarkable in itself, but honestly, we could hardly see a difference in wear from new to old. Great product! Well worth the investment.

Trevor Smith, Washington, USA

3 CHOOSE YOUR TIP



620-TIP-0510

Standard tip for **620, 688 & 694** holders. Carbide inserts are placed on the nose. Hard facing is placed on critical wear points for extended life of the tip.

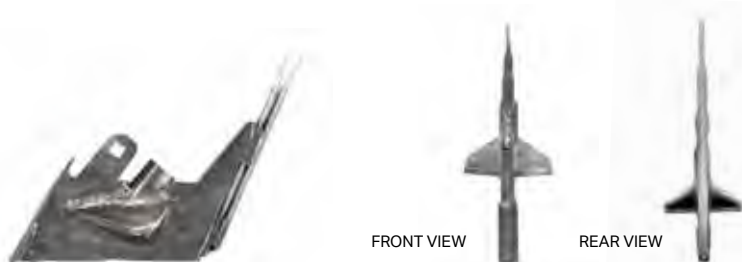
NOTES: Use bolt and nut combo 200-BNC-3100 to install tips. Use bolt and nut combo 620-BNC-3100 (5/16" x 1-1/2") to install shoe to holder.



620-TIP-1510

Full cast version of 620-TIP-0510 for use with **620, 688 & 694** holders. This tip is longer lasting with superior soil flow around the tip when compared to the welded 620-TIP-0510 tip. Carbide inserts are placed on the nose. Hard facing is placed on critical wear points for extended life of the tip.

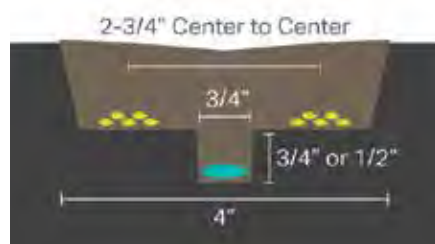
NOTES: Use bolt and nut combo 200-BNC-3100 to install tips. Use bolt and nut combo 620-BNC-3100 (5/16" x 1-1/2") to install shoe to holder.



620-TIP-4060

Triple shoot unibody tip and seed shoe. Extra-long carbide inserts placed on the nose of the tip. The nose carbides have a continuous roofed profile, producing exceptional soil flow with minimal disturbance. The seed is placed in a distinct paired row, 2-3/4" center to center. The seed is deposited prior to the Aqua NH3 + Liquid Phos being placed 3/4" deeper, between the seed rows. The tip helps prevent skewing on hill sides. The shoe portion is 4" wide, with carbide fully covering the leading edges.

NOTES: This tip replaces the standard tip, seed shoe, fertilizer tube combinations, and is to be used with **620, 688 & 694** holders. Use bolt and nut combo 200-BNC-3100 to install tips.



SEED FERTILIZER

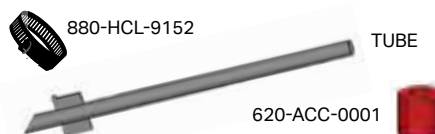
Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

4 CHOOSE YOUR FERTILIZER

620-TUB-1021*

N

1/2" (12mm) O.D. NH3 tube for **620, 688 & 694** series holders.



620-TUB-1070

N

P

1/4" (6mm) O.D. Aqua NH3 + Phos tube for **620, 688 & 694** series holders.



620-TUB-4000

N

L

0.4" O.D. Stainless Steel Liquid or NH3 tube for **620, 688 & 694** series holders.



620-TUB-4040

N

P

0.4" O.D. Stainless Steel Aqua NH3 + Phos tube for **620, 688 & 694** series holders.



NOTES: The tube assemblies include all accessories shown.

*For pressurized NH3 Systems (including MaxQuip) you will be given the standard NH3 tube and then must consult with your pressurized system dealer for tubing inserts.

VOS (Versatile Opener System)

Choose the holder, tip, and fertilizer suitable for your situation and soil type.

1 CHOOSE YOUR HOLDER



610-HLD-2080HD

FITS: 47° and 50° C-shank
When installing on a 50° shank other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 110.



688-HLD-2080

FITS: Horsch 84° shank. Use the bottom two holes when installing this holder for standard installation. To add 4° more pitch, use the top two holes on the holder.



693-HLD-2080

FITS: Morris Contour II & Morris Quantum

2 CHOOSE YOUR TIP



610-TIP-0802

SINGLE SHOOT TIP

3/4" (19mm) long-wearing single shoot tip with long carbide insert on the nose for highly abrasive conditions.

FERTILIZER OPTIONS: Used for seeding only.

PACKER RECOMMENDATION: 3/4" (19mm) or wider.



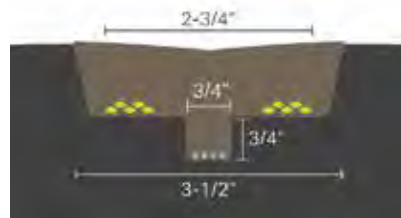
610-TIP-3581

PAIRED ROW TIP

3-1/2" (89mm) cast chrome paired row tip with 3/4" (19mm) vertical seed/fertilizer separation. Carbide insert on the nose for excellent penetration and wear resistance. Carbide inserts on the underside of the wing maintain a sharp cutting edge and provide extra-wear life. Carbide inserts at the back of the underside of the wings seals up fertilizer trench prior to seed placement.

FERTILIZER OPTIONS: Granular, Liquid, Aqua NH₃ or Aqua NH₃ + Phos

PACKER RECOMMENDATION: 3" (76mm) or wider.



610-TIP-4035

PAIRED ROW TIP

4" (102mm) paired row cast tip with carbide insert on the nose for excellent penetration and wear resistance. These tips have a 3/4" (19mm) vertical drainage trench. Carbide inserts on the underside of the wing to maintain a sharp cutting edge. This paired row liquid or granular double shoot tip has no vertical seed/fertilizer separation.





610-TIP-4081 / 4082 / 4085

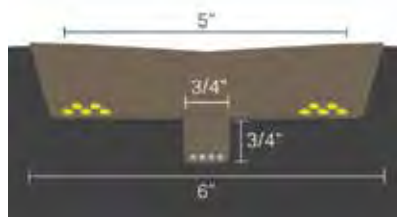
PAIRED ROW TIP

4" (102mm) paired row tip with 3/4" (19mm) vertical seed/fertilizer separation. Extra long nose carbide, narrow carbide on the cutting edges of the wings and under the wing to seal the fertilizer trench, and firm up the seed bed prior to seed placement. **610-TIP-4082** has additional carbide along the sides of the fertilizer trench to provide extra wear life. **Not recommended for use on Case IH 800 / 900 or NH P2070.**

610-TIP-4085 for Europe only.

FERTILIZER OPTIONS: Granular, Liquid, Aqua NH₃ or Aqua NH₃ + Phos

PACKER RECOMMENDATION: 4" (102mm) or wider.



610-TIP-6082

PAIRED ROW TIP

OVERVIEW: 6" (152mm) paired row cast tip with 3/4" (19mm) vertical seed/fertilizer separation. Carbide insert on the nose for excellent penetration and wear resistance. Carbide inserts on the underside of the wing maintain a sharp cutting edge and provide extra-wear life. Carbide inserts at the back of the underside of the wings seals up fertilizer trench prior to seed placement.

FERTILIZER OPTIONS: Granular, Liquid, Aqua NH₃ or Aqua NH₃ + Phos

PACKER RECOMMENDATION: 5-1/2" (140mm) or wider.

● ● ● ● SEED ● ● ● ● FERTILIZER

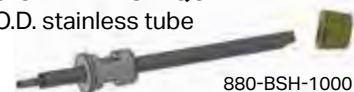
Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 18.

3 CHOOSE YOUR FERTILIZER

880-TUB-1003¹
880-TUB-1004²

L

PRECISION DRILLS LIQUID 1/4"
(6mm) O.D. stainless tube



880-BSH-1000

880-TUB-1009¹
880-TUB-1010²

N L

PRECISION DRILLS LIQUID OR
AQUA NH₃ 0.40" (10mm) O.D.
stainless tube



880-BSH-1000

880-TUB-1011¹
880-TUB-1012²

N P

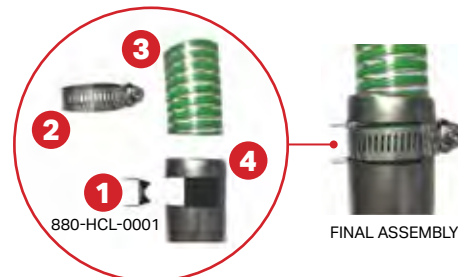
PRECISION DRILLS AQUA NH₃ +
PHOS 1/4" (6mm) O.D. stainless tube



880-BSH-1003

NOTES: All tubes come with bushings as pictured above. ¹880-TUB-1003, 1009 & 1011 are for everything other than C-shank. ²880-TUB-1004, 1010 & 1012 are for C-shank openers, and are 1" longer. Call the factory for more details.

PROPER INSTALLATION:



“

We'd been min-tilling OSR ground and found that producing satisfactory seedbeds that would allow for the timely and reliable establishment of the crop without them drying out and losing moisture was becoming more and more difficult to achieve. I'd looked at a number of competing drill coulters but was always drawn back to the level of low disturbance of the VOS. We spent a few hours with Stuart discussing how the coulters would work and the types of soil conditions we'd expect to be working in, and we finally concluded the VOS would suit our needs. We have to date achieved an acreage of 4,655 and believe we will successfully break the 5,000 acre barrier.

James Mayes, Bentfield Bury Farms (Sentry Ltd), UK

Seeding Openers to Fit *Speed-Loc™*

Single Shoot & Side Band Options



200-HOE-1700

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: Long-wearing welded high-chrome tip.

INSTALLATION DRIVER: 100-DRV-1020

OVERVIEW: This opener runs through the ground at a fairly vertical angle to provide less rock pulling. Provides 1-1/2" to 1-3/4" (38–44mm) seed spread.

Works best with the 1" (25mm) single tube seed boot. See pages 62-63.



**200-KNF-0810
200-KNF-0811**

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS:

- 3/4" (19mm) weld-on tips:
- 200-KNF-0810 (without carbide)
- 200-KNF-0811 (with carbide)

INSTALLATION DRIVER: 400-DRV-1010

OVERVIEW: Low disturbance, low draft opener provides easy pulling.

Works with 300-ATM-1035 of the Seed Boot System. See pages 62-63.



200-KNF-0813

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: 3/4" (19mm) weld-on tip with extra-long nose carbide for longer wear life.

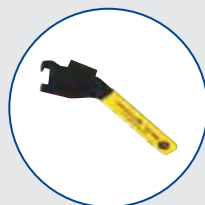
INSTALLATION DRIVER: 400-DRV-1010

OVERVIEW: The more vertical approach of this opener reduces rock pulling.

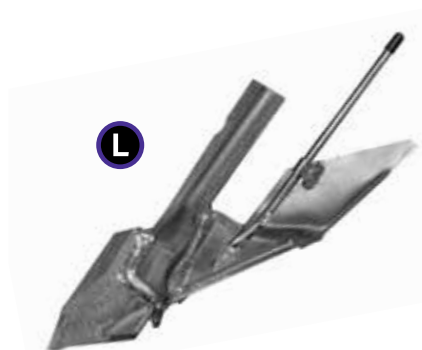
Works with 300-ATM-1035 of the Seed Boot System. See pages 62-63.



To ensure proper installation of *Speed-Loc™* products, use the appropriate driver listed with each product. For a chart of all drivers see page 78.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from *Speed-Loc™* Adapters. See page 78.



200-KNF-0863

SIDE BAND OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: Liquid N

TUBE SIZE: 1/4" (6mm) O.D.

TIP OPTIONS: The welded high-chrome tip is protected with a carbide insert on the nose and a solid carbide wing. The carbide placement provides sharp cutting edges for excellent penetration.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: This is the only multi-shoot opener available for use with the *Speed-Loc* system. It provides all of the benefits of the *Speed-Loc* system with the seed placement you trust.

This unique side band opener provides good horizontal separation with a slight vertical seed/fertilizer separation.

These openers work very well when used with a pressurized liquid system.



200-KNF-7501

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: The high-chrome welded tip has a carbide insert on the nose for a sharp cutting edge and extra wear life.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: Designed for use with the Technotill System.



200-KNF-7511

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: Seed with Granular starter

TUBE SIZE: N/A

TIP OPTIONS: 3/4" (19mm) weld-on tip with carbide for longer wear life.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: Precise seed placement due to the funnel being close to the tip and to the bottom of the furrow. The funnel is reinforced with hard surfacing for longer wear life.

Works with the square tube seed boot of the Seed Boot System. It also fits the Bourgault or Flexi-Coil square tube seed boot. See pages 62-63.

Interested in BTT Products?

Try before you buy with
the BTT Demo Program.
See page 53.

**200-KNH-4000**

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™***FERTILIZER TYPE:** N/A**TUBE SIZE:** N/A

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

INSTALLATION DRIVER:

Depends on tip used. See page 78.

OVERVIEW: Works with knife attachment 300-ATM-1035 of the Seed Boot System. See page 62-63.

**200-KNH-4010**

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™***FERTILIZER TYPE:** N/A**TUBE SIZE:** N/A

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

INSTALLATION DRIVER:

Depends on tip used. See page 78.

OVERVIEW: This funnel is reinforced with hard surfacing for longer wear life.

Works with the square tube seed boots of the Seed Boot System. It also fits the Bourgault or Flexi-Coil square tube seed boot. See pages 62-63.

**410-KNF-0801**

SINGLE SHOOT OPENER

FITS: 410 Series *Speed-Loc™***FERTILIZER TYPE:** N/A**TUBE SIZE:** N/A

TIP OPTIONS: 3/4" (19mm) weld-on tip with carbide.

INSTALLATION DRIVER:

400-DRV-1010

OVERVIEW: Low disturbance, low draft opener provides easy pulling.

Works with knife attachment 300-ATM-1031 of the Seed Boot System. See pages 62-63.



We use the *Speed-Loc™* Quick Change System on our deep tillage equipment. Very handy and don't have to worry about losing any shovels. All we use is Bourgault Tillage Tools. The openers on our 8810 have hardly had any wear in the 1,500 acres we did and will be able to use them for next season too. Tough, rugged and reliable!

Trevor Nolan, Manitoba, Canada



200-VRT-1040

SINGLE SHOOT OPENER

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE:
Granular

TUBE SIZE: 1-1/4"
(32mm) O.D.

TIP OPTIONS: 1" (25mm)
weld-on tip with nose
carbide for long-lasting
wear life and excellent
penetration.

INSTALLATION DRIVER:
200-DRV-1030

OVERVIEW: The vertical
approach of this opener
reduces rock pulling and
soil throw.


BLUE ARMOUR
200-SPN-0200



200-SPN-0200 200-SPN-0208

SINGLE SHOOT OPENER

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: N/A

INSTALLATION DRIVER:
400-DRV-1000

OVERVIEW: These
spoons have a 2" (51mm)
spread.

200-SPN-0200 has 1/4"
(6mm) material.

200-SPN-0208 has 5/16"
(8mm) material for
increased wear life.


BLUE ARMOUR
200-SPN-0300



200-SPN-0300 200-SPN-0308

SINGLE SHOOT OPENER

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: N/A

INSTALLATION DRIVER:
400-DRV-1000

OVERVIEW: 3" (76mm)
spread.

200-SPN-0300 has 1/4"
(6mm) material.

200-SPN-0308 has 5/16"
(8mm) material for
increased wear life.


BLUE ARMOUR
410-SPN-0300*



***BUILT TO
ORDER**

410-SPN-0300* 410-SPN-0308

SINGLE SHOOT OPENER

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP OPTIONS: N/A

INSTALLATION DRIVER:
400-DRV-1000

OVERVIEW: 3" (76mm)
spread.

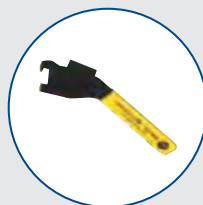
410-SPN-0300 has 1/4"
(6mm) material.

410-SPN-0308 has
5/16" (8mm) material for
increased wear life.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.



To ensure proper installation of *Speed-Loc™* products, use the appropriate driver listed with each product. For a chart of all drivers see page 78.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from *Speed-Loc™* Adapters. See page 78.

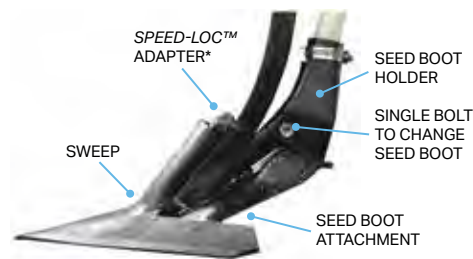
Quick Change Seed Boot System

Match seed spread to opener width.

The quick-change seed boot system consists of two parts: the seed boot holder, which bolts onto the back of the shank, and the seed boot attachment, which fits into the holder. A nut and bolt secure the attachment.

There are seven different interchangeable attachments to choose from, each giving a different seed spread pattern. This system allows you to match your seed spread to the width of the opener you are using.

It is perfect for producers who want to switch back and forth from a wide seed spread behind a sweep to a narrow seed band behind a knife.



SEED BOOT HOLDER



300-HLD-4700

FITS: Bourgault & Ezee-On 47° shanks

OVERVIEW: 1-3/4" (45mm) bolt hole spacing. The bolt hole section is designed flat.

NOTES: Use a hose clamp to secure the air hose into the seed boot holder.



300-HLD-4710

FITS: 47° shanks except the Bourgault & Ezee-On

OVERVIEW: 1-3/4" (45mm) bolt hole spacing. The bolt hole section is curved.

NOTES: Use self tapping screw (911-SCR-1051) to secure the air hose into the seed boot holder.



300-HLD-5000

FITS: Bourgault chisel plow shanks, Morris LH755 shank on the Magnum III and Morris Concept 2000

OVERVIEW: 2-1/4" (57mm) bolt hole spacing. The bolt hole section is flat and has two sets of holes. The top set of holes should be used in almost all cases when mounting this holder to the shank.

NOTES: Use self tapping screw (911-SCR-1051) to secure the air hose into the seed boot holder.



300-HLD-5010

FITS: Any chisel plow shank except the Bourgault and the Morris LH755 shank

OVERVIEW: 2-1/4" (57mm) bolt hole spacing. The bolt hole section is curved.

NOTES: Use a hose clamp to secure the air hose into the seed boot holder.

NOTES:

- All holders on this page only accept 1-1/8" (29mm) O.D. hose.
- Bushing 300-BSH-1200 is required for 1-1/4" (32mm) O.D. hose. See page 110.
- A self-tapping screw 911-SCR-1051 should be used to hold the air hose or the bushing into the seed boot holder.
- A 3/8" (9mm) screw 911-SCR-1038 is also available to secure the air hose into the top of the bushing.

SEED BOOT ATTACHMENTS

**300-BNC-4414**

This bolt and nut secure the quick change seed boot attachments into the holders.

**300-ATM-1000**

Spreader attachment will distribute the seed evenly in a 3" to 4" (76-102mm) band. Seed spread may vary depending on sweep size, soil type and fan speed.

**300-ATM-1006**

Spreader attachment will distribute the seed evenly in a 6" (152mm) row. Seed spread may vary depending on sweep size, soil type and fan speed. **Works well for organic operations because of the wide seed spread.**

**300-ATM-1010**

Splitter attachment places the seed into two distinct rows approx. 6" (152mm) apart. Seed spread may vary depending on sweep size, soil type and fan speed.

**300-ATM-1020**

Straight attachment spreads the seed approx. 2-1/2" (63mm). It works well with the quick change spoons, spikes or any size of sweep.

SEED BOOT ATTACHMENTS

**300-ATM-1031**

Knife attachment places the seed in a very narrow band.

For use behind:

- 200-VRT-1000
- 410-VRT-1000
- 410-HLD-7500
- 410-KNF-0800
- 410-KNF-0801

**300-ATM-1035**

Knife attachment places the seed in a very narrow band.

For use behind:

- 200-KNF-0810
- 200-KNF-0811
- 200-KNF-0813
- 200-KNH-4000

**300-ATM-1036**

For use in Europe. Knife attachment places the seed in a band. **There is hard facing on the side.** Wider slot than the 300-ATM-1035.

For use behind 200-KNF-0813.

**300-SQR-1500**

Slotted top hole to fit 1-3/4" to 2-1/4" (45-57mm) bolt spacing. Accepts 1-1/4" (32mm) O.D. air hose.

Designed to fit curved bottom shanks.

**300-SQR-1505**

Slotted top hole to fit 1-3/4" to 2-1/4" (45-57mm) bolt spacing. Accepts 1-1/4" (32mm) O.D. air hose.

Designed to fit flat bottom shanks.

Original Degelman Wear Parts

Built by BTT for Degelman and available at BTT dealers!

Degelman Pro-Till *Niaux* 200 Disks

Notched concave disks provide a very aggressive cutting edge that is well suited for soil penetration. These disks are a good choice for residue management.

Concave disks do an excellent job of tilling and inverting the soil. The action of the disk depends on the speed. The biggest advantage this disk offers is durability and longevity.

MAX LIFE™ Harrow Tines

The MAX LIFE process weld infuses tungsten carbide onto the harrow tine creating the toughest and most economical option available.

Aftermarket MAX LIFE Harrow Tines last 6X longer than competitor tines and fit Degelman Heavy Harrows.

MAX LIFE™ Scrapers

MAX LIFE scrapers will significantly increase the life and performance of your roller scrapers.

The tungsten carbide tipped scrapers maintain their original length and shape, resulting in a clean roller and a more consistent field finish.



Degelman

SCRAPERS (PG 95) | HARROW TINES (PG 96) | DISKS (PG 101-102)

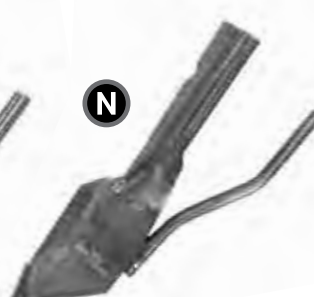
Fertilizer Knives

**200-KNF-7521**

FERTILIZER KNIFE

FITS: 200 Series
Speed-Loc™**FERTILIZER TYPE:**
Cold Flow NH3**TUBE SIZE:**
1/2" (12mm) O.D.**TIP OPTIONS:**
3/4" (19mm) welded
tip with carbide which
provides extra wear life
and better penetration.**INSTALLATION DRIVER:**
100-DRV-1010**OVERVIEW:** The shorter
tube length on this
knife makes it better for
cultivators and chisel
plows. The welded tip is
better for rocky conditions.**Can be converted to
pressurized NH3 or liquid
system.** Call for details.**200-KNF-7525**

FERTILIZER KNIFE

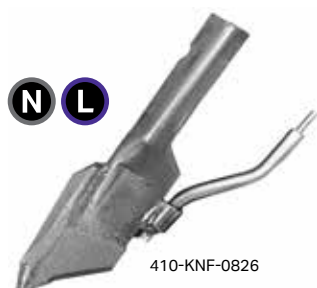
FITS: 200 Series
Speed-Loc™**FERTILIZER TYPE:**
Cold Flow NH3**TUBE SIZE:**
1/2" (12mm) O.D.**TIP OPTIONS:**
3/4" (19mm) welded
tip with carbide which
provides extra wear life
and better penetration.**INSTALLATION DRIVER:**
100-DRV-1010**OVERVIEW:** The longer
tube length on this knife
makes it better for air
seeders and air drills that
have seed boots on the
back of the shank. **Not to
be used with seed at the
same time.** The welded
tip is better for rocky
conditions.**Can be converted to
pressurized NH3 system.**
Call for details.**200-KNF-7531**

FERTILIZER KNIFE

FITS: 200 Series
Speed-Loc™**FERTILIZER TYPE:**
Hot Gas NH3**TUBE SIZE:**
3/8" (9mm) O.D.**TIP OPTIONS:**
3/4" (19mm) welded
tip with carbide which
provides extra wear life
and better penetration.**INSTALLATION DRIVER:**
100-DRV-1010**OVERVIEW:** The shorter
tube length on this
knife makes it better for
cultivators and chisel
plows. The welded tip is
better for rocky conditions.**Can be converted to
pressurized NH3 or liquid
system.** Call for details.***BUILD TO
ORDER****200-KNF-7560***

FERTILIZER KNIFE

FITS: 200 Series
Speed-Loc™**FERTILIZER TYPE:**
NH3 + Liquid Phos**TUBE SIZE:**
0.400" stainless
steel tube**TIP OPTIONS:**
3/4" (19mm) welded tip
with extra carbide for
long lasting wear life and
better penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** This fertilizer
knife is designed for use
with Aqua NH3 and Liquid
Phos. The welded tip is
better in rocky conditions.**For guaranteed delivery of multi-shoot openers, place orders by January 31st.****Stabilize Your NH3 Hose**This stainless steel hose holder mounts on any C-shank
to hold the NH3 hose in place and is completely height
adjustable.



410-KNF-0825 410-KNF-0826

FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:

410-KNF-0825:

Cold Flow NH3

410-KNF-0826:

1/4" (6mm) NH3 PSI
or Liquid N

TUBE SIZE:

410-KNF-0825: 1/2"
(12mm) O.D.

410-KNF-0826: 1/4"
(6mm) O.D.

TIP OPTIONS:

3/4" (19mm) welded tip
with carbide provides
extra wear life and better
penetration.

INSTALLATION DRIVER:

400-DRV-1010

OVERVIEW: Designed
for heavy-duty use. The
welded tip makes it better
in rocky conditions.



410-KNF-0827

FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:

Cold Flow NH3

TUBE SIZE:

1/2" (12mm) O.D.

Pipe is also tapped with
an 1/8" (3mm) NPT thread
allowing for threaded
inserts to accommodate
pressurized NH3 or liquid
fertilizer applications.

TIP OPTIONS:

3/4" (19mm) welded tip
with carbide provides
extra wear life and better
penetration.

INSTALLATION DRIVER:

400-DRV-1010

OVERVIEW: Designed
for heavy-duty use. The
welded tip makes it better
in rocky conditions.



410-KNF-0831

FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:

Hot Gas NH3

TUBE SIZE:

3/8" (9mm) O.D.

TIP OPTIONS:

3/4" (19mm) welded tip
with carbide provides
extra wear life and better
penetration.

INSTALLATION DRIVER:

400-DRV-1010

OVERVIEW: Designed for
heavy-duty use with Hot
Gas NH3 kits. The welded
tip makes it better in rocky
conditions.

**Can be converted to a
Liquid system.** Call for
details.



410-KNF-0841

FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:

Liquid or NH3

TUBE SIZE:

0.40" (10mm) O.D.
stainless steel

TIP OPTIONS:

3/4" (19mm) welded tip
with carbide provides
extra wear life and better
penetration.

INSTALLATION DRIVER:

400-DRV-1010

OVERVIEW: Designed
for use with Liquid or NH3
fertilizer.



To ensure proper installation of **Speed-Loc™** products, use the appropriate driver listed with each product. For a chart of all drivers see page 78.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from *Speed-Loc™* Adapters. See page 78.

**410-KNF-7540**

FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
Granular**TUBE SIZE:**
1-1/4" (32mm) O.D. For
different hose sizes a
bushing may be used. See
page 108.**TIP OPTIONS:** 3/4"
(19mm) welded tip with
carbide provides extra
wear life and better
penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
use with Granular fertilizer.**Not recommended for
seeding.****410-KNF-7551
410-KNF-7553**

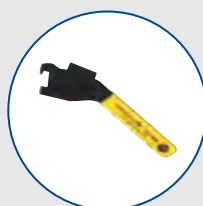
FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
Granular + Cold Flow or
Hot Gas NH3**TUBE SIZE:**
Granular: 1-1/4" (32mm)
O.D. For different hose
sizes a bushing may be
used. See page 110.**410-KNF-7551:** Cold
Flow NH3, 1/2" (12mm)
O.D.**410-KNF-7553:** Hot Gas
NH3, 3/8" (9mm) O.D.**TIP OPTIONS:**
3/4" (19mm) welded tip
with nose carbide for
long-lasting wear life and
excellent penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
use with Granular fertilizer
and either Cold Flow or
Hot Gas NH3 kits.**Not recommended for
seeding.****410-KNF-7560**

FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
NH3 + Liquid Phos**TUBE SIZE:**
0.400" stainless steel tube**TIP OPTIONS:**
3/4" (19mm) welded tip
with extra carbide for
long lasting wear life and
better penetration.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed for
use with Aqua NH3 and
Liquid Phos. The welded
tip is better in rocky
conditions.**410-KNH-7524
410-KNH-7526***

FERTILIZER KNIFE

FITS: 410 Series
*Speed-Loc™***FERTILIZER TYPE:**
Cold Flow NH3 or NH3 PSI**TUBE SIZE:**
410-KNH-7524: 1/2"
(12mm) O.D. for use with
Cold Flow Kits**410-KNH-7526:** 1/4"
(6mm) O.D. PSI**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502**Tips sold separately.**
See page 17.**INSTALLATION DRIVER:**
400-DRV-1010**OVERVIEW:** Designed
for use with NH3 with
the flexibility of using a
replaceable tip, allowing
you to choose the right tip
for your conditions.**Can be converted to a
pressurized NH3 or liquid
system.** Call for details.**To ensure proper installation of
Speed-Loc™ products,** use the
appropriate driver listed with each
product. For a chart of all drivers
see page 78.**The Speed Release Tool 200-REL-1010
must be used when removing openers,
sweeps and spikes from Speed-Loc™
Adapters.** See page 78.

**200-KNH-4020****FERTILIZER KNIFE**

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE:
Cold Flow NH3

TUBE SIZE:
1/2" (12mm) O.D.

TIP OPTIONS: Any Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 12-13.

INSTALLATION DRIVER:
Depends on tip used. See page 78.

OVERVIEW: This fertilizer knife is only recommended on light duty units with light trips.

Not recommended for rocky areas.

It is designed for use with Cold Flow NH3 kits.

Can be converted to a pressurized NH3 or liquid system. Call for details.

**200-ASY-7523****FERTILIZER KNIFE**

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

TUBE SIZE: 1/2" (12mm) O.D.

TIP OPTIONS:
3/4" (19mm) welded tip with extra carbide for long lasting wear life and better penetration.

INSTALLATION DRIVER:
100-DRV-1010

OVERVIEW: NH3 is delivered through a nylon insert, insulating the knife from the NH3, preventing moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off.

Not suggested for rocky conditions.

**410-ASY-0823****FERTILIZER KNIFE**

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

TUBE SIZE: 1/2" (12mm) O.D.

TIP OPTIONS:
3/4" (19mm) welded tip with extra carbide for long lasting wear life and better penetration.

INSTALLATION DRIVER:
400-DRV-1010

OVERVIEW: NH3 is delivered through a nylon insert, insulating the knife from the NH3, preventing moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off.

Not suggested for rocky conditions.

**410-ASY-7523****FERTILIZER KNIFE**

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

TUBE SIZE: 1/2" (12mm) O.D.

TIP OPTIONS:
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502

Tips sold separately. See page 17.

INSTALLATION DRIVER:
400-DRV-1010

OVERVIEW: NH3 is delivered through a nylon insert, insulating the knife from the NH3, preventing moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off.

Not suggested for rocky conditions.

For guaranteed delivery of multi-shoot openers, place orders by January 31st.

**Stabilize Your NH3 Hose**

This stainless steel hose holder mounts on any C-shank to hold the NH3 hose in place and is completely height adjustable.

**Non-Freeze NH3 Rear Assembly**

This replacement rear assembly works with all Non-Freeze NH3 Speed-Loc knives.

**600-ASY-7523**

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank**FERTILIZER TYPE:**
Non-Freeze NH3**TUBE SIZE:**
1/2" (12mm) O.D.**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502**Tips sold separately.**
See page 17.**OVERVIEW:** NH3 is delivered through a nylon insert, insulating the knife from the NH3, preventing moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off. **Not recommended for rocky conditions.****NOTES: Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 114.**For 43° shank use a 7° wedge.** See page 110.**600-HLD-7500
602-HLD-7500**

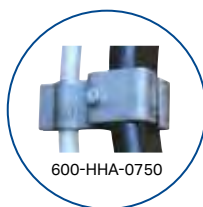
FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank**FERTILIZER TYPE:**
N/A**TUBE SIZE:**
N/A**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502**Tips sold separately.**
See page 17.**OVERVIEW:** This knife uses replaceable tips. Choose the right tip for your conditions.**600-HLD-7500** regular use**602-HLD-7500** heavy duty use in tough conditions and high shank trip forces.**NOTES: Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 114.**For 43° shank use a 7° wedge.** See page 110.**050-KNH-0820**

FERTILIZER KNIFE

FITS: 47°, 50° C-shank**FERTILIZER TYPE:**
Cold Flow NH3**TUBE SIZE:**
1/2" (12mm) O.D.**BOLT HOLE SPACING:**
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.**TIP OPTIONS:** Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions.**Tips sold separately.**
See pages 12-13.**OVERVIEW:** This fertilizer knife is only recommended for use on light duty units with light trips. Not recommended for rocky areas.**NOTES: Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 114.**Can be converted to a pressurized NH3 or liquid system.** Call for details.**599-KNH-7540**

FERTILIZER KNIFE

FITS: 47° C-shank**FERTILIZER TYPE:**
Granular**TUBE SIZE:**
1-1/4" (32mm) O.D. For different hose sizes a bushing may be used. See page 110.**BOLT HOLE SPACING:**
1-3/4" (45mm)**TIP OPTIONS:**
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502**Tips sold separately.**
See page 17.**OVERVIEW:** This fertilizer knife is designed to fit on the Bourgault Shank with 1-3/4" bolt hole centers with 47° shanks on air seeder units.**NOTES: Installation bolts sold separately.** Use 1/2" Grade 8 hex head bolts. See page 114.**Stabilize Your NH3 Hose**

This stainless steel hose holder mounts on any C-shank to hold the NH3 hose in place and is completely height adjustable.

**Non-Freeze NH3 Rear Assembly**

This replacement rear assembly works with all Non-Freeze NH3 Speed-Loc knives.



600-KNH-7520

600-KNH-7520 602-KNH-7520

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank

FERTILIZER TYPE:
Cold Flow NH3

TUBE SIZE:
1/2" (12mm) O.D.

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502

Tips sold separately.
See page 17.

OVERVIEW: Designed for use with Cold Flow NH3 kits. The replaceable tip gives you the flexibility to choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 114. **For 43° shank use a 7° wedge.** See page 110.

600-KNH-7520 regular use
602-KNH-7520 heavy duty use in tough conditions and high shank trip forces.

Can be converted to a pressurized NH3 or Liquid system. Call for details.



600-KNH-7522

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank

FERTILIZER TYPE:
Cold Flow NH3

TUBE SIZE:
Dual 1/2" (12mm) O.D.

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

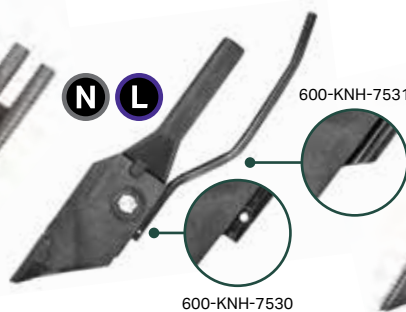
TIP OPTIONS:
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502

Tips sold separately.
See page 17.

OVERVIEW: Designed for use with Cold Flow NH3 kits. The second 1/2" pipe is used for venting. The replaceable tip gives you the flexibility to choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 114.

For 43° shank use a 7° wedge. See page 110.



600-KNH-7531

600-KNH-7530

600-KNH-7530 / 7531 602-KNH-7530

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank

FERTILIZER TYPE:
Hot Gas NH3, Liquid or Aqua NH3

TUBE SIZE:
600-KNH-7530 3/8" (9mm) O.D.
600-KNH-7531 0.400" stainless steel

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502

Tips sold separately.
See page 17.

OVERVIEW: Designed for use with the replaceable tip, giving you the flexibility to choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 114.

600-KNH-7530/7531 regular use
602-KNH-7530 heavy duty/high impact conditions, especially when used on applicators using high shank trip forces.

For 43° shank use a 7° wedge. See page 110.



600-KNH-7540

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank

FERTILIZER TYPE:
Granular

TUBE SIZE:
1-1/4" (32mm) O.D.

BOLT HOLE SPACING:
1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:
3/4" (19mm) tips:
• 600-TIP-7500
• 600-TIP-7501
• 600-TIP-7502

Tips sold separately.
See page 17.

OVERVIEW: This knife uses replaceable tips. Choose the right tip for your conditions.

NOTES: Installation bolts sold separately. Use 1/2" Grade 8 hex head bolts. See page 114.

For 43° shank use a 7° wedge. See page 110.

**600-KNH-7552**

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank**FERTILIZER TYPE:**

Granular + Cold Flow NH3

TUBE SIZE:**Granular:** 1-1/4" (32mm) O.D. For different hose sizes a bushing may be used. See page 110.**NH3:** 1/2" (12mm)**BOLT HOLE SPACING:**

1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately.

See page 17.

OVERVIEW: Designed for use with Granular and Cold Flow NH3 kits. The replaceable tip gives you the flexibility to choose the right tip for your conditions.**NOTES: Installation bolts sold separately.** Use 1/2"

Grade 8 hex head bolts. See page 114.

For 43° shank use a 7° wedge. See page 110.**Can be converted to a liquid system.** Call for details.**602-KNH-7554**

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank**FERTILIZER TYPE:**

Granular + Cold Flow NH3

TUBE SIZE:**Granular:** 1-1/4" (32mm) O.D. For different hose sizes a bushing may be used. See page 110.**NH3:** 1/2" (12mm)**BOLT HOLE SPACING:**

1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately.

See page 17.

OVERVIEW: Designed for use with Granular and Cold Flow NH3 kits with the addition of an extra blow off NH3 hose. The replaceable tip gives you the flexibility to choose the right tip for your conditions. The 602 series is designed for heavy duty conditions.**NOTES: Installation bolts sold separately.** Use 1/2"

Grade 8 hex head bolts. See page 114.

For 43° shank use a 7° wedge. See page 110.**602-KNH-7585**

FERTILIZER KNIFE

FITS: Bourgault MRS only**FERTILIZER TYPE:**

Granular

TUBE SIZE:

1-3/4" (44mm) O.D.

BOLT HOLE SPACING:

1-3/4" to 2-1/4" (44-57mm) slotted bolt hole spacing.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately.

See page 17.

OVERVIEW: This granular fertilizer knife is used with a replaceable tip, giving you the flexibility to choose the right tip for your conditions.**NOTES: Installation bolts sold separately.** Use 1/2"

Grade 8 hex head bolts. See page 114.

**602-KNH-7586**

FERTILIZER KNIFE

FITS: Bourgault MRS only**FERTILIZER TYPE:**

Granular + Liquid or NH3

TUBE SIZE:**Granular:** 1-3/4" (44mm) O.D.**Liquid NH3:** 1/4" (6mm) O.D. Liquid or PSI**BOLT HOLE SPACING:**

1-3/4" to 2-1/4" (44-57mm) slotted bolt hole spacing.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately.

See page 17.

OVERVIEW: This liquid and granular fertilizer knife is used with a replaceable tip, giving you the flexibility to choose the right tip for your conditions.**NOTES: Installation bolts sold separately.** Use 1/2"

Grade 8 hex head bolts. See page 114.

**602-KNH-7587**

FERTILIZER KNIFE

FITS: Bourgault MRS only**FERTILIZER TYPE:**
Granular + Cold Flow NH3**TUBE SIZE:****Granular:** 1-1/4" to 1-3/4"
(32-44mm) O.D.**NH3:** 1/2" (12mm) O.D.**BOLT HOLE SPACING:**1-3/4" to 2-1/4" (44-57mm)
slotted bolt hole spacing.**TIP OPTIONS:**

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately.
See page 17.**OVERVIEW:** This NH3
and granular fertilizer
knife is used with a
replaceable tip, giving
you the flexibility to
choose the right tip
for your conditions.**NOTES:** **Installation bolts**
sold separately. Use 1/2"
Grade 8 hex head bolts.
See page 114.**602-KNH-7640**

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-shank**FERTILIZER TYPE:**
Granular**TUBE SIZE:**

1-1/2" (38mm) O.D.

BOLT HOLE SPACING:1-3/4" to 2-1/2" (44-64mm)
slotted bolt hole spacing
providing the ability to fit
many different makes and
models.**TIP OPTIONS:**

3/4" (19mm) tips:

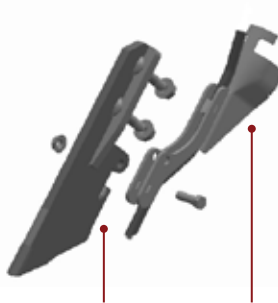
- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately.
See page 17.**OVERVIEW:** This knife
uses replaceable tips.
Choose the right tip
for your conditions.
For heavy duty use in
tough conditions and
high shank trip forces.**NOTES:** **Installation bolts**
sold separately. Use 1/2"
Grade 8 hex head bolts.
See page 114.**For 43° shank use a 7°**
wedge. See page 110.**050-MRA-5230**
050-MRA-5231

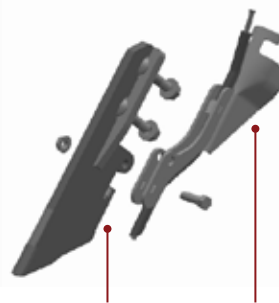
FERTILIZER KNIFE

FITS: C-shank with 2-1/4" bolt spacing**FERTILIZER TYPE:**
Granular + NH3, Granular + Liquid**TUBE SIZE:****NH3:** 1/2" (12mm) O.D.**Liquid:** 1/4" (6mm) O.D. stainless steel**Granular:** 1-3/4" (44mm) O.D.**BOLT HOLE SPACING:** 2-1/4" (57mm) shank bolt hole
spacing.**TIP OPTIONS:** N/A**OVERVIEW:** This 1/2" wide low disturbance fertilizer
knife has double carbide on the nose as well as hard
facing above the carbide and on the sides for longer
wear.**050-MRA-5230** applies NH3 + Granular.**050-MRA-5231** applies Liquid + Granular.

For an expanded view of this opener see page 120.

Modular design allows you to replace worn parts
instead of the entire opener.

050-MRH-5225 + 050-MRF-0030

050-MRA-5230

050-MRH-5225 + 050-MRF-0031

050-MRA-5231**Stabilize Your NH3 Hose**This stainless steel hose holder mounts
on any C-shank to hold the NH3 hose
in place and is completely height
adjustable.



670-ASY-7523
SHOWN WITH
600-TIP-7502



670-HLD-1000G
SHOWN WITH
600-TIP-7501



670-HLD-1000
670-HLD-1000G
670-HLD-1000GL
670-HLD-1000GN

670-HLD-1000N
670-HLD-1000L
670-ASY-7523

FERTILIZER KNIFE

FITS: 84° shanks and Salford Independent Series

FERTILIZER TYPES: Granular N, Granular N + NH₃, Granular N + Liquid N, NH₃, Liquid N

TUBE SIZE:

Granular: 1-1/2" (38mm) O.D.

NH₃: 1/2" (12mm) O.D.

Liquid: 1/4" (6mm) O.D. stainless steel

Non-Freeze NH₃: 1/2" (12mm) O.D.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

3" (76mm) tips:

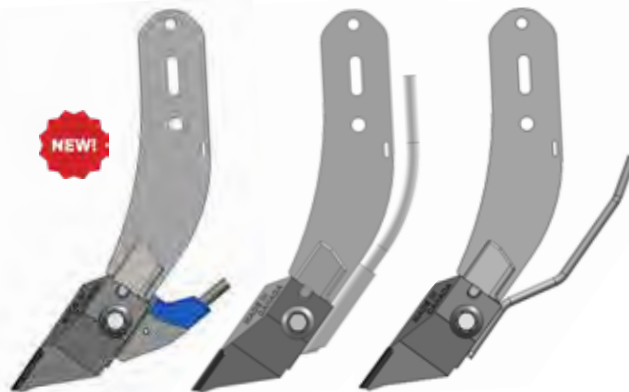
- 600-TIP-3000
- 600-TIP-3001

Tips sold separately. See page 17.

OVERVIEW: Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder. This opener features adjustment holes that allow you to adjust the height of the opener by 1.375" (35mm).

670-ASY-7523 NON-FREEZE VERSION: NH₃ is delivered through a nylon insert, insulating the NH₃ from the knife. This prevents the moist soil from freezing and building up on the knife, keeping it narrow to reduce disturbance with minimal gassing off. Designed to work with Cold Flow NH₃ units.

NEW!



674-ASY-7523
674-HLD-7520
674-HLD-7530

FERTILIZER KNIFE

FITS: Nitro-Master Edge On Shank

FERTILIZER TYPE: Non-Freeze NH₃, Cold Flow NH₃, Hot Gas NH₃

TUBE SIZE:

NH₃: 1/2" (12mm) O.D.

Hot Gas NH₃ 3/8" (9.5mm) O.D.

BOLT HOLE SPACING: 4-1/2" (115mm) bolt hole spacing as well as 1-3/4" to 2-1/2" (44-64mm) slotted bolt hole spacing providing the ability to fit many different makes and models.

TIP OPTIONS:

3/4" (19mm) tips:

- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately. See page 17.

OVERVIEW: This knife uses 600 series replaceable tips. Choose the right tip for your conditions. For heavy duty use in tough conditions and high shank trip forces.

NOTES: Installation bolts sold separately. Use Grade 8 hex head bolts. See page 114.



Non-Freeze NH₃ Rear Assembly

This replacement rear assembly works with Non-Freeze NH₃ Speed-Loc knives.

Speed-Loc™

200 Series Quick Change Adapters

See the *Speed-Loc™* adapter chart on pages 80-81.



200-QCA-4700

FITS: 47° Shanks, Bourgault & Ezee-On field cultivators, air seeders and air drills

BOLT HOLE SPACING:
1-3/4" (45mm)
center to center

BOLTS:
1/2" (12mm) hex head bolts. See page 114.



200-QCA-4710

FITS: 47° Shanks (except Bourgault & Ezee-On)

BOLT HOLE SPACING:
1-3/4" (45mm)
center to center.

BOLTS:
7/16" (11mm) shank holes use oversized head plow bolts. See page 114.
1/2" (12mm) shank holes use regular plow bolts.



200-QCA-5000

FITS: 50° Shanks, Morris Concept 2000 & Bourgault

BOLT HOLE SPACING:
2-1/4" (57mm)
center to center.

BOLTS:
1/2" (12mm) hex head bolts. See page 114.

NOTES: Use for seeding only. Not recommended for primary tillage.



200-QCA-5010

FITS: 43° & 50° Shanks (except Bourgault Chisel Plows)

BOLT HOLE SPACING:
2-1/4" (57mm)
center to center.

BOLTS:
1/2" (12mm) plow bolts.

NOTES: Not recommended for deep, heavy tillage.

For 43° shank use a 7° wedge. See page 110.

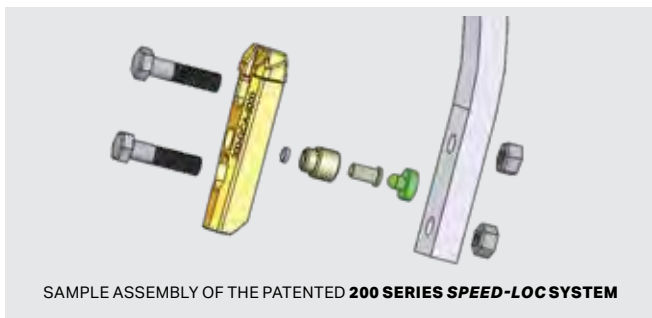


200-QCA-5020

FITS: European built shanks

BOLT HOLE SPACING:
63-80mm center to center.

BOLTS:
M12-Din608 10.9 plow bolts.



SAMPLE ASSEMBLY OF THE PATENTED 200 SERIES SPEED-LOC SYSTEM

Don't forget the Speed Release Tool!

The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from the *Speed-Loc* Adapters. See page 78.

Not sure which adapter or bolts you need? See the *Speed-Loc* adapter chart on pages 80-81. For a complete list of bolt lengths, see page 114.



200-QCA-5030

FITS: Horsch shanks

BOLT HOLE SPACING:
2-1/4" (57mm)
center to center.

BOLTS:
M12-Din608 10.9 plow bolts.

410 Series Quick Change Adapters

Speed Release Tool 200-REL-1010 must be used to remove product from all *Speed-Loc* adapters.



410-QCA-5000

FITS: 50° Shanks on Bourgault chisel plows and Morris Concept 2000 with 755lb trip.

BOLT HOLE SPACING:

2-1/4" (57mm) center to center.

BOLTS:

1/2" (12mm) hex head bolts. See page 115.

NOTES: On a Bourgault four-hole shank, the center hole of the adapter should be plugged to protect the spring ball from NH3 gases when used as a NH3 applicator.

When installing 410 Series *Speed-Loc* Adapters for use with NH3, fill the hole behind the spring ball with plumber's putty to protect from degradation caused by NH3.



410-QCA-5010

FITS: 43° & 50° Shanks on all chisel plows except Bourgault, Morris Concept 2000 with 755lb trip, and some John Deere models.

BOLT HOLE SPACING:

1-3/4" to 3" (45-76mm) center to center slotted bolt hole spacing providing the ability to fit many different makes and models.

BOLTS: 1/2" (12mm) hex head bolts. See page 115.

NOTES: In rocky or abrasive conditions, the bottom nut may experience excessive wear or damage. This problem is alleviated by placing the bottom bolt in from the back of the shank and putting the nut inside the slot in front of the adapter.

For 43° shank use a 7° wedge. See page 110.



410-QCA-5020

FITS: Lemken shanks

BOLT HOLE SPACING:

1-3/4" (45mm) center to center.

BOLTS:

M12-DIN 608 10.9 plow bolts.



410-QCA-5060

FITS: Köckerling

BOLT HOLE SPACING: N/A

BOLTS:

M12-DIN 608 12.9 plow bolts.



410-QCA-5080

FITS: 50° Shanks on some older and current model John Deere 2410 and 2430 chisel plows, and Summers Superchisel.

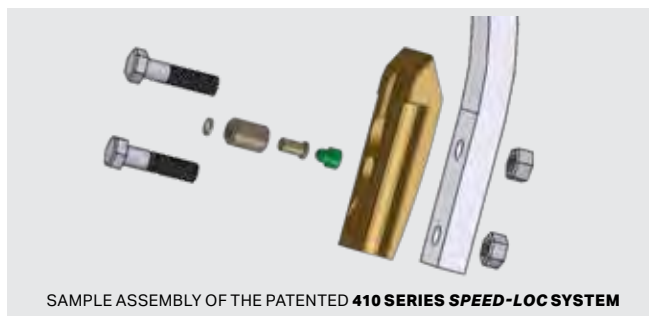
BOLT HOLE SPACING:

2-1/4" (57mm) center to center.

BOLTS:

For John Deere 1-1/4" shank use 1/2" x 3" Grade 8 hex head bolt prevailing torque lock nuts.

NOTES: Use bushing 880-BSH-2000 for installation on all John Deere shanks that have a split bottom bolt hole, and for Summers chisel plows. See page 110.



SAMPLE ASSEMBLY OF THE PATENTED 410 SERIES SPEED-LOC SYSTEM

Speed-Loc™ Accessories & Replacement Parts

Speed Release Tool 200-REL-1010 must be used to remove product from all *Speed-Loc* adapters.

						
200-SLC-1001	200-SLC-1010	200-SLC-1020	200-SLC-1030	200-SLC-1035	200-SLC-1037	200-SLC-1038
Replacement bushing for all 200 Series adapters. Comes complete with dust seal.	Replacement dust seal for all 200 & 410 Series adapters.	Replacement locking pin for all 200 & 410 Series adapters purchased after Nov 1, 2008.	Replacement spring ball for 200-QCA-4700 adapters.	Replacement spring ball for 200-QCA-4710, 200-QCA-5000, 200-QCA-5010 adapters.	Replacement spring ball for 200-QCA-5020 adapters.	Replacement spring ball for 200-QCA-5020 adapters. For use in special applications.
						
200-SLC-1039	410-SLC-1001	410-SLC-1022	410-SLC-1030	410-SLC-1050	100-HAM-4000	200-REL-1010
Replacement spring ball for 200-QCA-5030 adapters.	Replacement bushing for 410-QCA-5000, 410-QCA-5010, 410-QCA-5020 adapters. Comes complete with dust seal.	Replacement locking pin for all 410 Series adapters purchased prior to Nov 1, 2008. If 410 Series adapter was purchased after Nov 1, 2008 use 200-SLC-1020.	Replacement spring ball for 410-QCA-5000, 410-QCA-5010, 410-QCA-5020 adapters.	Replacement package for 410 Series adapters. Includes pin, bushing, spring ball, dust seal.	This 4lb (1.8kg) hammer is ideal for installing all quick change products.	The speed release tool must be used to remove 200 and 410 Series sweeps and openers off <i>Speed-Loc</i> adapters.

Speed-Loc™ Drivers

Choose the correct driver to install *Speed-Loc* products.

PART #	100-DRV-1010	100-DRV-1020	200-DRV-1013	200-DRV-1030	400-DRV-1000	400-DRV-1010
200-ASY-7523	■					
200-HOE-1700		■				
200-KNF-0800, 0801, 0810, 0811, 0813, 7560						■
200-KNF-0863, 7501, 7510, 7511, 7512, 7521, 7525, 7531, 7542	■					
200-KNH-7551						■
200-TIP-0511, 0801, 0802, 0803, 0811 when used on 200-KNH-4000, 4010 OR 4020						■
200-TIP-1011				■		
200-TIP-2011, 3000, 3001, 3011, 4011 when used on 200-KNH-4000, 4010 OR 4020			■			
200-VRT-1040				■		
410-ASY-0823, 7523						■
410-KNF-0801, 0825, 0826, 0831, 7551, 7553, 7560						■
410-KNH-7524, 7526, 7540						■
SWEEPS & SPOONS					■	



Speed-Loc™ Installation & Removal

Scan the QR codes with your smart phone camera to watch the how-to videos.

Preparation

Before installing a new set of seeding openers, fertilizer knives, sweeps or spikes on new or existing adapters, ensure that you visually inspect each adapter for the following signs of damage:

- broken, damaged or missing locking pin
- completely depressed locking pin that will not retract back out (damaged spring ball)
- loose bolts, cracks and other signs of wear

Scan the QR code on the right with your smart phone camera to watch the video on how to replace a ball spring on Speed-Loc Quick Change adapters.



SCAN WITH SMART
PHONE CAMERA

Installation

When installing any product always use safety glasses and specified driver. See page 78.

- 1 Firmly install product by sliding it onto the adapter by hand, over the locking pin, until it will no longer travel on the adapter.
- 2 Place the appropriate driver over the product being installed to prevent damage to the nose or leading edge. With a 4lb. (1.8 kg) hammer, strike the driver with the hammer several times driving the product upward onto the adapter until it contacts the top stopper.
- 3 Product being driven on should be over the locking pin and snapped or locked into place in the hole of the product being driven on. Pin should be visible through the hole. **Product must be driven all the way on!** Putting the product on part way and going into the field will NOT place the product onto the adapter.
- 4 Verify the pin has sprung into place of the hole in the product. **Failure to do so will cause loss of product.**
- 5 After a few hundred acres of work, check adapters. If they are loose on the shank re-torque the bolts.



SCAN WITH SMART
PHONE CAMERA

New product may move slightly on the adapters. This is normal wear. If you notice any damage to the product or pin, replace damaged parts and return damaged parts to dealer. If product installs very hard and will not drive over the locking pin, do not use the product. Return it to dealer for replacement and warranty.

Scan the QR code above with your smart phone camera to watch the video on how to install products onto Speed-Loc Quick Change adapters.

Removal

When removing the product always use safety glasses and Speed-Release Tool (200-REL-1010). See page 78.

- 1 Strike the product sharply with a hammer on both sides of the product to loosen the rust and dirt between the adapter and product.
- 2 Place the hook of the release tool on top of the product stem; pressing down on the handle to depress the locking pin.
- 3 While depressing the locking pin strike the top driving plate of the release tool with a hammer to move the product downward to clear the pin on the adapter and STOP. Driving the release tool beyond the pin will result in damaging the release tool, locking pin and spring ball.
- 4 Remove the release tool; strike the top of the stem to remove the product the remainder of the way off the adapter body.
- 5 Clean and inspect the adapter and locking pin for damage. Follow installation instructions for reinstalling products.



SCAN WITH SMART
PHONE CAMERA

Scan the QR code on the right with your smart phone camera to watch the video on how to remove products from Speed-Loc Quick Change adapters.

Speed-Loc™ Adapter Chart

For North America & Australia

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES					410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080	400-WDG-0300
AFM												
180, 200, 250, 880	43°	7/16	1-3/4	■			■					
150, 2300, 310, 300	50°	1/2	2-1/4				■			■		
350 SCARICHISEL	50°	1/2	2-1/4				■			■		
ANDERSON												
FIELD CULTIVATORS	47°	3/8	1-3/4	■								
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
BOURGAULT												
FIELD CULTIVATORS 6200, 6800, 8800, 8810, 8910	47°	1/2	1-3/4	■								
SPS 270, 360	50°	1/2	2-1/4						■			
5710, 5810 AIR DRILL	47°	1/2	1-3/4	■								
CHISEL PLOWS 9200, 9400, 9500, 9800	50°	1/2	2-1/4			■			■			
BRADY												
FIELD CULTIVATORS	43°	3/8	1-5/8	(NO ADAPTER FOR THIS APPLICATION)								
CHISEL PLOWS	50°	7/16	2-1/4				■			■		
BRILLION												
HFCT MO	47°	7/16	1-5/8	■								
BUSH HOG												
FIELD CULTIVATORS	47°	3/8	1-3/4	■								
CHISEL PLOWS	50°	7/16	2-1/4				■			■		
CASE												
FC, FCW, FCM, 10, 50, 55, 645	47°	3/8	1-3/4	■								
4700, 4900, 5000, 645	43°	1/2	2-1/4				■	■			■	
CASE IH												
255 TIGER-MATE II	47°	7/16	1-3/4	■								
45, 4300, 4500, 4600, 4700, 4800, 4900	47°	7/16	1-3/4	■								
VIBRASHANK	47°	7/16	1-3/4	■								
VIBRACHISEL 5600, 5700	43°	1/2	2-1/4				■	■		■		■
5800, 5850, 5900	50°	1/2	2-1/4				■			■		
PTX 300, PTX 600	50°	1/2	2-1/4				■			■		
ATX 400, 700 AIR HOE DRILL 350 LB OR 550 LB TRIP	50°	1/2	2-1/4				■					
CONCORD												
C-SHANKS	50°	1/2	2-1/4				■			■		
EDGE-ON SHANKS				(NO ADAPTER FOR THIS APPLICATION)								
CCIL												
202, 179, 279, 379	47°	3/8	1-3/4	■								
203, 204, 205	43°	1/2	2-1/2							■		■
806, 807, 808	43°	1/2	2-1/2							■		■
CHISEL PLOW (THICK SHANK)	50°	7/16	2-1/4				■			■		
CNH (DMI)												
FIELD CULTIVATORS	47°	7/16	1-3/4	■								
DEGELMAN												
FIELD CULTIVATORS	47°	7/16	1-3/4	■								
500	50°	7/16	2-1/4				■			■		
3000-2	50°	7/16	2-1/4				■			■		
DEMSTER												
CHISEL PLOWS	54°	7/16	2-1/4	(NO ADAPTER FOR THIS APPLICATION)								
EDWARDS												
CHISEL PLOWS	50°	7/16	2-1/4				■			■		
FORWARD												
BOURGAULT TYNE												
280, 2700, 2800, 8800	47°	1/2	1-3/4	■								
FUSION DELTA	47°	1/2	1-3/4		■							
3000 & 400 SERIES C/P	50°	1/2	2-1/4				■			■		
EZEE-ON												
FIELD CULTIVATORS 3500, 3550, 5550	47°	1/2	1-3/4	■								

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES					410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080	400-WDG-0300
6000 WITH FIELD CULTIVATOR SHANK OPTION	47°	1/2	1-3/4	■								
6000 WITH CHISEL PLOW SHANK OPTION	50°	1/2	2-1/4				■			■		
ALL CHISEL PLOWS INCLUDING 7450	50°	1/2	2-1/4				■			■		
7560, 7550	47°	1/2	1-3/4	■								
FLEXI-COIL												
200, 400, 800	47°	7/16	1-3/4	■								
300, 340, 600	50°	1/2	2-1/4				■			■		
820 & ST820 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4	■								
820 & ST820 WITH 550 LB & 650 LB TRIPS	50°	1/2	2-1/4				■			■		
5000 & 7500 DEPENDING ON SHANK OPTION	47°	1/2	1-3/4	■								
5000 & 7500 DEPENDING ON SHANK OPTION	50°	1/2	2-1/4				■			■		
5000HD & 5500 AIR HOE DRILL 350 LB OR 550 LB TRIP	50°	1/2	2-1/4				■					
FRIGGSTAD												
FIELD CULTIVATORS	47°	7/16	1-3/4	■								
CHISEL PLOWS (OLDER MODELS)	50°	7/16	2-1/4				■			■		
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
GASON												
5100 SERIES	46°	7/16	1-3/4	■								
SCARITILL & EH SCARITILL	47°	1/2	BOTH	■								
7100 ECOTILL	50°	1/2	2-1/4				■			■		
GESSNER												
HR 1200	50°	1/2	2-1/4							■		
GLENCOE												
PC, MPC, PCMW	47°	3/8	1-3/4	■								
CHISEL PLOWS	47°	7/16	2-1/4				■			■		■
HIGH CLEARANCE	50°	7/16	1-2/4				■			■		
GRAHAM												
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
400, 500, 1600, 2600	54°	7/16	2-1/4	(NO ADAPTER FOR THIS APPLICATION)								
GREAT PLAINS												
8000, 7000	47°	7/16	1-3/4	■								
GYRAL IMPLEMENTS												
PENETRATOR T23, T25	43°	1/2	BOTH				■	■		■		■
AG BNOSS T30	43°	7/16	BOTH				■	■		■		■
GYSLER												
CHISEL PLOWS	47°	7/16	2-1/4				■			■		■
HESSTON												
FIELD CULTIVATORS	47°	1/2	1-3/4	■								
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
HINIKER												
FIELD CULTIVATORS	47°	7/16	1-3/4	■								
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
HORWOOD BAGSHAW												
350 SCARIBAR EDGE-ON	47°	1/2	1-3/4	■								
HORWARD												
CHISEL PLOWS²	50°	9/16	2-1/4				■			■		
INTERNATIONAL												
45, 46, 47	47°	7/16	1-3/4	■								
10, 50, 55, 75, 509, 645	43°	1/2	2-1/4							■		■
JANKE												
UNIV DIRECT DRILL	50°	1/2	2-1/4				■			■		
U/D DRILL (HYD) EARLY	50°	1/2	2-1/4				■			■		

NOTES: 200 Series adapters should not be used on a chisel plow or heavy duty cultivator unless being used for seeding.

¹Sweeps will not work with this combination, for knife openers only. ²Bolt sizes will require adapting.

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES					410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080	400-WDG-0300
JEOFFROY												
450	47°	3/8	1-3/4	■								
JOHN DEERE ³												
1000, 1010, 1050	43°	3/8	1-5/8	(NO ADAPTER FOR THIS APPLICATION)								
726, 2200, 2210, 2230	47°	7/16	1-3/4	■								
940, 960, 985	47°	7/16	1-3/4	■								
730	47°	7/16	1-3/4	■								
735, 737, 610, 655, 680, 685, 1600, 1610, 1650	50°	1/2 ⁵	2-1/4			4	■			5	6	■
1810, 1820, 1830, 1835 WITH 350 LB TRIPS	47°	1/2	1-3/4	■								
1810, 1820, 1830, 1835, H500, H500F WITH 500 LB TRIPS	50°	1/2 ⁵	2-1/4				■			5	6	■
2400, 2410, 2430	50°	1/2 ⁵	2-1/4				■			5	6	■
JOHN SHEARER												
UNIVERSAL CULTIVATOR	47°	7/16	1-3/4	■								
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
KONGSKILDE												
C-SHANK	47°	1/2	1-3/4	■								
S-TINE	47°	7/16	1-5/8	■								
KRAUSE												
600, 900, 3100, 4200	47°	7/16	1-3/4	■								
4000	50°	1/2	2-1/4				■			■		
5630, 5635	47°	1/2	1-3/4	■								
LEON												
CP77	43°	7/16	2-1/4			■	■			■		■
ALL OTHER LEON CHISEL PLOWS	50°	1/2	2-1/4				■			■		
FIELD CULTIVATORS	47°	7/16	1-3/4	■								
MASSEY FERGUSON												
160	47°	3/8	1-3/4	■								
259	47°	7/16	1-3/4	■								
124, 125, 126, 128, 133	54°	7/16	2-1/4	(NO ADAPTER FOR THIS APPLICATION)								
MF 7300 CHISEL PLOW	50°	1/2	2-1/4				■			■		
MORRIS												
L225, L233, L240, L320	47°	3/8	1-3/4	■								
CHALLENGER II, 9000, 9100	47°	1/2	1-3/4	■								
MAXIM, MAXIM II	47°	1/2	1-3/4	■								
MAXIM III	47°	1/2	1-3/4	■								
CONCEPT 2000 WITH 400 LB TRIP	47°	1/2	1-3/4	■								
CONCEPT 2000 WITH 550 LB TRIP	47°	1/2	1-3/4	■								
CONCEPT 2000 WITH LH 755 LB TRIP	50°	1/2	2-1/4				■			■		
220, 4, 5, 6, 7	43°	7/16	2-1/4				■	■		■		■
MAGNUM I	43°	1/2	2-1/4				■	■		■		■
912, 8900, 9000, MAGNUM II	50°	1/2	2-1/4				■			■		
MAGNUM III WITH LH 755 LB TRIP	50°	1/2	2-1/4				■			■		
CHALLENGER L2 480	47°	3/8	1-3/4	■								
NEW HOLLAND												
SD 440A, SD 550A AIR HOE DRILL (DEPENDING ON SHANK OPTION)	47°	1/2	1-3/4	■								
SD 440A, SD 550A AIR HOE DRILL (DEPENDING ON SHANK OPTION)	50°	1/2	2-1/4				■			■		
ST 540 CHISEL PLOW	50°	1/2	2-1/4				■			■		
ST 250	47°	1/2	1-3/4	■								
ST 830 WITH 350 LB TRIP	47°	1/2	1-3/4	■								

MAKE & MODEL	SHANK DEGREE	BOLT SIZE	HOLE CENTER	200 SERIES					410 SERIES			
				200-QCA-4700	200-QCA-4710	200-QCA-5000	200-QCA-5010	100-WDG-0700	410-QCA-5000	410-QCA-5010	410-QCA-5080	400-WDG-0300
ST 830 WITH 550 LB TRIP (DEPENDING ON SHANK OPTION)	47°	1/2	1-3/4		■							
ST 830 WITH 550 LB TRIP (DEPENDING ON SHANK OPTION)	50°	1/2	2-1/4				■			■		
ST 830 WITH 650 LB TRIP	50°	1/2	2-1/4				■			■		
P2050, P2060 AIR HOE DRILL 350 LB OR 550 LB TRIP	50°	1/2	2-1/4				■					
NOBLE												
XR20	50°	7/16	2-1/4				■			■		
8000, 4000 MULTI-TOOL	50°	1/2	2-1/4				■			■		
QUINSTAR												
FIELD FINISHER	47°	7/16	1-3/4		■							
FALLOW MASTER III	50°	1/2	2-1/4				■			■		
RYAN (RFM)												
1000 SERIES	47°	7/16	1-3/4		■							
SALFORD												
FIELD CULTIVATOR	47°	7/16	1-3/4		■							
SCHULTE												
1000 SERIES	50°	7/16	2-1/4				■			■		
SMALE												
MULTIVATOR	47°	7/16	1-3/4		■							
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
SUMMERS												
SUPERCHISEL	50°	1/2	2-1/4								■	
SUNFLOWER												
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
5000, 6000, 7000	47°	7/16	1-3/4		■							
TAYLOR												
FIELD CULTIVATORS	47°	3/8	1-3/4		■							
UNVERFERTH												
PERFECTA II FIELD CULTIVATORS	47°	7/16	1-3/4		■							
VERSATILE												
DH730, DH750 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4		■							
C500 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4		■							
C600 WITH 350 LB & 550 LB TRIPS	47°	1/2	1-3/4		■							
C600 WITH 600 LB TRIP	50°	1/2	2-1/4				■			■		
C700 WITH 650 LB TRIP	50°	1/2	2-1/4				■			■		
VICTORY												
CHISEL PLOWS	50°	1/2	2-1/4				■			■		
WIL-RICH												
FIELD CULTIVATORS	47°	7/16	1-3/4		■							
CHISEL PLOWS (1993 & OLDER)	43°	7/16	2-1/4				■	■		■		■
CHISEL PLOWS (1994 & NEWER)	50°	1/2	2-1/4				■			■		
XL2, QX2	47°	7/16	1-3/4		■							
YEOMANS GRAHAM HOEMES												
US CHISEL PLOWS	50°	1/2	2-1/4				■			■		

NOTES: *880-BSH-2000 should be used with all split John Deere shanks. ⁴Use wedge 880-WDG-0300 to correct pitch. ⁵Shanks that are mounted with a vertical bolt (28" standard). ⁶Shanks that are mounted with a horizontal bolt (32" standard).



Sweeps & Chisels

24-30%

LONGER WEAR

- ♥ INCREASED DURABILITY
- ♥ REDUCED STEM WEAR
- ♥ BETTER VALUE

Blue Armour is available in select Bolt-On, 200 & 410 Series *Speed-Loc™* Quick Change sweeps and spoons. Not available in products with a welded wear pad.



**LOOK FOR THE BLUE
ARMOUR SHIELD!**



We are pleased with the performance of our Blue Armour Sweeps. **We were hoping for 30% more usable life than the competitor's sweep but we are getting closer to 50%.**

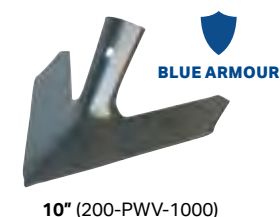
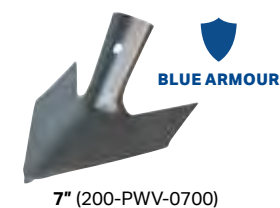
The wear pattern is better because Blue Armour retains the leading tip of the sweep much longer. This keeps us at a more consistent depth.

Ryan Tucker, North Dakota, USA

Tillage

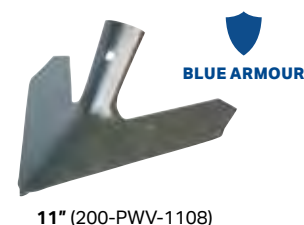
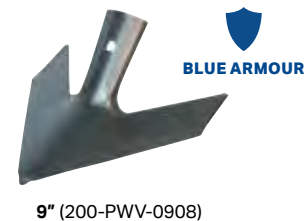
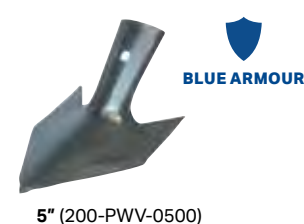
200 Series Speed-Loc™

Blue Armour options available. Look for the blue shield!



SIZE	THICKNESS	PRODUCT NO.
4" (100mm)	1/4" (6mm)	200-PWV-0400
5" (140mm)	1/4" (6mm)	200-PWV-0500
5" (140mm)	5/16" (8mm)	200-PWV-0508
7" (180mm)	1/4" (6mm)	200-PWV-0700
7" (180mm)	5/16" (8mm)	200-PWV-0708
9" (230mm)	1/4" (6mm)	200-PWV-0900
9" (230mm)	5/16" (8mm)	200-PWV-0908
10" (254mm)	1/4" (6mm)	200-PWV-1000
10" (254mm)	5/16" (8mm)	200-PWV-1008
11" (280mm)	1/4" (6mm)	200-PWV-1100
11" (280mm)	5/16" (8mm)	200-PWV-1108
12" (305mm)	1/4" (6mm)	200-PWV-1200
12" (305mm)	5/16" (8mm)	200-PWV-1208
13" (330mm)	1/4" (6mm)	200-PWV-1300
13" (330mm)	5/16" (8mm)	200-PWV-1308
14" (355mm)	1/4" (6mm)	200-PWV-1400
14" (355mm)	5/16" (8mm)	200-PWV-1408
16" (406mm)	5/16" (8mm)	200-PWV-1608*
18" (457mm)	5/16" (8mm)	200-PWV-1808*

*THESE SWEEPS ARE ONLY AVAILABLE IN 5/16" (8MM) THICKNESS AND WERE DEVELOPED FOR WESTERN EUROPE. IT IS NOT RECOMMENDED FOR MOST NORTH AMERICAN FIELD CONDITIONS.



To ensure proper installation of **Speed-Loc™** products, use the appropriate driver listed with each product. For a chart of all drivers see page 78.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from Speed-Loc™ Adapters. See page 78.



BLUE ARMOUR

200-GFO-0308**GOOSEFOOT**

This "Goosefoot" tillage tool is 5/16" (8mm) thick and 2-1/2" (63mm) wide. Designed specifically for vibrating s-tine cultivators.

**200-PWV-0405****SWEEP W/ HARDENED WEAR PAD**

This sweep is 1/4" (6mm) thick and 4" (100mm) wide with a 3/8" hardened wear pad (52-56 HRC). The nose runs 1/2" (12mm) lower than the other 200 Series sweeps. This increased pitch improves penetration in hard or compacted ground. Ideal for fall tillage or deep working.



EMBEDDED CARBIDE ON UNDERSIDE

200-PWV-0405ML**MAX LIFE™ SWEEP W/ HARDENED WEAR PAD**

This sweep is 1/4" (6mm) thick and 4" (100mm) wide with a 3/8" hardened wear pad (52-56 HRC). Heat applied, embedded carbide on the underside. The nose runs 1/2" (12mm) lower than the other 200 Series sweeps. This increased pitch improves penetration in hard or compacted ground. Ideal for fall tillage or deep working.



200-PWV-0528

**200-PWV-0428
200-PWV-0528****SWEEP W/ HARDENED WEAR PAD**

These sweeps are 5/16" (8mm) thick with a 3/8" x 2" hardened wear pad (52-56 HRC) which increases the life expectancy.

200-PWV-0428 is 4" (100mm) wide.

200-PWV-0528 is 5" (127mm) wide.

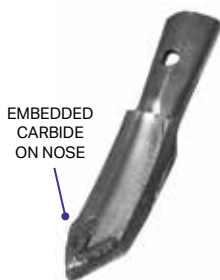
Designed mainly for fall tillage or deep working.

**200-PWV-0928****SWEEP W/ HARDENED WEAR PAD**

This sweep is 5/16" (8mm) thick and 9" (230mm) wide. It has a 3/8" x 2" hardened wear pad (52-56 HRC) that extends up the entire stem which increases its life expectancy.

**200-SPK-0200****SPIKE**

This spike is 5/8" (15mm) thick, 2-1/4" (57mm) wide and 6" (150mm) long. It has a hardened wear pad (52-56 HRC) for extra life. This tool is ideal for primary tillage or banding fertilizer.



EMBEDDED CARBIDE ON NOSE

200-SPK-0200ML**MAX LIFE™ SPIKE**

This spike is 5/8" (15mm) thick, 2-1/4" (57mm) wide and 6" (150mm) long. It has a hardened wear pad (52-56 HRC) for extra life. Heat applied, embedded carbide has been added to the nose. Ideal for primary tillage or banding fertilizer.

**200-SPK-0215****SPIKE**

This spike is 5/8" (15mm) thick, 2-1/4" (57mm) wide and 6" (150mm) long. It has a hardened wear pad (52-56 HRC) that extends to the top of the stem to prevent wear in abrasive soil or when working at greater depths.

**200-SPK-0230****SPIKE**

This sweep is 5/8" (15mm) thick, 2" (50mm) wide and 4" (102mm) long with a hardened wear pad (52-56 HRC) for extra life. This tool is made specifically for slurry injection.

410 Series Speed-Loc™

Blue Armour options available. Look for the blue shield!



4" (410-PWV-0400)



6" (410-PWV-0600)
(410-PWV-0608)

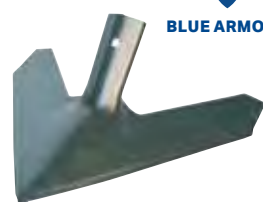


8" (410-PWV-0800)
(410-PWV-0808)

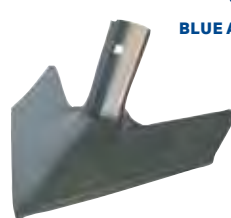
SIZE	THICKNESS	PRODUCT NO.
4" (100mm)	1/4" (6mm)	410-PWV-0400
6" (150mm)	1/4" (6mm)	410-PWV-0600
6" (150mm)	5/16" (8mm)	410-PWV-0608
8" (200mm)	1/4" (6mm)	410-PWV-0800
8" (200mm)	5/16" (8mm)	410-PWV-0808
10" (254mm)	1/4" (6mm)	410-PWV-1000
10" (254mm)	5/16" (8mm)	410-PWV-1008
12" (305mm)	1/4" (6mm)	410-PWV-1200
12" (305mm)	5/16" (8mm)	410-PWV-1208
14" (355mm)	1/4" (6mm)	410-PWV-1400
14" (355mm)	5/16" (8mm)	410-PWV-1408
16" (406mm)	1/4" (6mm)	410-PWV-1600
16" (406mm)	5/16" (8mm)	410-PWV-1608
18" (457mm)	5/16" (8mm)	410-PWV-1808



18" (410-PWV-1800)
(410-PWV-1808)



16" (410-PWV-1600)
(410-PWV-1608)



12" (410-PWV-1200)
(410-PWV-1208)



14" (410-PWV-1400)
(410-PWV-1408)



To ensure proper installation of **Speed-Loc™** products, use the appropriate driver listed with each product. For a chart of all drivers see page 78.

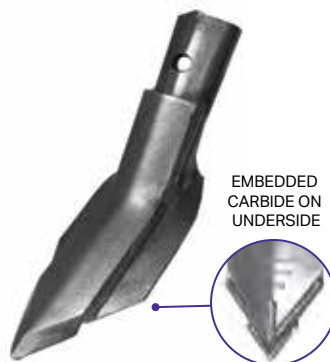


The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from Speed-Loc™ Adapters. See page 78.

**410-PWV-0418****SWEEP W/ HARDENED WEAR PAD**

This sweep has a 3/8" x 2" hardened wear pad (52-56 HRC) for longer life. The sweep is 5/16" (8mm) thick and 4" (100mm) wide.

This sweep runs at a 13° pitch, steeper than the regular 410 Series sweep and provides more disturbance. This tool is ideal for primary tillage or banding fertilizer.

**410-PWV-0418ML****MAX LIFE™ SWEEP W/ HARDENED WEAR PAD**

This sweep has a 3/8" x 2" hardened wear pad (52-56 HRC) for longer life. The sweep is 5/16" (8mm) thick and 4" (100mm) wide. Heat applied, embedded carbide has been added to the underside.

This sweep runs at a 13° pitch, steeper than the regular 410 Series sweep and provides more disturbance. Ideal for primary tillage or banding fertilizer.

**410-PWV-0518****SWEEP W/ HARDENED WEAR PAD**

This sweep is 5/16" (8mm) thick x 5" (127mm) wide. It has a 3/8" x 2" hardened wear pad (52-56 HRC) for longer life.

It runs at a 3° pitch, the same as a standard sweep.

**410-SPK-0200****SPIKE**

This heavy-duty spike is 5/8" (15mm) thick, 2" (50mm) wide and 9" (230mm) long. It has a 3/8" x 2" hardened wear pad (52-56 HRC) for extra life. This tool is ideal for primary tillage or banding fertilizer.

**410-SPK-0200ML****MAX LIFE™ SPIKE**

This heavy-duty spike is 5/8" (15mm) thick, 2" (50mm) wide and 9" (230mm) long. It has a 3/8" x 2" hardened wear pad (52-56 HRC) for extra life. Heat applied, embedded carbide has been added to the underside. Ideal for primary tillage or banding fertilizer.

Interested in BTT Products?

Try before you buy with the BTT Demo Program.
See page 53.

Bolt-On Sweeps, Spikes & Chisels

Blue Armour options available. Look for the blue shield!

The Extended Stem Advantage

Bolt-on sweeps fit all makes and models of tillage equipment. The stem, or neck, on these bolt-on sweeps are longer than that of our competitors. This extended stem allows us to punch the bolt holes higher than what you'd see on any other brand of sweep.

The results are reduced stem breakage, less wear on the shank, and less wear and stone damage to the bottom bolt. Less wear on the shank extends the useful life of the sweep, while less stone damage on the bottom bolt means fewer problems when changing shovels.

The extended stem feature saves you time and money.



BLUE ARMOUR

043 Series

FITS: Heavy-duty chisel plows with 43° shanks and 2-1/4" to 2-1/2" (57-64mm) hole centers.

SIZE	THICKNESS	PRODUCT NO.
8" (200mm)	1/4" (6mm)	043-PWV-0800
10" (254mm)	1/4" (6mm)	043-PWV-1000
12" (305mm)	1/4" (6mm)	043-PWV-1200
14" (355mm)	1/4" (6mm)	043-PWV-1400
16" (420mm)	1/4" (6mm)	043-PWV-1600
18" (460mm)	1/4" (6mm)	043-PWV-1800



BLUE ARMOUR

047 Series

FITS: Field cultivators with 47° shanks and 1-3/4" (45mm) hole centers.

SIZE	THICKNESS	PRODUCT NO.
4" (100mm)	1/4" (6mm)	047-PWV-0400
7" (180mm)	5/16" (8mm)	047-PWV-0708
9" (230mm)	1/4" (6mm)	047-PWV-0900
9" (230mm)	5/16" (8mm)	047-PWV-0908
10" (254mm)	1/4" (6mm)	047-PWV-1000
10" (254mm)	5/16" (8mm)	047-PWV-1008
11" (280mm)	1/4" (6mm)	047-PWV-1100
12" (305mm)	1/4" (6mm)	047-PWV-1200
13" (330mm)	1/4" (6mm)	047-PWV-1300
13" (330mm)	5/16" (8mm)	047-PWV-1308



BLUE ARMOUR

050 Series

FITS: Heavy-duty chisel plows with 50° shanks and 2-1/4" (57mm) hole centers.

SIZE	THICKNESS	PRODUCT NO.	SIZE	THICKNESS	PRODUCT NO.
6" (150mm)	1/4" (6mm)	050-PWV-0600	14" (355mm)	1/4" (6mm)	050-PWV-1400
8" (200mm)	1/4" (6mm)	050-PWV-0800	16" (420mm)	1/4" (6mm)	050-PWV-1600
10" (254mm)	1/4" (6mm)	050-PWV-1000	16" (420mm)	5/16" (8mm)	050-PWV-1608
12" (305mm)	1/4" (6mm)	050-PWV-1200	18" (460mm)	1/4" (6mm)	050-PWV-1800



070-RCH-0451

REVERSIBLE CHISEL

This reversible chisel is 5/16" (8mm) thick and 4" (100mm) wide. It has 1-3/4" (45mm) bolt hole spacing to fit light and medium-duty field cultivators.

It is used mostly for primary tillage in the fall or early spring.



070-RCH-0452

REVERSIBLE CHISEL

This reversible chisel is 5/16" (8mm) thick and 4" (100mm) wide. It has 2-1/4" to 2-1/2" (57-63mm) bolt hole spacing.

It is used mostly for primary tillage in the fall or early spring.



070-RSP-0200A

REVERSIBLE SPIKE

This reversible spike is 2" (50mm) wide, 5/8" (16mm) thick and 14-1/2" (368mm) long. It has 1-3/4" to 2" (45-57mm) bolt hole spacing.

It is shorter than our other two reversible spikes, and is designed for light to medium-duty field cultivators or for chisel plows where ground clearance in transport is a concern.



070-RSP-0210A

REVERSIBLE SPIKE

FITS: Bourgault chisel plow and Morris LH 755 shank.

On 43° machines the shank curvature may interfere with installation.

This reversible spike is 2" (50mm) wide, 5/8" (16mm) thick and 17" (431mm) long.

It has 2-1/4" (57mm) bolt hole spacing and is flat through the bolt hole section.



070-RSP-0220A

REVERSIBLE SPIKE

FITS: Any chisel plow shank except Bourgault chisel plow and Morris LH 755 shank.

On 43° machines the shank curvature may interfere with installation.

This reversible spike is 2" (50mm) wide, 5/8" (16mm) thick and 16-1/2" (419mm) long.

It has 2-1/4" to 2-1/2" (57-63mm) bolt hole spacing and is curved at the bolt hole section.



SHOWN WITH
200-TIP-0802

030-HLD-2000

HOLDER

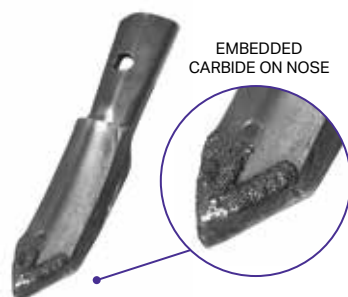
FITS: John Deere 2210 47° shank, Salford Curved Flat S-Tine two piece shank.

This holder allows the use of our 200 Series tips, thus providing a much longer wearing alternative to what is currently common in the industry.

Tips sold separately. See pages 12-13.

MAX LIFE™ Sweeps, Spikes & Chisels

Speed-Loc™ & Bolt-On Options



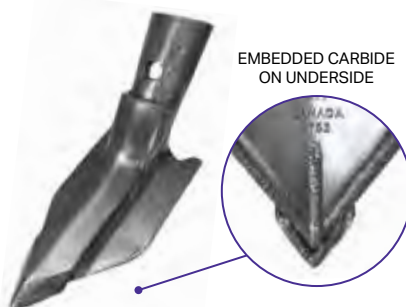
200-SPK-0200ML

QUICK CHANGE SPIKE

FITS: 200 Series Speed-Loc™ (47° shank)

The spike is 5/8" (15mm) thick, 2-1/4" (57mm) wide and 6" (150mm) long. It has a hardened wear pad (52-56 HRC) for extra life.

Heat applied, embedded carbide has been added to the nose. Ideal for primary tillage or banding fertilizer.



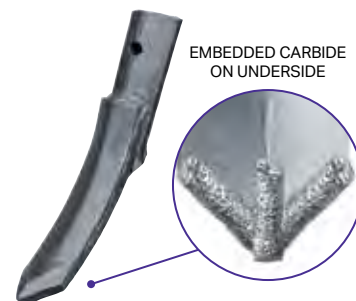
200-PWV-0405ML

QUICK CHANGE SWEEP

FITS: 200 Series Speed-Loc™ (47° shank)

The sweep is 1/4" (6mm) thick and 4" (100mm) wide with a 3/8" hardened wear pad (52-56 HRC) which increases the life expectancy. Heat applied, embedded carbide has been added to the underside.

The sweep nose runs 1/2" (12mm) lower than the other 200 Series sweeps. The increased pitch improves penetration in hard or compacted ground. Ideal for fall tillage or deep working.



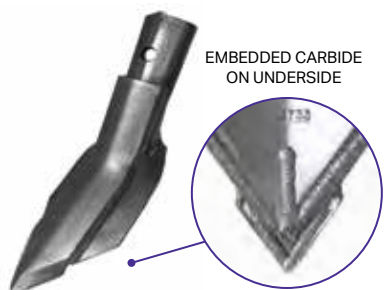
410-SPK-0200ML

QUICK CHANGE HD SPIKE

FITS: 410 Series Speed-Loc™ (47° shank)

The spike is 2" (50mm) wide, 5/8" (15mm) thick and 9" (230mm) long. It has a 3/8" x 2" hardened wear pad (52-56 HRC) for extra life. Heat applied, embedded carbide has been added to the underside.

Ideal for primary tillage or banding fertilizer.



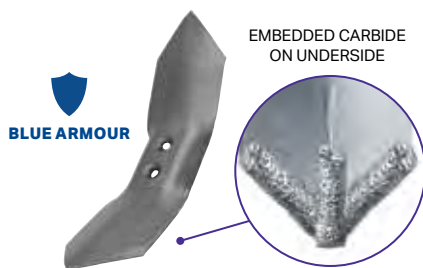
410-PWV-0418ML

QUICK CHANGE SWEEP

FITS: 410 Series Speed-Loc™ (47° shank)

The sweep has a 3/8" x 2" hardened wear pad (52-56 HRC) for longer life. It is 5/16" (8mm) thick and 4" (100mm) wide. Heat applied, embedded carbide has been added to the underside.

This sweep runs at a 13° pitch, steeper than the regular 410 Series sweep.

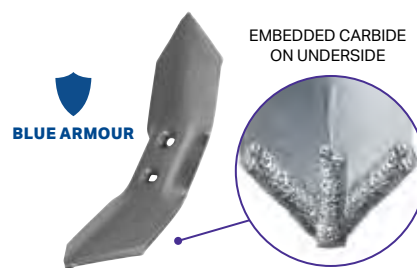


070-RCH-0451ML

REVERSIBLE CHISEL

This reversible chisel has heat applied, embedded carbide added to the underside. It is 5/16" (8mm) thick and 4" (100mm) wide. It has 1-3/4" (45mm) bolt hole spacing to fit light- and medium-duty field cultivators.

It is used mostly for primary tillage in the fall or early spring.



070-RCH-0452ML

QUICK CHANGE HD SPIKE

FITS: 410 Series Speed-Loc™ (47° shank)

The spike is 4" (100mm) wide, 5/16" (8mm) thick and 9" (230mm) long. It has a hardened wear pad (52-56 HRC) for extra life. Heat applied, embedded carbide has been added to the underside. Ideal for primary tillage or banding fertilizer.

Cast Sweeps & Chisel Plow Points

Manufactured by Richmond Brothers Equipment and available through the BTT dealer network!



810-SIH-0700

CAST SWEEP

FITS: Case IH

SIZE: 7"

OVERVIEW: 47°, 1-3/4" Centers, 7/16" Bolt

RICHMOND BROS PART #: RB7IH



810-SIH-0900

CAST SWEEP

FITS: Case IH

SIZE: 9"

OVERVIEW: 47°, 1-3/4" Centers, 7/16" Bolt

RICHMOND BROS PART #: RB9IH



810-SJD-0700

CAST SWEEP

FITS: John Deere

SIZE: 7"

OVERVIEW: 47°, 1-3/4" Centers, 7/16" Bolts

RICHMOND BROS PART #: RB7JD



810-SJD-0900

CAST SWEEP

FITS: John Deere

SIZE: 9"

OVERVIEW: 47°, 1-3/4" Centers, 7/16" Bolts

RICHMOND BROS PART #: RB9JD



810-CPP-0200

CHISEL PLOW POINT

SIZE: 2"

OVERVIEW: Reversible, 1-3/4" to 2-3/4" Hole Centers

RICHMOND BROS PART #: RBDC



810-CPP-0750

CHISEL PLOW POINT

SIZE: 7-1/2"

OVERVIEW: Winged, 50°, 2-1/4" Hole Centers, 1/2" Bolts

RICHMOND BROS PART #: RBPR



810-SKG-0275

SHOVEL

FITS: Kongskilde

SIZE: 2-3/4"

OVERVIEW: Single 7/16" Bolt

RICHMOND BROS PART #: RB234K



810-SKG-0400

SHOVEL

FITS: Kongskilde

SIZE: 4"

OVERVIEW: Duck Foot, Single 7/16" Bolt

RICHMOND BROS PART #: RB4K

Deep Rippers

Manufactured by Richmond Brothers Equipment and available through the BTT dealer network!



815-RIH-0300

DEEP RIPPER

FITS: Case IH, DMI

SIZE: 3"

OVERVIEW: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB3C



815-RIH-0500

DEEP RIPPER

FITS: Case IH, DMI

SIZE: 5"

OVERVIEW: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB5C



815-RIH-0700

DEEP RIPPER

FITS: Case IH, DMI

SIZE: 7"

OVERVIEW: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB7C



815-RIH-1000

DEEP RIPPER

FITS: Case IH, DMI

SIZE: 10"

DESCRIPTION: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB10C



815-RIH-1400

DEEP RIPPER

FITS: Case IH, DMI

SIZE: 14"

DESCRIPTION: 1-1/4" Parabolic,
1 Hole Ripper Point

RICHMOND BROS PART #: RB14C



815-RJD-0300

DEEP RIPPER

FITS: John Deere, Kuhn Krause
Dominator

SIZE: 3"

DESCRIPTION: 1-1/4" Parabolic,
2 Hole Ripper Point

RICHMOND BROS PART #: RB3

**815-RJD-0500**

DEEP RIPPER

FITS: John Deere, Kuhn Krause Dominator**SIZE:** 5"**DESCRIPTION:** 1-1/4" Parabolic, 2 Hole Ripper Point**RICHMOND BROS PART #:** RB5**815-RJD-0700**

DEEP RIPPER

FITS: John Deere, Kuhn Krause Dominator**SIZE:** 7"**DESCRIPTION:** 1-1/4" Parabolic, 2 Hole Ripper Point**RICHMOND BROS PART #:** RB7**815-RJD-1000**

DEEP RIPPER

FITS: John Deere, Kuhn Krause Dominator**SIZE:** 10"**DESCRIPTION:** 1-1/4" Parabolic, 2 Hole Ripper Point**RICHMOND BROS PART #:** RB10**815-RJD-1400**

DEEP RIPPER

FITS: John Deere, Kuhn Krause Dominator**SIZE:** 14"**DESCRIPTION:** 1-1/4" Parabolic, 2 Hole Ripper Point**RICHMOND BROS PART #:** RB14

Built rugged for superior abrasion & impact resistance.

The Richmond Brothers Equipment line of ripper points is designed to stand up in adverse, rocky conditions with little to no damage or breakage and has outlasted competitive points in side-by-side field testing.

Wear protection is built into the ripper design, so when it's time to change points, it's fast, easy, and you can reuse attaching hardware.

The high center crown design of Richmond cast cultivator sweeps gives an overall smoother field finish with considerably less slabbing in sticky conditions. Sweeps have an aggressive point and a more durable cutting edge for excellent weed-cutting and an unbeatable wear-life.

Shank Savers & Nuggets

Manufactured by Richmond Brothers Equipment and available through the BTT dealer network!



815-RSS-0010



815-RSS-0020



815-RSS-0040

815-RSS-0010

SHANK SAVER

FITS: Krause Dominator

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.

RICHMOND BROS PART #: RBSSCW

815-RSS-0020

SHANK SAVER

FITS: Krause Dominator

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.

RICHMOND BROS PART #: RBSSDN

815-RSS-0030

SHANK SAVER

FITS: John Deere

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.

RICHMOND BROS PART #: RBSSCW

815-RSS-0040

SHANK SAVER

FITS: Landoll-style Parabolic Shanks

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.

RICHMOND BROS PART #: RBSSLW



815-RNW-0010

NUGGET

OVERVIEW: Half moon shape weld-on nugget, old style.



815-RNW-0011

NUGGET

OVERVIEW: Triangle shape weld-on nugget, new style.



815-RNW-0020

NUGGET

OVERVIEW: Landoll Wedge

MAX LIFE™ Scrapers

Keep disks and packer wheels clean and free of debris.



015-JDS-2680

FITS: John Deere, Norwood

REPLACES OEM#:
John Deere 55-4-01605,
5NS55401716



015-SRC-0001

FITS: Bourgault 3310, 3320 & 3420, SE, QDA & XTC, John Deere 1870 Conserva Pak

REPLACES OEM#:
Bourgault N/A
John Deere A88182

NOTES: Packer scraper. Sized to fit multiple mounting brackets. Scraper arm assembly is required on Bourgault machines.



015-SRC-0004

FITS: Wishek Tandem Disk Model 814NT, 842NT & 862NT

REPLACES OEM#:
Wishek W105216
Flaman PW105216

NOTES: Disk Scraper



015-SRC-0005

**015-SRC-0005
015-SRC-0006**

FITS: Case IH 800 & 900, NH P2070 & 2075

REPLACES OEM#:
CNH Precision Scraper RH 84336698
CNH Precision Scraper LH 84336699

015-SRC-0006 LEFT
015-SRC-0005 RIGHT

NOTES: Packer scraper.



010-DEG-1000

FITS: Degelman Pro-Till

REPLACES OEM#:
572955



010-DEG-1001ML

FITS: Degelman Pro-Till

REPLACES OEM#:
572957

NOTES: This scraper has MAX LIFE™ tungsten embedded carbide applied to wear edges.



015-ASY-0012

**015-ASY-0011
015-ASY-0012**

Bourgault SE & QDA scraper arm assembly.

NOTES:
015-ASY-0011 LEFT
015-ASY-0012 RIGHT



015-ASY-0022

**015-ASY-0021
015-ASY-0022**

Bourgault XTC scraper arm assembly.

NOTES:
015-ASY-0021 LEFT
015-ASY-0022 RIGHT

MAX LIFE™ Tungsten Carbide Harrow Tines

Ask your BTT dealer for the latest additions to our lineup!

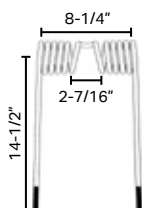
010-HAR-3814ML

COIL I.D.: 1-15/16"

DIMENSIONS: 3/8" X 8-1/4" X 14-1/2"

FITS:

Summers/Herman (OEM #8H1110S)



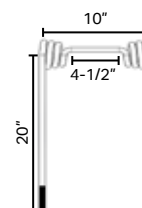
010-HAR-5000ML

COIL I.D.: 2-9/16"

DIMENSIONS: 1/2" X 10" X 20"

FITS:

Salford (OEM #R60000)



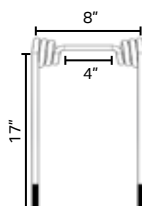
010-HAR-3817ML

COIL I.D.: 1-13/16"

DIMENSIONS: 3/8" X 8" X 17"

FITS:

Bourgault (OEM #2070-27)



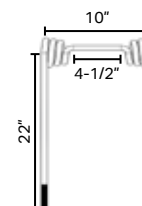
010-HAR-5001ML

COIL I.D.: 2-11/16"

DIMENSIONS: 1/2" X 10" X 22"

FITS:

Bourgault XR770 (OEM #2070-79, 2070-79-01)



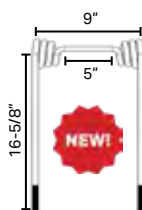
010-HAR-3818ML

COIL I.D.: 1-11/16"

DIMENSIONS: 3/8" X 9" X 16-5/8"

FITS:

Degelman (OEM #143101)



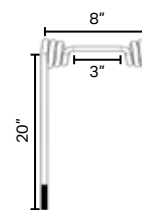
010-HAR-5008ML

COIL I.D.: 2-5/8"

DIMENSIONS: 1/2" X 8" X 20"

FITS:

Bourgault 8800/8810/8910 series Cultivator, SPS 270/360/365, and 9000 Series CP (OEM #2070-76)



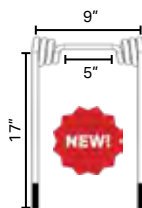
010-HAR-3819ML

COIL I.D.: 2"

DIMENSIONS: 3/8" X 9" X 17"

FITS:

Summers (OEM #8H1150S)



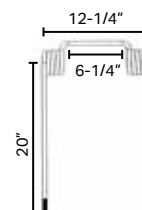
010-HAR-5020ML

COIL I.D.: 2"

DIMENSIONS: 1/2" X 12-1/4" X 20"

FITS:

John Deere (OEM #N236516)



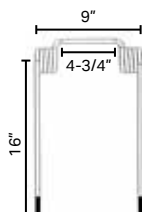
010-HAR-4309ML

COIL I.D.: 2-1/16"

DIMENSIONS: 7/16" X 9" X 16"

FITS:

John Deere (OEM #N236890)



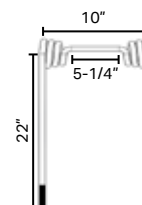
010-HAR-5022ML

COIL I.D.: 2-3/4"

DIMENSIONS: 1/2" X 10" X 22"

FITS:

Elmer's (OEM #21370, 12137000)



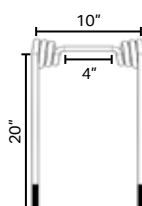
010-HAR-4375ML

COIL I.D.: 2-1/8"

DIMENSIONS: 7/16" X 10" X 20"

FITS:

Bourgault 6000/Delmar 5500 (OEM #2070-77, #2070-77-01)



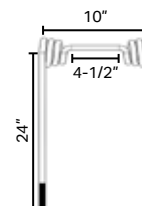
010-HAR-5024ML

COIL I.D.: 2-3/4"

DIMENSIONS: 1/2" X 10" X 24"

FITS:

Rite Way (OEM #404-0039)



3 YEAR Limited Warranty

From the date of purchase against breakage for three years prorated to a maximum of 100%.

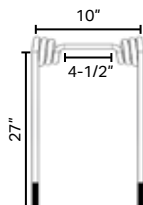
010-HAR-5027ML

COIL I.D.: 2-5/8"

DIMENSIONS: 1/2" X 10" X 27"

FITS:

Morris (OEM #H27900)



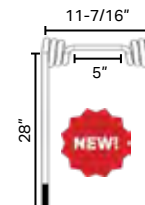
010-HAR-5628ML

COIL I.D.: 2-3/4"

DIMENSIONS: 9/16" X 11-7/16" X 28"

FITS:

Rite Way (OEM #404-0028, 404-0035)



010-HAR-5028ML UNIVERSAL

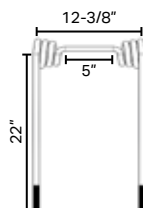
COIL I.D.: 2-9/16"

DIMENSIONS: 1/2" X 12-3/8" X 22"

FITS:

CNH/Flexi-Coil (OEM #87505461)

Summers/Herman (OEM #8H1180S)



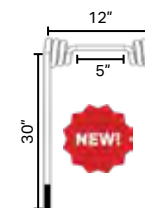
010-HAR-6230ML

COIL I.D.: 2-3/4"

DIMENSIONS: 5/8" X 12" X 30"

FITS:

Degelman (OEM #143509)



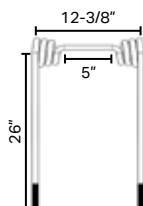
010-HAR-5029ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 1/2" X 12-3/8" X 26"

FITS:

Summers (OEM #8H1184S)



010-HAR-6250ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 5/8" X 12-1/2" X 27"

FITS:

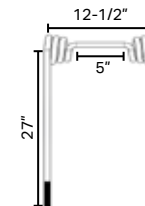
Bourgault (OEM #2070-70, 8606-13)

Brandt (OEM #B021751, C516584)

Gates (OEM #120229, 120230)

Rite Way (OEM #404-0030)

Summers/Herman (OEM #8H1195S)



010-HAR-5625ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 12" X 26"

FITS:

Bourgault/Delmar (OEM #2070-28)

Brandt (OEM #B021750)

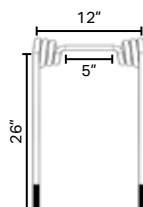
Flexi-Coil (OEM #90081C, 87445314)

Gates (OEM #120240, 120241)

Pillar (OEM #212-033, 212-145)

Rite Way (OEM #404-0010)

Summers/Herman (OEM #8H1190S)



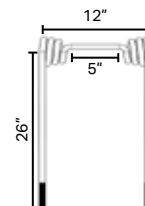
010-DEG-5626ML

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 12" X 26"

FITS:

Degelman (OEM #143112, 143517)



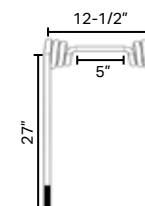
010-DEG-6227ML

COIL I.D.: 2-5/8"

DIMENSIONS: 5/8" X 12-1/2" X 27"

FITS:

Degelman (OEM #143113, 143507, 143516)



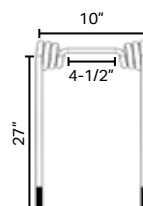
010-HAR-5627ML

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 10" X 27"

FITS:

Morris (OEM #H49499)



MAX LIFE™ Harrow Tine Quick Reference

Ask your BTT dealer for the latest additions to our lineup!

OEM	OEM NUMBER	DIMENSIONS	BTT PART NUMBER
BOURGAULT / DELMAR			
BOURGAULT	#2070-27	3/8" x 8" x 17"	010-HAR-3817ML
BOURGAULT / DELMAR	#2070-28	9/16" x 12" x 26"	010-HAR-5625ML Universal
BOURGAULT	#2070-70	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
BOURGAULT 9500CP	#2070-76	1/2" x 8" x 20"	010-HAR-5008ML
BOURGAULT 6000 / DELMAR 5500	#2070-77	7/16" x 10" x 20"	010-HAR-4375ML
BOURGAULT / DELMAR	#2070-77-01	7/16" x 10" x 20"	010-HAR-4375ML
BOURGAULT XR770	#2070-79	1/2" x 10" x 22"	010-HAR-5001ML
BOURGAULT XR770	#2070-79-01	1/2" x 10" x 22"	010-HAR-5001ML
BOURGAULT	#8606-13	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
BRANDT			
	#B021750	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#B021751	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
	#C516584	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
CNH / FLEXI-COIL			
	#87505461	1/2" x 12-3/8" x 22"	010-HAR-5028ML Universal
	#90081C	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#87445314	9/16" x 12" x 26"	010-HAR-5625ML Universal
DEGELMAN			
	#143101	3/8" x 9" x 16-5/8"	010-HAR-3818ML
	#143509	5/8" x 12" x 30"	010-HAR-6230ML
	#143112	9/16" x 12" x 26"	010-DEG-5626ML
	#143517	9/16" x 12" x 26"	010-DEG-5626ML
	#143113	5/8" x 12-1/2" x 27"	010-DEG-6227ML
	#143507	5/8" x 12-1/2" x 27"	010-DEG-6227ML
	#143516	5/8" x 12-1/2" x 27"	010-DEG-6227ML
ELMER'S			
	#21370	1/2" x 10" x 22"	010-HAR-5022ML
	#12137000	1/2" x 10" x 22"	010-HAR-5022ML
GATES			
	#120240	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#120241	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#120229	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
	#120230	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
JOHN DEERE			
	#N236516	1/2" x 12-1/4" x 20"	010-HAR-5020ML
	#N236890	7/16" x 9" x 16"	010-HAR-4309ML
MORRIS			
	#H27900	1/2" x 10" x 27"	010-HAR-5027ML
	#H49499	9/16" x 10" x 27"	010-HAR-5627ML
PILLAR			
	#212-033	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#212-145	9/16" x 12" x 26"	010-HAR-5625ML Universal
RITE WAY			
	#404-0039	1/2" x 10" x 24"	010-HAR-5024ML
	#404-0010	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#404-0028	9/16" x 11-7/16" x 28"	010-HAR-5628ML
	#404-0035	9/16" x 11-7/16" x 28"	010-HAR-5628ML
	#404-0030	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal
SALFORD			
	#R60000	1/2" x 10" x 20"	010-HAR-5000ML
SUMMERS / HERMAN			
	#8H1110S	3/8" x 8-1/4" x 14-1/2"	010-HAR-3814ML
	#8H1150S	3/8" x 9" x 17"	010-HAR-3819ML
	#8H1180S	1/2" x 12-3/8" x 22"	010-HAR-5028ML Universal
	#8H1184S	1/2" x 12-3/8" x 26"	010-HAR-5029ML Universal
	#8H1190S	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#8H1195S	5/8" x 12-1/2" x 27"	010-HAR-6250ML Universal



6X

LONGER WEAR

3YR

LIMITED WARRANTY

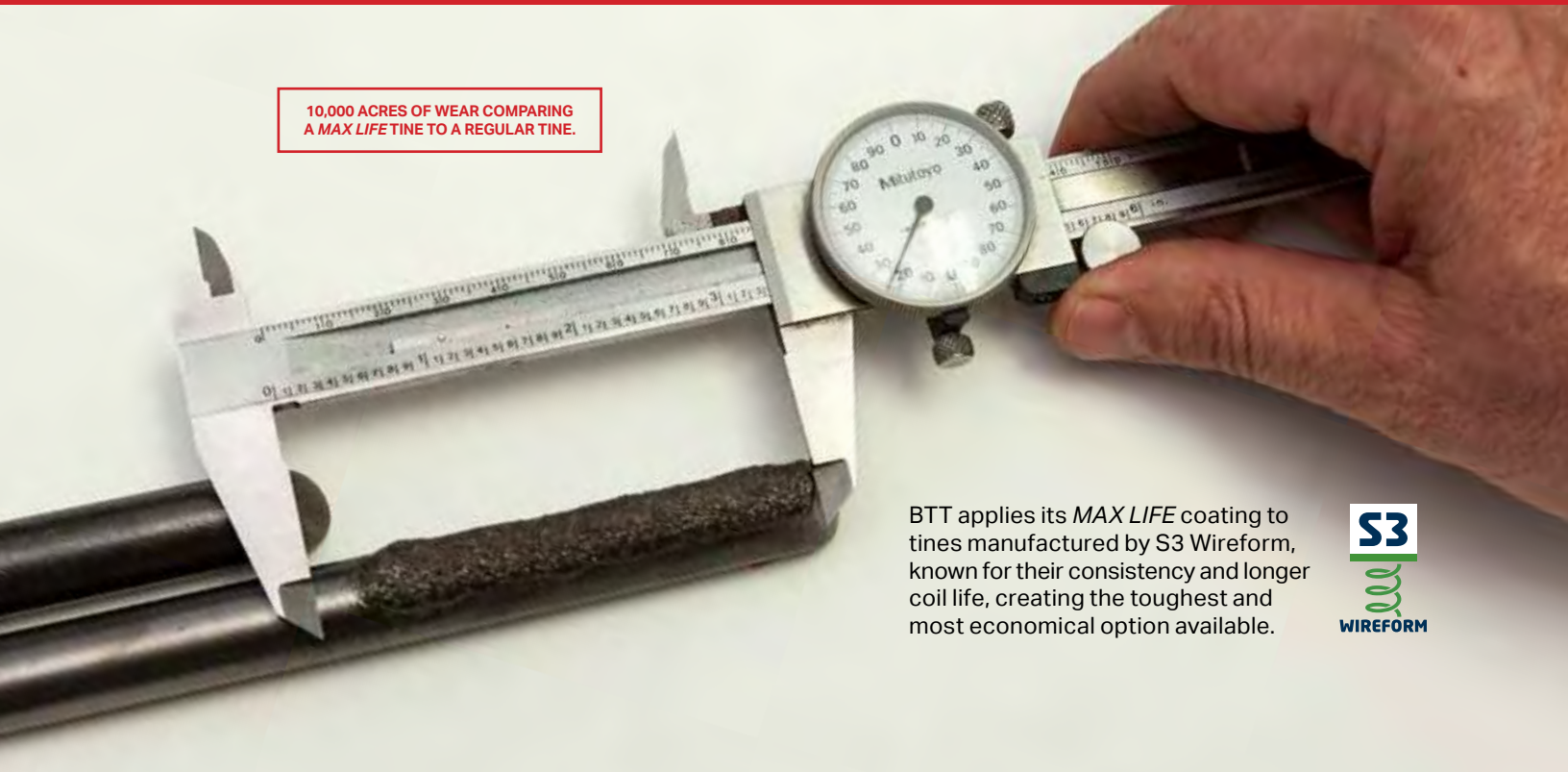


There is no more need to worry about excessive tine wear in dry soil conditions before the fall rain. People tend to put off harrowing when the soil is too dry. Harrowing behind the combine as soon as possible maximizes the benefits of straw management and even next years' germination.

This product changes the harrowing/time management decision, and there is a good chance the life of this tine will be close to the life of the harrow bar itself. I wouldn't hesitate to recommend the *MAX LIFE* tine to anyone.

Shawn Blandin, Synergy Farms, Saskatchewan, Canada

10,000 ACRES OF WEAR COMPARING
A *MAX LIFE* TINE TO A REGULAR TINE.



BTT applies its *MAX LIFE* coating to tines manufactured by S3 Wireform, known for their consistency and longer coil life, creating the toughest and most economical option available.



NIAUX 200

Boost Your Performance



The research and development efforts in metallurgy and heat treatment have resulted in a line of coulters and disk blades that outperform the competition. Special boron-carbon steel along with patented transitional heat treatment results in a consistently longer wearing blade with less dulling on the leading edge without sacrificing durability.

LONG-LASTING

Thanks to increased hardness in the working area, *Niaux 200* disks have a 20-40% longer lifespan than other disks on the market.

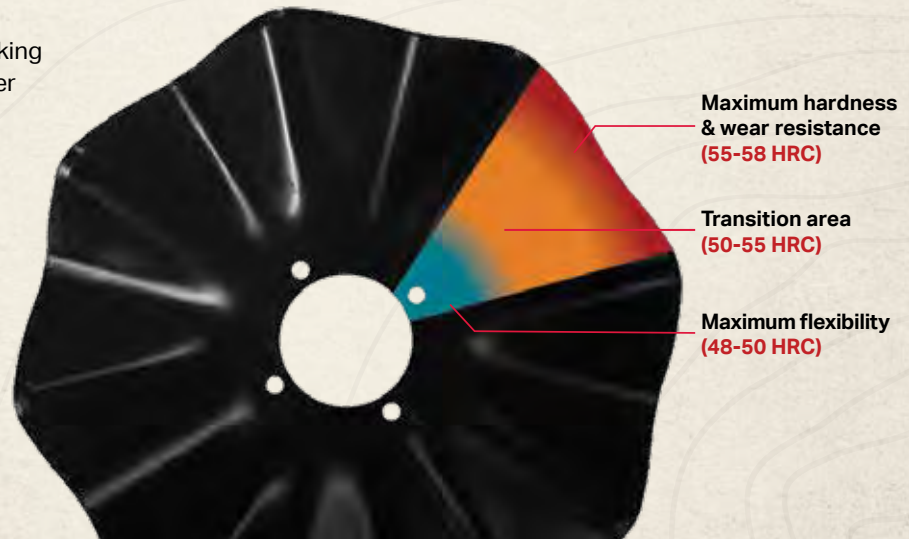
EFFECTIVE

Niaux 200 disk blades ensure a perfect cutting quality throughout their lifetime.





ROBUST

Niaux 200 disk blades are very resilient and are designed to resist extreme shocks and deformations.

Lifetime replacement warranty against breakage.



TO LEARN MORE VISIT forgesdeniaux.com or tillagetoools.ca/niaux-200-disk-blades/

			
500-200-1000	500-200-1015	500-200-1035	500-200-1040
FITS: BOURGAULT	FITS: BOURGAULT	FITS: BOURGAULT	FITS: BOURGAULT
Bourgault MRB® III, 3720 Coulter Drill (Original Manufacturer's Part)	Bourgault MRB® ID, 3820 Coulter Drill (Original Manufacturer's Part)	Bourgault MRB® I / Series 20 (Original Manufacturer's Part)	Bourgault MRB® II / Series 25 (Original Manufacturer's Part)
Replaces OEM Part # 2085-04	Replaces OEM Part # 2085-05	Replaces OEM Part # 6407-25	Replaces OEM Part # 6717-99
Disk Type Flat Coulter Single Bevel	Disk Type Flat Coulter Single Bevel	Disk Type Flat Coulter Double Bevel	Disk Type Flat Coulter Double Bevel
Dimensions 20-1/2" x 5mm	Dimensions 20-1/2" x 5mm	Dimensions 18-3/8" x 4-1/2mm	Dimensions 20-3/8" x 4-1/2mm
Pilot Hole Size 3.660"	Pilot Hole Size 3.660"	Pilot Hole Size 3.645"	Pilot Hole Size 3.645"
# of Bolt Holes 4 Beveled Holes	# of Bolt Holes 4	# of Bolt Holes 4	# of Bolt Holes 4

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**500-200-1025****FITS:** AMITY / CONCORD**AVAILABLE FALL 2023**

Replaces OEM Part #	34354
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3-5/8"
# of Bolt Holes	4

**500-200-1005****FITS:** CNH

Case: IH 500, 500T
NH: P2080 & P2085

Replaces OEM Part #	87488385
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3.5"
# of Bolt Holes	4

**517-200-1020****FITS:** CNH / DMI**AVAILABLE FALL 2023****CIH, DMI:** 530C & 730C**CNH:** 870 & 875**Salford:** I-5100 & 5200

Replaces OEM Part #	87457566
Disk Type	Plain Concave
Dimensions	24-3/4" x 6-1/2mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1005****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**

Pro-Till
 Original Manufacturer's Part

Replaces OEM Part #	143556
Disk Type	Plain Concave
Dimensions	20" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**517-200-1010****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**

Pro-Till
 Original Manufacturer's Part

Replaces OEM Part #	143550
Disk Type	Plain Concave
Dimensions	18" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**517-200-1025****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**

Pro-Till
 Original Manufacturer's Part

Replaces OEM Part #	143562
Disk Type	Plain Concave
Dimensions	22" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

AVAILABLE IN 2024!
 BLADES TO FIT

AMAZONE
 Notched
 20" x 5mm

SPEED-TILLER / CASE IH
 Notched
 24" x 6.5mm

WISHEK
 Smooth
 28" x 8mm

**522-200-1010****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143557
Disk Type	U Notch Concave
Dimensions	20" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1020****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143553
Disk Type	Double V Notch Concave
Dimensions	20" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1025****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143566
Disk Type	Double V Notch Concave
Dimensions	22" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1030****FITS:** DEGELMAN**AVAILABLE SUMMER 2023**Pro-Till
Original Manufacturer's Part

Replaces OEM Part #	143563
Disk Type	U Notch Concave
Dimensions	22" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**510-200-1000****FITS:** GREAT PLAINS**AVAILABLE FALL 2023**

Turbo Chopper, Turbo-Max , Turbo Till & Turbo Till II

Replaces OEM Part #	820-011C
Disk Type	20 Wave RT Coulter
Dimensions	20-1/2" x 6-1/2mm
Pilot Hole Size	1-3/4" Round
# of Bolt Holes	N/A

**511-200-1000****FITS:** GREAT PLAINS**AVAILABLE FALL 2023**

Vantage I Fertilizer Coulter, Zone Coulter & HD Utility Coulter

Replaces OEM Part #	820-215C
Disk Type	20 Wave RT Coulter
Dimensions	18" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	4

**500-200-1010****FITS:** JOHN DEERE

JD 750, 752, 1560, 1590, 1690, 1850, 1860, 1890, 1890 CCS, 1895, 1990 & 1835 SFP Air Hoe, N500, N500F & H500F

Replaces OEM Part #	N283804
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3"
# of Bolt Holes	4

**517-200-1030****FITS:** JOHN DEERE / NORWOOD**JD:** 2680H**Norwood:** Kwik-Till

Replaces OEM Part #	JD NS90340003 NW 18199A & 19028A
Disk Type	Plain Concave
Dimensions	20" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1040****FITS:** JOHN DEERE / NORWOOD**JD:** 2680H**Norwood:** Kwik-Till

Replaces OEM Part #	JD NS90340002 NW 18354A
Disk Type	Notched Concave
Dimensions	20" x 6-1/2mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1000****FITS:** LEMKEN**AVAILABLE FALL 2023**

Heliodor 8

Replaces OEM Part #	3490471
Disk Type	Notched Concave
Dimensions	18" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	6

**522-200-1005****FITS:** LEMKEN**AVAILABLE FALL 2023**

Rubin 9

Replaces OEM Part #	3490467
Disk Type	Notched Concave
Dimensions	24-5/8" x 6mm
Pilot Hole Size	N/A
# of Bolt Holes	5

**522-200-1035****FITS:** LEMKEN**AVAILABLE FALL 2023**

Heliodor 9

Replaces OEM Part #	34910027
Disk Type	Notched Concave
Dimensions	20" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**500-200-1020****FITS:** PILLAR**AVAILABLE FALL 2023**

DH Series

Replaces OEM Part #	206-007
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3-5/8"
# of Bolt Holes	4

**505-200-1000****FITS:** Salford

Salford I-1100 & I-1200

Replaces OEM Part #	10010764 & CT512008
Disk Type	8 Wave Coulter
Dimensions	20" x 4-1/2mm
Pilot Hole Size	4"
# of Bolt Holes	4

**505-200-1005****FITS:** Salford**AVAILABLE FALL 2023**

Salford I-1100 & I-1200

Replaces OEM Part #	10010766 & CT512013
Disk Type	13 Wave Coulter
Dimensions	20" x 4-1/2mm
Pilot Hole Size	4"
# of Bolt Holes	4

**505-200-1010****FITS:** SalfordSalford I-2100, I-2200 (all)
Salford I-4100 (back 2 rows)
Salford I-4200 (all but front row)

Replaces OEM Part #	10010768 & CT512208
Disk Type	8 Wave Coulter
Dimensions	21-3/4" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**505-200-1015****FITS:** Salford**AVAILABLE FALL 2023**Salford I-2100, I-2200 (all)
Salford I-4100 (back 2 rows)
Salford I-4200 (all but front row)

Replaces OEM Part #	CT512213 & 10010769
Disk Type	13 Wave Coulter
Dimensions	22-3/4" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1015 & 1017****FITS:** Salford / Sunflower**AVAILABLE FALL 2023****Salford:** I-4100 (first 2 rows), I-4200 (front row) & I-5100 (all)
Sunflower: 4410, 4411, 4412, 4510, 4511 & 4530

Replaces OEM Part #	CT512250 & 10010771
Disk Type	Plain Concave
Dimensions	
517-200-1015	22-1/4" x 5mm
517-200-1017	22-1/4" x 6-1/2mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1020****FITS:** SALFORD / CNH / DMI**AVAILABLE FALL 2023****Salford:** I-5100 & 5200**CIH/DMI:** 530C & 730C**CNH:** 870 & 875

Replaces OEM Part #	CT503059 & 10010727
Disk Type	Plain Concave
Dimensions	24-3/4" x 6-1/2mm
Pilot Hole Size	4"
# of Bolt Holes	5

**505-200-1020****FITS:** SUMMERS**AVAILABLE FALL 2023**

Summers Super Coulters & Coulters Chisel

Replaces OEM Part #	8J1020
Disk Type	8 Wave Coulters
Dimensions	20" x 6-1/2mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**505-200-1025****FITS:** SUMMERS**AVAILABLE FALL 2023**

Summers Super Coulters & Coulters Chisel

Replaces OEM Part #	8J1021N
Disk Type	8 Wave Notch Coulters
Dimensions	22-1/2" x 6-1/2mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**515-200-1000****FITS:** SUMMERS**AVAILABLE FALL 2023**

Summers DK Series Disk

Replaces OEM Part #	8K5026
Disk Type	Plain Concave
Dimensions	26-1/4" x 6-1/2mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**521-200-1000****FITS:** SUMMERS**AVAILABLE FALL 2023**

Summers DT Series Disk

Replaces OEM Part #	8K5025N
Disk Type	Notched Concave
Dimensions	25" x 8mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**500-200-1030****FITS:** YETTER / AGPRO**AVAILABLE FALL 2023**

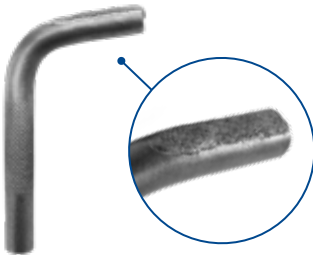
Replaces OEM Part #	Yetter 2571-169
Disk Type	Flat Coulters
Dimensions	18" x 4-1/2mm
Pilot Hole Size	3-15/16" Round
# of Bolt Holes	4

Can't find the disk you're looking for?
Contact us to chat with a BTT team member!

For the most current list of disk options, visit tillagetools.ca.

Unique Farms. Unique Needs.

Our line of specialty products is always expanding. Tell us what you'd like to see!



010-BTP-0750

THRESHING PIN

FITS: Pickett Equipment Bean Combine

OVERVIEW: A milled pocket on the threshing pin keeps the *MAX LIFE™* embedded carbide deposit close to flush with the profile of the pin, preventing seed damage. The fine grit of the carbide coating handles crops gently but wears much longer than standard threshing pins.

NOTES: Use existing hardware to install pins.



702-DEG-0012

MANURE SPREADER WEAR TIPS

FITS: Degelman M SERIES Manure Spreader

REPLACES OEM#: 246693

OVERVIEW: Wear tip with *MAX LIFE™* embedded carbide is applied to high wear areas.



010-WWS-9520



010-WWS-0762

010-WWS-0762

010-WWS-9520

WELDABLE WEAR STRIPS

OVERVIEW: Heat, bend and protect flat or curved surfaces on various machines and ground engaging tools such as seed drills, subsoilers, ploughs, cultivators, buckets, manure spreaders, root harvesters, mowers, augers and scrapers.

MAX LIFE™ weld-infused embedded tungsten carbide weldable wear strips have a 3/16" base and are available in two sizes.

010-WWS-0762 is 7-1/4" long x 5/8" wide, divided into 7 tiles.

010-WWS-9520 is 9-1/2" long x 2" wide, divided into 6 tiles.



We ran the *MAX LIFE* Threshing Pins as a demo to see if we could get more life out of our pins. The pins ran for 800 acres, and we found we had to switch out competitors' pins twice and were still running the *MAX LIFE* ones. Using the *MAX LIFE* pins means better quality thrashing with less time and cost on maintenance.

Tim van der Hoek, Alberta, Canada



010-PHT-9010 UNIVERSAL

POWER HILLER TINES

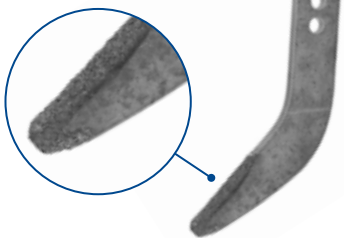
FITS: Struik and Baselier

SIZE: 8-3/4"

OVERVIEW: Bolt-on, universal short length tine is more durable than tile carbide in rocky conditions.

Laser cut from hardened steel with *MAX LIFE™* weld-infused embedded tungsten carbide applied to the leading edge for a longer wear life.

NOTES: Use existing hardware to install.



010-PHT-9015 UNIVERSAL

POWER HILLER TINES

FITS: Baselier and AVR

SIZE: 11"

OVERVIEW: Bolt-on, universal medium length tine is more durable than tile carbide in rocky conditions.

Laser cut from hardened steel with *MAX LIFE™* weld-infused embedded tungsten carbide applied to the leading edge for a longer wear life.

NOTES: Use existing hardware to install.



ADDITIONAL OPTIONS

POWER HILLER TINES

MAX LIFE™ Power Hiller Tines are available in a variety of lengths to fit Struik, AVR, Baselier, Grimme, Bau-Man and more.

Our line-up is always expanding!

Ask your BTT Dealer about current power hiller tine options or contact our team with your suggestions.



Why consider fall tillage?

It can improve your bottom line.

- Incorporates organic matter back into the soil, feeding soil microbes and improving soil health.
- Breaks up hard-pan to encourage strong root growth and allow spring snow melt to soak in.
- Suppresses stubborn weeds and reduces the possibility of chemical resistance.
- Aerates the soil, allowing oxygen and nutrients to flow through and feed microbes.
- Exposes black soil, warming soil quicker in the spring and promoting faster germination.
- Smooths uneven ground and wheel ruts while drying out wet fields.
- Saves time in the spring by applying fertilizer with fall tillage.

Check out our complete line of fall tillage products to fit most machine makes and models.

With the BTT Demo Program you can even try a few parts before you buy. See page 53 for details.



Blue Armour Sweeps
Page 82-89

MAX LIFE™ Harrow Tines
Page 96-98

Non-Freeze Fertilizer Knives
Page 69

Spikes
Page 85-90

Niaux 200 Disks
Page 100-105

Accessories & Reference

						
047-ACC-1001	047-ACC-1002	047-CAP-1001	100-WDG-0700	200-WDG-0206	200-WDG-0506	200-WDG-1000
Helps direct the flow of seed in a focused row behind the 047-ASY-1000, 047-ASY-1005P, or 675 Series openers.	2-1/4" center to center hole spacing. Allows you to adapt to any shank with an open bottom hole. Keeps the bottom bolt in place on the John Deere 1820, 1830 & 2410.	This cap is a replacement cap for 047-ASY-1000 and 047-ASY-1005P. See expanded assemblies for the right cap for your opener.	This 7° urethane wedge is designed to correct the pitch of 100-QCA-5010 and 200-QCA-5010 adapters on 43° shanks.	This 2° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.	This 5° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.	This 10° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.
						
200-WDG-1006	400-WDG-0300	400-WDG-0700	880-WDG-0300	880-WDG-0301	600-HHA-0750	614-ACC-1000
This 10° urethane wedge has 45-80mm bolt hole spacing. It is used to obtain proper sweep pitch on certain shanks.	This 3° urethane wedge is designed to correct the pitch of 410-QCA-5010 adapters on a 47° chisel plow shank, as well as the 50° bolt-on sweeps.	This 7° urethane wedge is designed to correct the pitch of 410-QCA-5010 adapters when installing on a 43° shank. It should also be used with the 600 Series knives when installing on a 43° shank.	This cast wedge adapter is designed for our 047, 610 and 612 seeding openers on all John Deere shanks.	This cast wedge adapter is designed for our 047, 610 and 612 seeding openers on all 50° curved bottom shanks, excluding John Deere.	This stainless steel hose holder mounts on any C-shank to hold the NH3 hose in place. It is completely height adjustable.	This bushing is necessary when using NH3 with the 614-TIP-2711 and 614-TIP-2712.
						
650-ACC-1000	650-ACC-1010	680-ACC-0001	680-ACC-0004	680-ACC-1000	694-ACC-1000	880-ASY-1010
This bracket limits the tripping distance of 650 fertilizer knives on JD 1870 Conserva Pak drills. Use with all fertilizer knives excluding: 650-HLD-1000GL 650-HLD-1000GN	This bracket limits the tripping distance of 650 fertilizer knives on JD 1870 Conserva Pak drills. Use with 650-HLD-1000GL & 650-HLD-1000GN knives.	This spacer plate is required for the Concord when installing any edge on product.	This conversion tab replaces the fertilizer tube on the 680-HLD-2000 so it can be converted to a single shoot opener.	Helps direct the flow of seed in a focused row behind 680-ASY-1000 openers. Use with openers prior to 2012.	This spacer is required when installing Titan Openers on anything except Concord.	This assembly is required to convert the standard 3/16" (5mm) O.D. liquid phos hose to 1/4" I.D. liquid phos delivery hoses on 047-ASY-1005P and 680-ASY-1000P.
						
880-BAR-3750	300-BSH-1200	300-BSH-1205	880-BSH-1000	880-BSH-1130	880-BSH-1150	880-BSH-1170
3/8" barb & 1/8" NPT coupler assembly used to convert standard 1/2" NH3 knives to fit a fertilizer hose with 3/8" ID. The 1/8" NPT fitting threads into the 1/2" Standard NH3 pipe and the 3/8" barb then fits the 3/8" ID fertilizer hose.	This bushing adapts air hoses from a 1-1/8" (28mm) O.D. hose up to a 1-1/4" (32mm) O.D. hose.	This bushing adapts air hoses from a 1-1/8" (28mm) O.D. hose to a 1-1/8" (28mm) O.D. hose.	This bushing is to be used with all VOS tips.	This bushing is required when using 1-1/8" (28mm) O.D. hose.	This bushing adapts air hoses from a 1-1/4" (32mm) O.D. hose up to a 1-1/2" (38mm) O.D. hose.	This bushing adapts 1-1/2" (38mm) O.D. hose to a 1-1/4" (32mm) hose.

						
880-BSH-2000	880-CPL-1010	880-CPL-2500	880-ORF-0001	880-GRD-1000	880-GRD-1010	880-HCL-0001
This bushing adapts 1-1/2" (38mm) O.D. hose to 1-1/4" (32mm) hose.	This bushing is to be used on John Deere split shanks with bolt ons and QCAs.	This barb and compression fitting are used when going from 1/4" (6mm) I.D. liquid phos tube to 3/16" stainless steel liquid phos tubes.	This coupler is used to attach a 1/4" (6mm) O.D. liquid phos tube. Included with all new liquid phos openers.	This orifice is used to concentrate and direct the flow of liquid fertilizer on 200-VRT-1061 and 200-KNF-0863.	This guard is used to protect liquid hose on all side band liquid openers in heavy trash conditions.	This clip eliminates hose movement, as the sharp corners embed into the granular pipe.
						
880-HCL-0002	880-HCL-0004	200-BNC-3100	300-BNC-4414	600-BNC-5000	200-ASY-0001	
Spacer clip may be required on the rear tube of the following side band openers: 683, 684, 686, 693, 694 where 1-1/8" (29mm) hose is used.	This 3/4" ear clamp is used to secure the rubber sleeve to the 1/2" pipe to protect the liquid phos tube.	Bolt and nut combo used to secure single shoot, paired row and side band tips onto holders. The bolt and nut should be changed when changing the tip. Over torquing will result in difficulty when removing.	Bolt and nut combo used to secure 600 series tips onto the 410, 599, 600 & 602 Series knife holders. Nut and bolt can be ordered separately. The bolt and nut should be changed when changing the tip to maintain locking ability of the nut.	Bolt and nut combo used to secure 600 series tips onto the 410, 599, 600 & 602 Series knife holders. Nut and bolt can be ordered separately. The bolt and nut should be changed when changing the tip to maintain locking ability of the nut.	This replacement rear assembly works with all Non-Freeze NH3 Speed-Loc™ fertilizer knives.	

Hoses popping out?

Don't forget the hose clip.

This clip eliminates hose movement, as the sharp corners embed into the granular pipe.

See illustration to right for proper installation.



C-shank

For 600 & 620 Series Openers

- Use 1/2" hex head Grade 8 bolt.
- Blue Loctite is also recommended

Torque shank bolts to 120-130 ft/lbs.

For 047-ASY-1000, 610 & 612 Series Openers

- **1" shanks** use 1/2" x 2" Grade 8 carriage bolt (961-CRG-2005)
- **1-1/4" shanks** use 1/2" x 2-1/4" Grade 8 carriage bolt (961-CRG-2255)
- **50° shanks other than Bourgault or Ezee-On** require a cast wedge adapter (880-WDG-0300 or 880-WDG-0301). See page 110.

When using wedges, different bolt lengths are required

- **1" shanks** use 1/2" x 2-1/4" Grade 8 bolt (961-CRG-2255)
- **1-1/4" shanks** use 1/2" x 2-1/2" Grade 8 bolt (961-CRG-2505)
- **1/2" stover lock nuts** (906-NPT-5005)

Torque shank bolts to 80-100 ft/lbs.

For 047-VRT-1040 & 047-KNH-1000 Openers

- **1" shanks** use 1/2" x 2" Plow bolts c/w lock washer and regular nut
- **7/8" and 3/4" shanks** use 1/2" x 1-3/4" Plow bolts c/w lock washer and regular nut

Edge On

For Bourgault 3310 & 3320 Edge On Shank

- **Use 3/8" x 2-1/4" Grade 8 Carriage bolts** (960-CRG-3755)
- **Use 3/8" Stover Lock Nut** (906-NPT-3755)

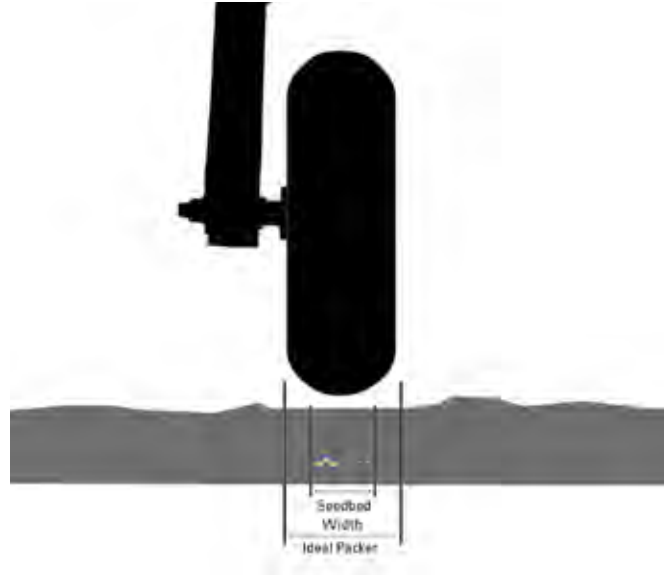
For Morris Maxim Edge On Shank

- **Use 3/8" x 2-1/4" Grade 8 carriage bolts** (960-CRG-3755)
- **Use 3/8" Stover Lock Nut** (906-NPT-3755)

For more detailed installation instructions refer to the individual part pages.

Packing Considerations

On-row packing is recommended to achieve good soil to seed contact for even germination. Generally, the packer wheel width should be equal to, or greater than, the width of the tip on the opener. The ideal result is a uniform depth of firm soil over the full seed row.

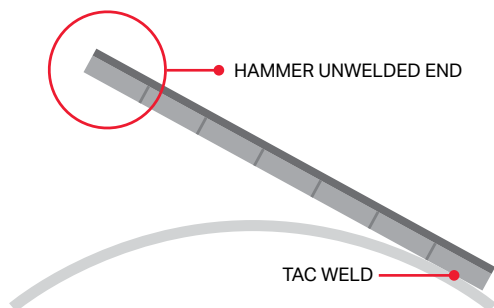


MAX LIFE™ Weldable Wear Strips Installation

Always clean the surface that the wear bar will be welded to, ensuring it's as flat and clean as possible. Tack weld the bar into position, then stitch weld in 2" length runs, alternating ends, or similar to minimize heat input.

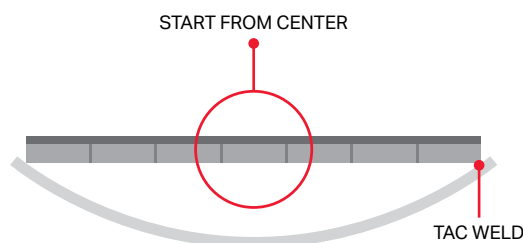
FOR OUTSIDE CURVES

Tack weld one end of the bar to the surface in at least three places, using a minimum of 1/2" weld in each deposit. Hammer down the unwelded end of the bar to form the curved surface (see top illustration). Stitch weld until the bar is firmly secured.



FOR INSIDE CURVES

Tack weld one end of the bar to the surface using a minimum of 1/2" weld in each deposit. Starting from the center, hammer down the bar to form the curved surface (see bottom illustration). Stitch weld until the bar is firmly in place.



Richmond Brothers Equipment Bolt On Shovel Installation

Clean shank free of dirt and rust. Use 7/16 bolts Grade 5 or higher. Use nylock or stover style lock nuts. For 7" and 9" shovels, ensure that the mounting pads are the ONLY contact point between shank and shovel. Torque spec is 42ft lbs. Re-torque nuts after approximately 200-300 acres. For the best results and performance of our products, ensure that tool is level front to back.

Handle shovels with care. Do not throw, drop, or strike shovels with an object. Do not use 1/2" impact driver or larger power tools to install. Do not let the entire weight of the cultivator rest on shovels while on a hard surface (concrete, frozen ground, etc.).

For further information on installation, handling, and replacements, don't hesitate to contact your local dealer or Richmond Brothers Equipment at 989.453.7097.

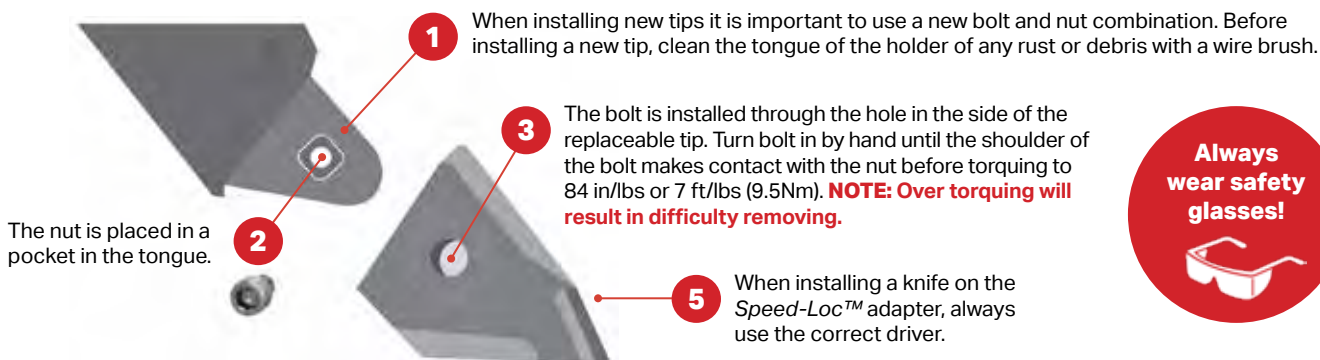
Replaceable Tips Installation & Removal

The tongue and groove configuration of replaceable tips allow customers to change tips as they wear out, instead of the whole opener. You can also change tip sizes if conditions change in your operation.

TIP REMOVAL

If a worn out tip is seized on the tongue, you can use two 3lb hammers, one to support the side of the boot and the other to strike the opposite side of the tip to break the side wall.

There are several things to keep in mind when changing or installing new tips:



Always wear safety glasses!



Bolt & Nut Part Numbers

DESCRIPTION	SIZE	PART #	DESCRIPTION	SIZE	PART #
Carriage Bolt – Grade 8	3/8" x 1-1/2"	960-CRG-1505	Lock Washer	1/2"	902-LWS-5000
Carriage Bolt – Grade 8	3/8" x 1-3/4"	960-CRG-1755	Nut – Grade 5	3/8"	904-NRG-3754
Carriage Bolt – Grade 8	3/8" x 2-1/4"	960-CRG-3755	Nut – Grade 5	7/16"	904-NRG-4374
Carriage Bolt – Grade 8	1/2" x 2"	961-CRG-2005	Nut – Grade 5	1/2"	904-NRG-5004
Carriage Bolt – Grade 8	1/2" x 2-1/4"	961-CRG-2255	Flanged Lock Nut	7/16"	907-NPF-4375
Carriage Bolt – Grade 8	1/2" x 2-1/2"	961-CRG-2505	Flanged Lock Nut	1/2"	907-NPF-5005
Carriage Bolt – Grade 8	7/16" x 1-3/4"	962-CRG-1755	Plow Bolt	1/2" x 1-3/4"	926-PRG-1754
Hex Head Bolt	1/4" x 3/4"	942-HRG-0754	Plow Bolt	1/2" x 2"	926-PRG-2004
Hex Head Bolt	1/4" x 2"	942-HRG-2004	Plow Bolt	1/2" x 2-1/4"	926-PRG-2254
Hex Head Bolt	1/2" x 1-3/4"	946-HRG-1754	Plow Bolt	1/2" x 2-1/2"	926-PRG-2504
Hex Head Bolt	1/2" x 2-3/4"	946-HRG-2754	Plow Bolt	1/2" x 2-3/4"	926-PRG-2754
Hex Head Bolt	1/2" x 3"	946-HRG-3004	Plow Bolt	1/2" x 3"	926-PRG-3004
Hex Head Bolt	1/2" x 3-1/4"	946-HRG-3254	Plow Bolt	1/2" x 3-1/2"	926-PRG-3504
Hex Head Bolt	1/2" x 3-1/2"	946-HRG-3504	Plow Bolt – O/S Hd Low Shld	3/8" x 1-1/2"	922-POL-1504
Hex Head Bolt – Grade 8	1/2" x 2"	946-HRG-2005	Plow Bolt – O/S Hd Low Shld	3/8" x 1-3/4"	922-POL-1754
Hex Head Bolt – Grade 8	1/2" x 2-1/4"	946-HRG-2255	Plow Bolt – O/S Hd Low Shld	3/8" x 2"	922-POL-2004
Hex Head Bolt – Grade 8	1/2" x 2-1/2"	946-HRG-2505	Plow Bolt – O/S Hd	3/8" x 2-1/4"	922-POR-2254
Hex Head Bolt – Grade 8	5/8" x 2-1/2"	948-HRG-2505	Plow Bolt – O/S Hd Low Shld	7/16" x 1-3/4"	924-POL-1754
Hex Head Bolt – O/S Hd Shld Blt	7/16" x 1-3/4"	933-HOS-1754	Plow Bolt – O/S Hd	7/16" x 2"	924-POR-2004
Hex Head Bolt – O/S Hd Shld Blt	7/16" x 2"	933-HOS-2004	Plow Bolt – O/S Hd	7/16" x 2-1/4"	924-POR-2254
Lock Nut – Stover	1/4"	906-NPT-2505	Plow Bolt – O/S Hd	7/16" x 2-1/2"	924-POR-2504
Lock Nut – Stover	3/8"	906-NPT-3755	Plow Bolt – O/S Hd	7/16" x 2-3/4"	924-POR-2754
Lock Nut – Stover	7/16"	906-NPT-4375	Plow Bolt – O/S Hd	7/16" x 3"	924-POR-3004
Lock Nut – Stover	1/2"	906-NPT-5005	Plow Bolt – O/S Hd	7/16" x 3-7/8"	924-POR-3874
Lock Nut – Stover	5/8"	906-NPT-6255	Screw – Pan Head	3/8"	911-SCR-1038
Lock Nut – Nylon Insert	1/4"	908-NNI-2504	Screw – Self Drill	1/2"	911-SCR-1051

LEGEND: O/S Hd = Oversized Head Low Shld = Low Shoulder Shld Blt = Shoulder Bolt

200-QCA-4700 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2-1/4" no lock washer	Hex head bolts
1" Bourgault shank w/ round tube Bourgault seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2" no lock washer	Hex head bolts, Grade 8 required
1" Bourgault shank w/ square tube Bourgault seed boot	1/2" x 2" no lock washer	1/2" x 2-1/2" no lock washer	Hex head bolts, Grade 8 required
7/8" Bourgault shank w/o seed boot	1/2" x 2" no lock washer	1/2" x 2" no lock washer	Hex head bolts
7/8" Bourgault shank w/ round tube Bourgault seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2" no lock washer	Hex head bolts, Grade 8 required
7/8" Bourgault shank w/ square tube Bourgault seed boot	1/2" x 2-1/4" no lock washer	1/2" x 2" no lock washer	Hex head bolts, Grade 8 required
3/4" Bourgault shank w/o seed boot	1/2" x 2" no lock washer	1/2" x 2" no lock washer	Hex head bolts
3/4" Bourgault shank w/ round tube Bourgault seed boot	1/2" x 2" c/w with lock washer	1/2" x 1-3/4" no lock washer	Hex head bolts
3/4" Bourgault shank w/ square tube Bourgault seed boot	1/2" x 2-1/4" w/ lock washer	1/2" x 1-3/4" no lock washer	Hex head bolts
3/4" Ezee-On shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Hex head bolts ³
7/8" Ezee-On shank w/o seed boot	7/16" x 2"	7/16" x 2"	Hex head bolts ³

NOTES: 1) Above bolt lengths are determined using prevailing torque side lock nuts – Grade C. This special locknut is necessary to keep the adapter tight. It is very important to use it, especially in stony or hard ground conditions. 2) Grade 8 bolts are required with the Bourgault 7/8" and 1" shanks where seed boots are involved. If not used, bolt loosening may occur. 3) Shanks with 7/16" holes require the special oversize (O/S) head hex bolt.

200-QCA-4710 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
3/4" and 7/8" Flexi-Coil shank w/o seed boot	7/16" x 2-1/4" no lock washer	7/16" x 2-1/4" no lock washer	Plow bolt ²
7/8" Flexi-Coil shank w/ 5649 seed boot	7/16" x 2-1/2" no lock washer	7/16" x 3-7/8" no lock washer	Plow bolt ²
1/2" Morris Challenger shank w/o seed boot	3/8" x 1-3/4" no lock washer	3/8" x 1-3/4" no lock washer	Plow bolt ²
5/8" Morris Challenger shank w/o seed boot	3/8" x 2" no lock washer	3/8" x 2" no lock washer	Plow bolt ²
7/8" Morris shank w/o seed boot	7/16" x 2-1/4" no lock washer	7/16" x 2-1/4" no lock washer	Plow bolt ²
9/16" CIL shank w/o seed boot	3/8" x 2" no lock washer	3/8" x 2" no lock washer	Plow bolt ²
5/8" John Deere shank w/o seed boot	7/16" x 2" no lock washer	7/16" x 2" no lock washer	Plow bolt ²
3/4" Degelman shank	7/16" x 2-1/4" no lock washer	7/16" x 2-1/4" no lock washer	Plow bolt ²
9/16" Wil-Rich shank w/o seed boot	1/2" x 2" no lock washer	1/2" x 2" no lock washer	Plow bolt

200-QCA-5010 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" shank w/o seed boot or wedge	1/2" x 2-1/2" w/ lock washer	1/2" x 2-1/2" w/ lock washer	Plow bolt
1-1/4" shank w/o seed boot or wedge	1/2" x 2-3/4" w/ lock washer	1/2" x 2-3/4" w/ lock washer	Plow bolt

NOTES: **1)** Above bolt lengths are determined using prevailing torque side lock nuts – Grade C. This special locknut is necessary to keep the adapter tight. **2)** Shanks with 3/8" and 7/16" holes require special oversize (O/S) head plow bolts. **3)** When bolting a seed boot, usually it is the bottom bolt which bolts the seed boot to the shank; the top bolt should remain the same length as listed above. If the seed boot cross section at the point the bolt goes through is 1/8" thick or less, use the same bolt length as above without the lock washer. If the seed boot cross section at the point the bolt goes through is greater than 1/8", increase bolt length by adding the measured cross section of the seed boot at the point the bolt goes through to the above lengths.

410-QCA-5000 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head
1" Bourgault shank w/ Bourgault splitter seed boot 6505-42	1/2" x 2-1/2"	1/2" x 2-3/4"	Hex head
1-1/4" Bourgault shank w/o seed boot	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head
1-1/4" Bourgault shank w/ Bourgault splitter seed boot 6505-42	1/2" x 2-3/4"	1/2" x 3"	Hex head

410-QCA-5010 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
1" shank w/o seed boot or wedge	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head
1-1/4" shank w/o seed boot or wedge	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head

NOTES: **1)** Above bolt lengths are determined using prevailing torque side lock nuts – grade C. This special locknut is necessary to keep the adapter tight. **2)** When bolting a seed boot, usually it is the bottom bolt which bolts the seed boot to the shank; the top bolt should remain the same length as listed above. If the seed boot cross section at the point the bolt goes through is 1/8" thick or less, use the same bolt length as above without the lock washer. If the seed boot cross section at the point the bolt goes through is greater than 1/8", increase bolt length by adding the measured cross section of the seed boot at the point the bolt goes through to the above lengths. **3)** When bolting an adapter using a wedge, a wedge will only be used when using the 410-QCA-5010 adapter on 43° and 47° chisel plows. Measure the cross section of the wedge at both bolt holes and add this amount to the above numbers. Remember that the measured cross section will be different at each hole in the wedge.

047 Series Bolt-On Sweeps

Light & Medium-Duty Cultivators

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2-1/4"	1/2" x 2"	Plow bolts, no lock washer, regular nut
7/8" Bourgault shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
7/8" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 2"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
7/8" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2-1/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Bourgault shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
3/4" Degelman shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Plow bolts, no lock washer, regular nut
7/8" Flexi-Coil shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Plow bolts, no lock washer, regular nut
1/2" Morris Challenger shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, no lock washer, regular nut
5/8" Morris Challenger shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, no lock washer, regular nut
5/8" John Deere shank w/o seed boot	7/16" x 1-1/2"	7/16" x 1-1/2"	Plow bolts, no lock washer, regular nut
9/16" CIL shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, no lock washer, regular nut
1/2" Case IH shank w/o seed boot	7/16" x 1-1/2"	7/16" x 1-1/2"	Plow bolts, no lock washer, regular nut

043 & 050 Series Bolt-On Sweeps

Heavy-Duty Chisel Plows

APPLICATION	TOP BOLT	BOTTOM BOLT	SPECIAL NOTES
1" Bourgault shank w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1" Bourgault shank w/ Bourgault splitter seed boot #6505-42	1/2" x 2-1/4"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1-1/4" Bourgault shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1-1/4" Bourgault shank w/ Bourgault splitter seed boot #6505-42	1/2" x 2-1/2"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1" John Deere shank w/o seed boot	1/2" x 1-3/4"	1/2" x 2"	Plow bolts, no lock washer, regular nut
3/4" Degelman shank (50°) w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut
1-1/4" Flexi-Coil shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1" Morris shank (43°) w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, no lock washer, regular nut
1-1/4" CIL shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
1-1/4" Case IH shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, no lock washer, regular nut
3/4" Case IH Vibra shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, no lock washer, regular nut

NOTES: **1)** All Bourgault sweeps come with 1/2" holes. Shanks with 3/8" and 7/16" holes require special oversize (O/S) head plow bolts. **2)** When bolting a seed boot, it's usually the bottom bolt which bolts the seed boot to the shank; the top bolt should remain the same length as listed above. If the seed boot cross section where the bolt goes through is 1/8" thick or less, use the same bolt length as above without the lock washer. If the seed boot cross section where the bolt goes through is greater than 1/8", increase bolt length by adding the measured cross section of the seed boot at the point the bolt goes through to the above lengths.

600 & 602 Series Replacement Tip Fertilizer Knives

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
FOR 47° & 50° APPLICATIONS NO WEDGE IS REQUIRED			
1-1/4" Bourgault shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock
1" Bourgault shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
7/8" Bourgault shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
3/4" Bourgault shank	1/2" x 2-1/4"	1/2" x 2-1/4"	Hex head bolt, regular nut & lock
1-1/4" Flexi-Coil shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock
1-1/4" Morris shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock ¹
1" John Deere shank	1/2" x 2-1/2"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock
1-1/4" John Deere shank	1/2" x 2-3/4"	1/2" x 2-3/4"	Hex head bolt, regular nut & lock
3/4" Degelman shank	1/2" x 2-1/4"	1/2" x 2-1/4"	Hex head bolt, regular nut & lock
FOR 43° APPLICATIONS WEDGE 400-WDG-0700 IS REQUIRED			
1" Morris shank for NH3 knives	1/2" x 3" no lock washer	1/2" x 2-3/4" no lock washer	Hex head, regular nut
1" Morris shank for granular knives	1/2" x 3" no lock washer	1/2" x 2-3/4" no lock washer	Hex head, regular nut
1-1/4" CIL shank, 2-1/2" hole center-to-center	1/2" x 3-1/4" c/w no lock washer	1/2" x 2-3/4" no lock washer	Hex head, regular nut
1-1/4" Case IH shank	1/2" x 3-1/4"	1/2" x 3"	Hex head bolt, regular nut & lock ²
3/4" Case IH Vibra chisel shank	1/2" x 2-3/4"	1/2" x 2-1/2"	Hex head bolt, regular nut & lock

NOTES: 1) Some material may have to be ground off the bottom of the 1-1/4" Morris shank (front face) to get the knife holder to seat down tight against the shank. 2) The 1-1/4" IH shank will fit the NH3 knives, but not the granular knife. 3) All knives come with holes to accommodate 1/2" bolts. If cultivator shanks have 7/16" holes, substitute 7/16" bolts for 1/2" and use a flat washer on the bolt head.

Common Torque Values USS/SAE Grade 8

BOLT DIAMETER	TORQUE DRY FT. LBS.	LUBRICATED FT. LBS.
1/4"	12	9
5/16"	24	18
3/8"	45	35
7/16"	70	50
1/2"	110	80
9/16"	150	110
5/8"	210	160
3/4"	380	280
7/8"	600	450
1"	910	680

This chart lists some of the more common bolt sizes and their calculated torque values. To ensure proper installation and the integrity of the bolts, it is recommended that you follow these values. **All highlighted values are common bolt sizes used for our products.**

Common Torque Values Metric

BOLT DIAMETER	CLASS 10.9		CLASS 12.9	
	TORQUE DRY FT. LBS.	LUBRICATED FT. LBS.	TORQUE DRY FT. LBS.	LUBRICATED FT. LBS.
M4	3.2	2.4	3.8	2.8
M5	6.5	4.9	7.6	5.7
M6	11.1	8.3	13	9.7
M7	18.5	13.9	21.7	16.3
M8	26.9	20.2	31.4	23.6
M10	53.2	39.9	62.2	46.7
M12	92.8	69.6	108.5	81.4
M14	148.4	111.3	173.4	130
M16	230	173	269	202
M18	318	239	372	279

Product Depth Charts

Seed Openers, Fertilizer Knives, Sweeps & Spikes

DEPTH (IN INCHES)						PART #
5	4	3	2	1	0	
						047-KNH-1000 / 047-HLD-1000 / 047-ASY-1000
						050-KNH-0500 W/ 200-TIP-0523
						050-KNH-0812 & 0820 W/ 200-TIP-0800
						050-KNH-0812 & 0820 W/ 200-TIP-0801
						050-KNH-0812 & 0820 W/ 200-TIP-1011
						050-KNH-0812 & 0820 W/ 200-TIP-3000
						050-KNH-0812 & 0820 W/ 200-TIP-3001
						050-KNH-0812 & 0820 W/ 200-TIP-3011
						050-KNH-0812 W/ 200-TIP-0800
						050-KNH-0812 W/ 200-TIP-1011
						050-KNH-0820 W/ 200-TIP-0800
						050-KNH-0820 W/ 200-TIP-1011
						200-HOE-1700
						200-KNF-0810 / 0811 / 0813 / 7551 / 7553
						200-KNF-0863 / 0861
						200-KNF-7510 / 7511 / 7512 / 7542
						200-KNF-7520 / 7521 / 7524 / 7525 / 7530 / 7531
						200-KNH-4000 / 4010 & 4020 W/ 200-TIP-0800 / 0801 / 3000 / 3001 / 3011
						200-KNH-4010 W/ 200-TIP-1011
						200-PWV-0400 TO 200-PWV-1200
						200-PWV-0405
						200-PWV-0508 TO 200-PWV-1208
						200-PWV-1300 / 1400
						200-PWV-1308 / 1408
						200-SPN-0200 / 0208 / 0300 / 0308

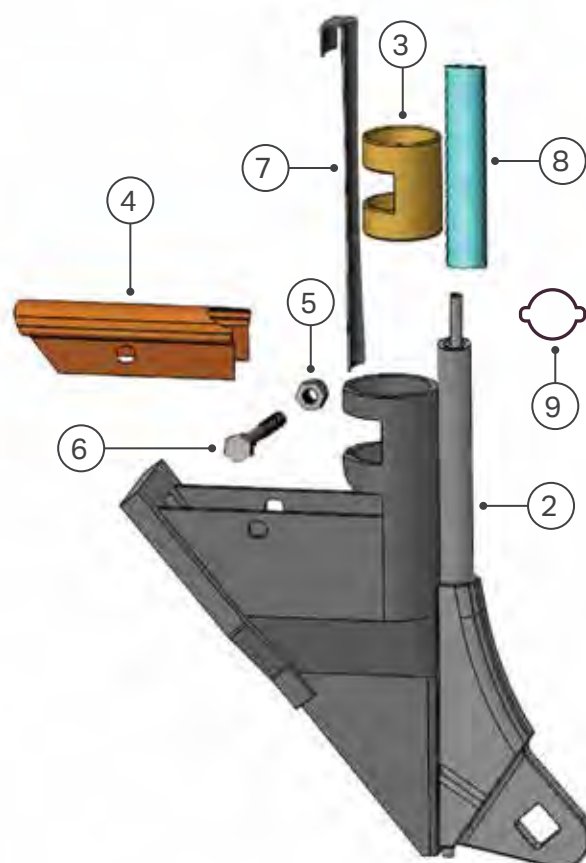
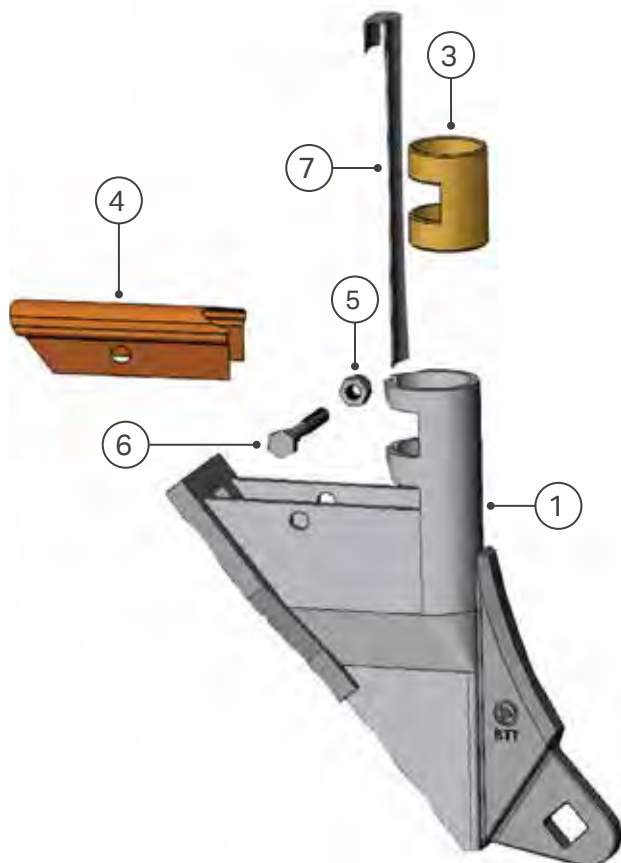
DEPTH (IN INCHES)						PART #
5	4	3	2	1	0	
						200-SPK-0200 / 0215
						200-VRT-1011 / 1000 / 1016 / 1040
						200-VRT-1061
						410-KNF-0800 / 0801 / 0813 / 0824 / 0825
						410-KNF-0830 / 0831 / 7551 / 7553 / 7560
						410-KNH-4000 W/ 200-TIP-0801
						410-KNH-7524 / 7540 W/ 600-TIP-7501
						410-PWV-0418 / 0418ML
						410-PWV-0400 / 0600 / 0608
						410-PWV-0800 / 0808
						410-PWV-1000 / 1008
						410-PWV-1200 / 1208
						410-PWV-1400 / 1408
						410-PWV-1600 / 1608
						410-PWV-1800 / 1808
						410-SPK-0200
						410-SPN-0300 / 0308
						599-KNH-7512 / 7540 W/ 600-TIP-7500 / 7501
						600-KNH-7510 W/ 600-TIP-7501
						600-KNH-7520 W/ 600-TIP-7501
						600-KNH-7530 W/ 600-TIP-7501
						600-KNH-7540 W/ 600-TIP-7501
						600-KNH-7550 W/ 600-TIP-7501
						600-KNH-7562 W/ 600-TIP-7507

047-ASY-1000

Single Shoot Seed Openers (Page 20)

047-ASY-1005P

Single Shoot Seed Openers (Page 20)



PART		047-ASY-1000	047-ASY-1005P
1	047-HLD-1000	■	■
2	047-HLD-1005P	■	■
3	880-BSH-1130	■	■
4	047-CAP-1001	■	■
5	908-NNI-2504	■	■
6	942-HRG-2004	■	■
7	047-ACC-1000*	■	■
8	680-HOS-1000**	■	■
9	880-HCL-0004	■	■

TIP OPTIONS:

200-TIP-0511	200-TIP-1011
200-TIP-0800	200-TIP-2011
200-TIP-0801	200-TIP-3000
200-TIP-0802	200-TIP-3001
200-TIP-0803	200-TIP-3011
200-TIP-0811	200-TIP-4011

Tips sold separately. See pages 12-13.

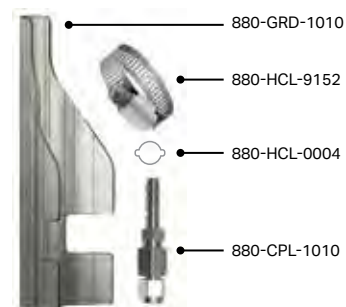
NOTES: Curved 50° shanks require either 880-WDG-0300 or 880-WDG-0301. **Sold separately.** See page 110.

*Use focus strip 047-ACC-1000 for more concentrated seed placement.

**680-HOS-1000 is a 6" x 1/2" I.D. NH3 hose.

880-ASY-1010 REQUIRED

This assembly is required to convert the standard 3/16" O.D. liquid phos tube to 1/4" I.D. liquid phos delivery hoses. **Sold separately.**

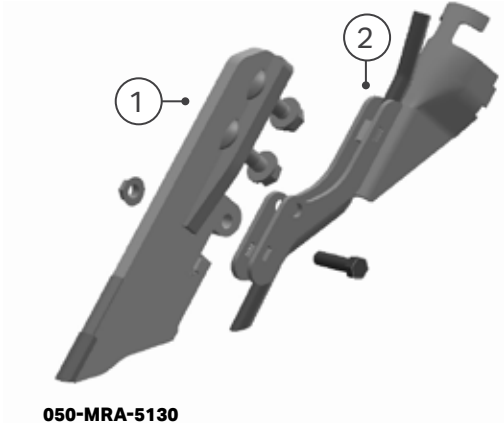


050-MRA-5130 & 5151

050-MRA-5230 & 5231

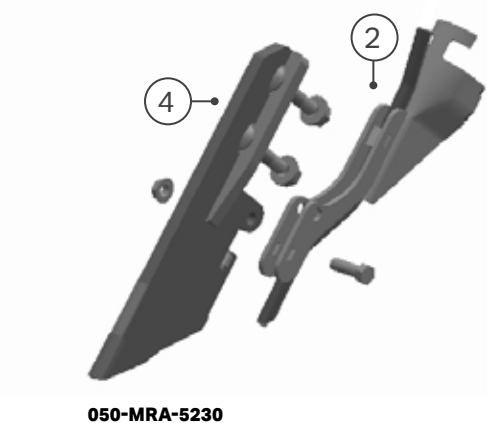
Bourgault Mid Row Shank Fertilizer Knives

C-Shank Fertilizer Knives



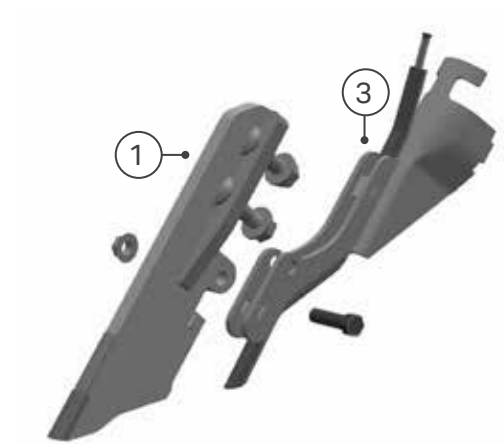
050-MRA-5130

FITS: Bourgault MRS with 1-3/4" bolt spacing (page 31)



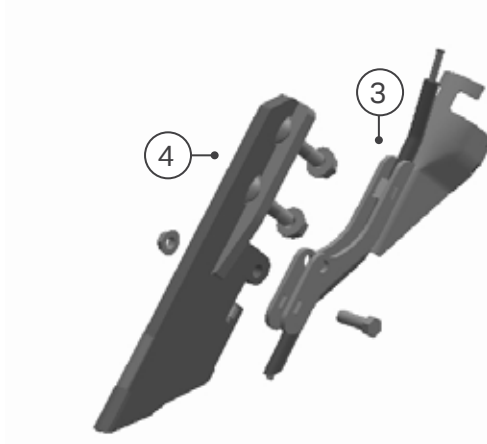
050-MRA-5230

FITS: C-shank with 2-1/4" bolt spacing (page 73)



050-MRA-5131

FITS: Bourgault MRS with 1-3/4" bolt spacing (page 31)



050-MRA-5231

FITS: C-shank with 2-1/4" bolt spacing (page 73)

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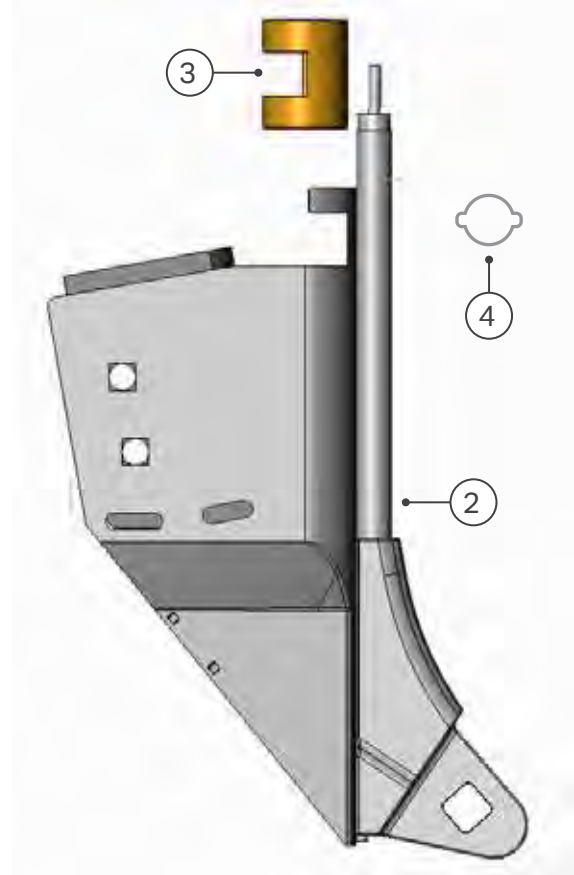
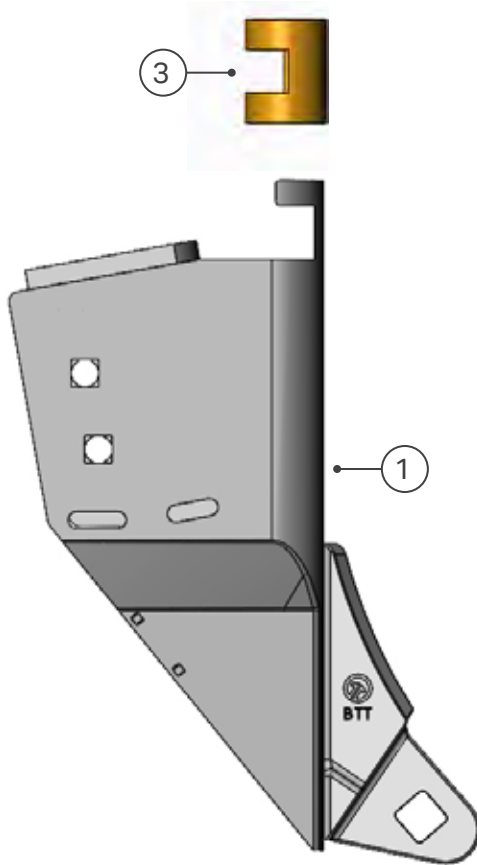
		<div><div><div>G</div><div>N</div></div><div><div>G</div><div>L</div></div><div><div>G</div><div>N</div></div><div><div>G</div><div>L</div></div></div>			
		050-MRA-5130	050-MRA-5131	050-MRA-5230	050-MRA-5231
PART					
1	050-MRH-5175	■	■		
2	050-MRF-0030	■		■	
3	050-MRF-0031		■		■
4	050-MRH-5225			■	■

680-ASY-1000

Single Shoot Seed Openers (Page 27 & 42)

680-ASY-1000P

Single Shoot Seed Openers (Page 27 & 42)



PART		680-ASY-1000	680-ASY-1000P
1	680-HLD-1000	■	■
2	680-HLD-1000P	■	■
3	880-BSH-1130	■	■
4	880-HCL-0004	■	■

TIP OPTIONS:

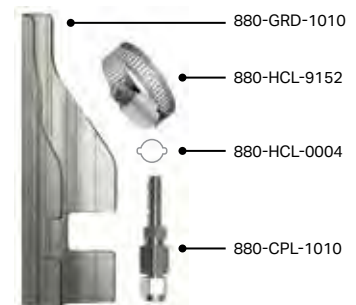
200-TIP-0511	200-TIP-1011
200-TIP-0800	200-TIP-2011
200-TIP-0801	200-TIP-3000
200-TIP-0802	200-TIP-3001
200-TIP-0803	200-TIP-3011
200-TIP-0811	200-TIP-4011

Tips sold separately. See pages 12-13.

NOTES: *680-HOS-1000 is a 6" x 1/2" I.D. NH3 hose.

880-ASY-1010 REQUIRED

This assembly is required to convert the standard 3/16" O.D. liquid phos tube to 1/4" I.D. liquid phos delivery hoses. **Sold separately.**

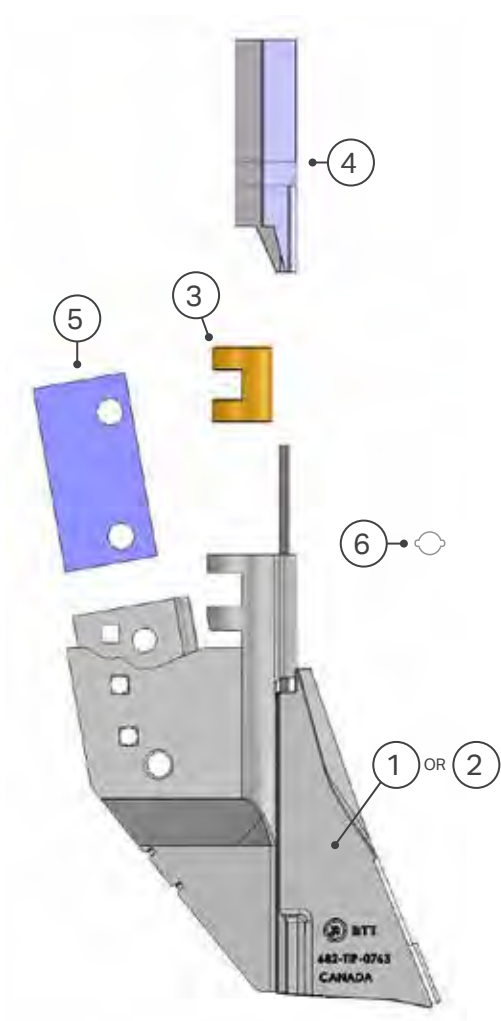


682-ASY-2063/2064

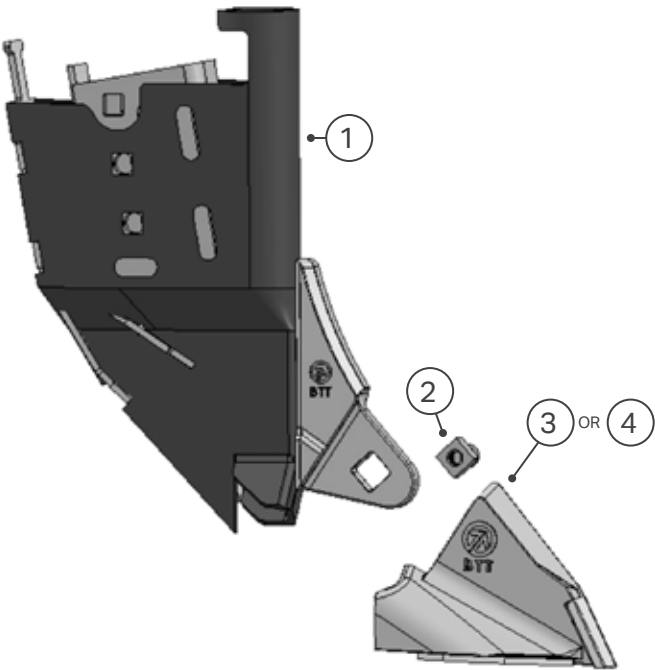
Side Band Seed Openers (Page 30 & 46)

680-ASY-0211/0212

TriMax™ Triple-Shoot System Seed Openers (Page 30)



682-ASY-2063 (LEFT)
682-ASY-2064P (RIGHT SHOWN)



680-ASY-0211 (LEFT)
680-ASY-0212 (RIGHT SHOWN)

PART		682-ASY-2063	682-ASY-2064
1	682-KNF-2063	■	
2	682-KNF-2064		■
3	880-BSH-1130	■	■
4	682-DEF-1000	■	■
5	680-ACC-0001*	■	■
6	695-HCL-1220	■	■

NOTES:
Accessory 680-ACC-0001 is needed when used for Edge On Concord. See page 110.

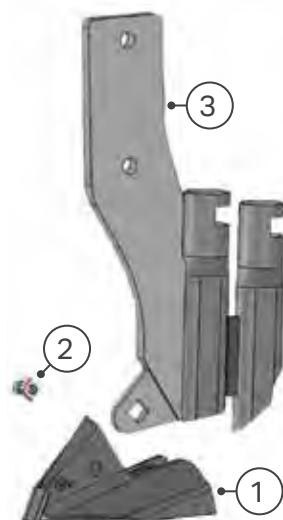
PART		680-ASY-0211	680-ASY-0212
1	680-HLD-0712	■	
2	200-BNC-3100		■
3	612-TIP-0211	■	
4	612-TIP-0212		■

NOTES:
Accessory 680-ACC-0001 is needed when used for Edge On Concord. See page 110.

610-TIP-4041 Assemblies

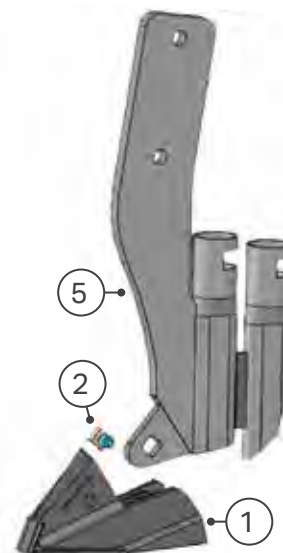
Paired Row Seed Openers (Assemblies on these pages include the tip)

PART		683-ASY-4020G	693-ASY-4020G
1	610-TIP-4041	■	■
2	200-BNC-3100	■	■
3	683-HLD-2000	■	
5	693-HLD-2000		■
6	694-HLD-2000		



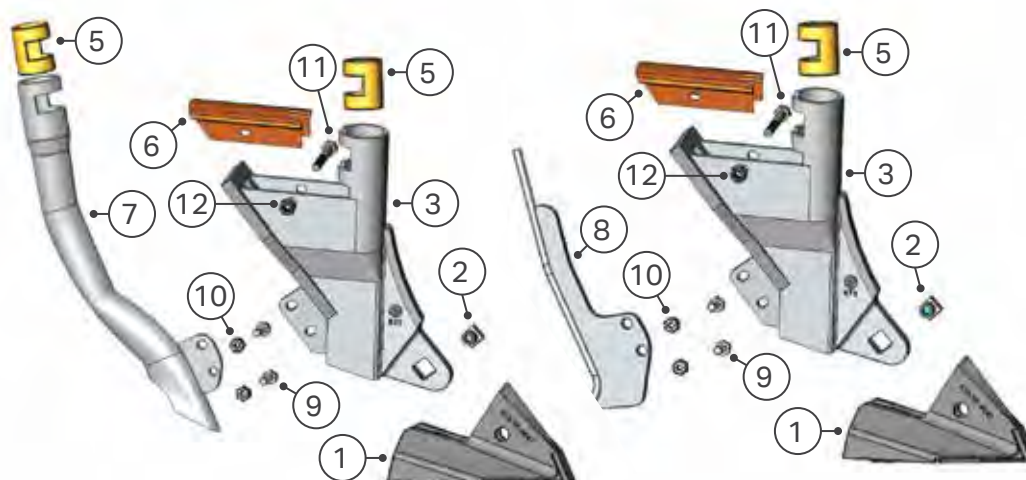
683-ASY-4020G

FITS: Morris Contour I
(page 47)



693-ASY-4020G

FITS: Morris Contour II &
Morris Quantum (page 47)



610-ASY-4020

FITS: C-shank (page 22)

610-ASY-4026

FITS: C-shank (page 22)

PART		610-ASY-4020	610-ASY-4026
1	610-TIP-4041	■	■
2	200-BNC-3100	■	■
3	610-HLD-2000	■	■
4	680-HLD-2000		
5	880-BSH-1130 (x2)	■	■
6	047-CAP-1000	■	■
7	610-TUB-1001	■	
8	610-TUB-2526		■
9	942-HRG-0754 (x2)	■	■
10	906-NPT-2505 (x2)	■	■
11	942-HRG-2004	■	■
12	908-NNI-2504	■	■

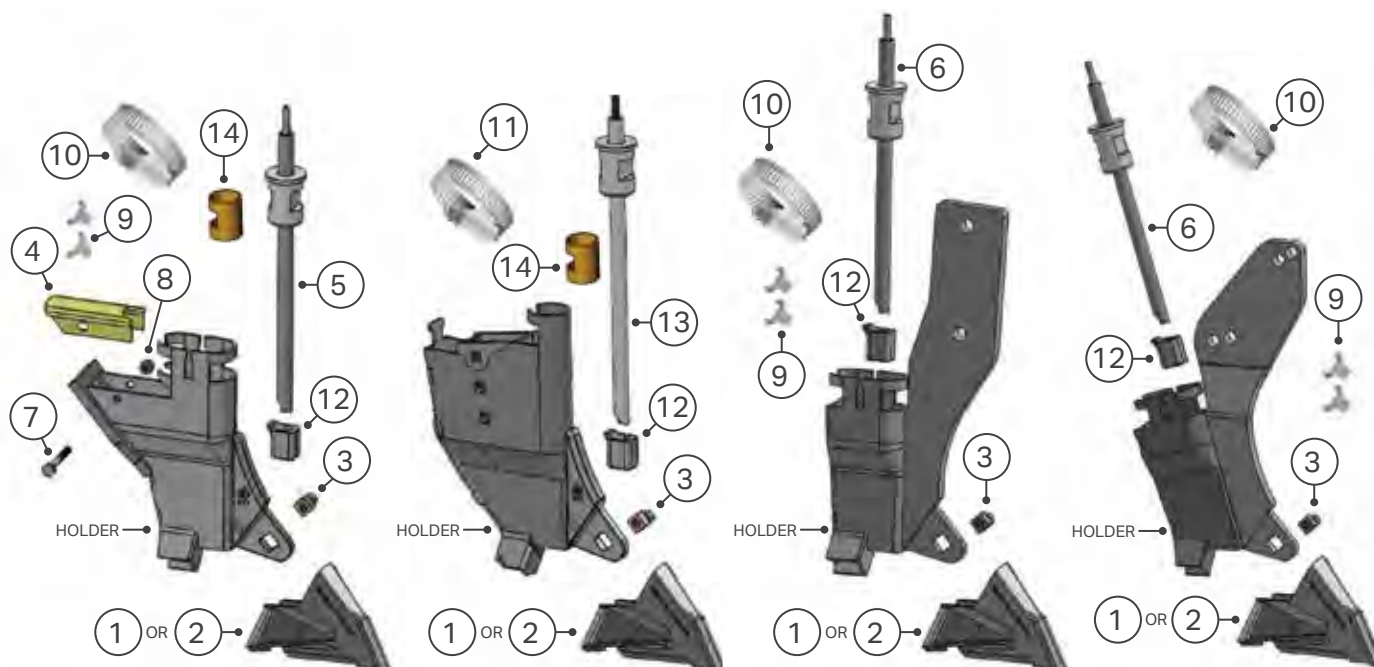
NOTES: Accessory 680-ACC-0004 is a conversion tab needed to replace the fertilizer tube on the 680-HLD-2000, making it a single shoot opener. See page 110.

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Side Band Seed Openers (Assemblies on these pages include the tip)

614-TIP-2711 & 2712 Assemblies

Side Band Seed Openers (Assemblies on these pages include the tip)



610-ASY-2711 (LEFT)
610-ASY-2712 (RIGHT SHOWN)

HOLDERS:

610-HLD-2711
610-HLD-2712 (SHOWN)

FITS: C-shank (page 23)

680-ASY-2711 (LEFT)
680-ASY-2712 (RIGHT SHOWN)

HOLDERS:

680-HLD-2711
680-HLD-2712 (SHOWN)

FITS: Edge On, Bourgault PHD
(page 29) Morris Maxim (page 45)

683-ASY-2711 (LEFT)
683-ASY-2712 (RIGHT SHOWN)

HOLDERS:

683-HLD-2711
683-HLD-2712 (SHOWN)

FITS: Morris Contour I (page 45)

684-ASY-2711 (LEFT)
684-ASY-2712 (RIGHT SHOWN)


HOLDERS:

684-HLD-2711
684-HLD-2712 (SHOWN)

FITS: Case IH 800/900,
NH P2070 & 2075, Flexi-Coil
PD5700 & 7200 (page 34)



STANDARD INSTALLATION
3° MORE PITCH



STANDARD INSTALLATION
3° MORE PITCH

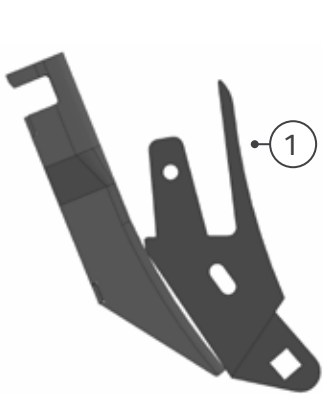
PART		610-ASY-2711G	610-ASY-2711L	610-ASY-2712G	610-ASY-2712L	680-ASY-2711G	680-ASY-2711GP	680-ASY-2711L	680-ASY-2711LP	680-ASY-2712G	680-ASY-2712GP	680-ASY-2712L	680-ASY-2712LP	683-ASY-2711G	683-ASY-2711GP	683-ASY-2711L	683-ASY-2711LP	683-ASY-2712G	683-ASY-2712GP	683-ASY-2712L	683-ASY-2712LP	684-ASY-2711G	684-ASY-2711GP	684-ASY-2711L	684-ASY-2711LP	684-ASY-2712G	684-ASY-2712GP	684-ASY-2712L	684-ASY-2712LP		
1	614-TIP-2711	■	■			■	■	■	■					■	■	■	■					■	■	■	■						
2	614-TIP-2712 (SHOWN)			■	■					■	■	■	■					■	■	■	■						■	■	■	■	
3	200-BNC-3100	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
4	610-CAP-1080	■	■	■	■																										
5	880-TUB-2701		■		■													■	■	■	■	■	■	■	■		■	■	■	■	
6	880-TUB-2711															■	■				■			■	■				■	■	
7	942-HRG-2004	■	■	■	■																										
8	908-NNI-2504	■	■	■	■																										
9	880-HCL-0001 (x2)	■		■										■	■			■	■			■	■			■	■				
10	880-HCL-1828	■	■	■	■									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
11	880-HCL-9152							■	■				■					■	■										■	■	
12	614-ACC-1000		■		■			■	■				■			■	■				■			■	■				■	■	
13	680-TUB-2701							■	■				■			■	■							■	■				■	■	
14	880-BSH-1130	■		■																											

NOTES: Two 880-HCL-0001 are included with the granular openers only. They are intended to provide additional security to installed hoses. **See page 111 for proper hose clip installation.** When ordering liquid phos openers call the factory for tube sizes. When installing openers on Case IH 800 & 900, New Holland P2070 & 2075, and Flexi-Coil PD5700 & 7200 you have two options as shown in the diagram above.

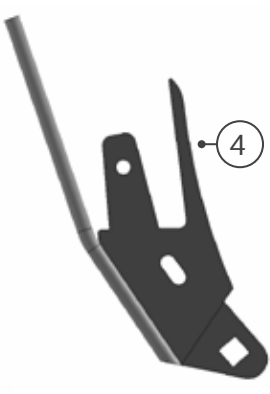
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John Deere 1870 Conserva Pak

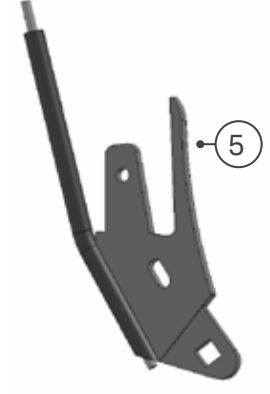
Fertilizer Knives (Page 40)



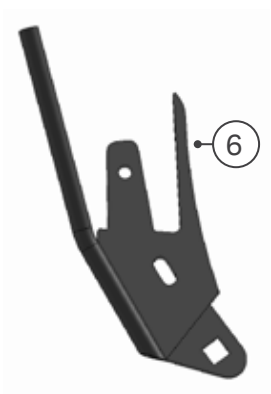
650-HLD-1000G



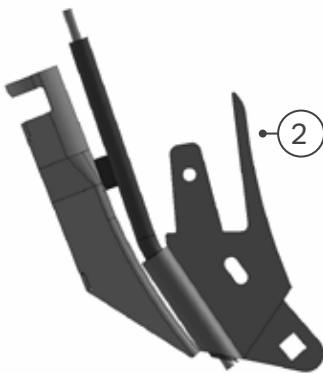
650-HLD-1001



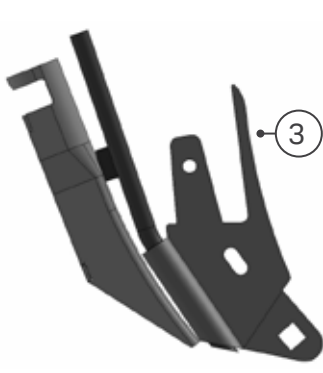
650-HLD-1000L



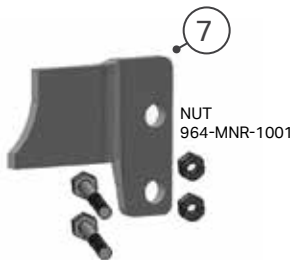
650-HLD-1000N



650-HLD-1000GL

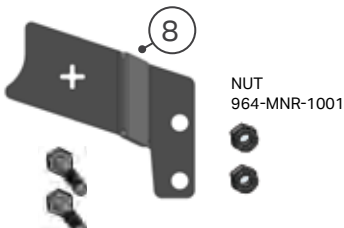


650-HLD-1000GN



BOLT
964-MHR-1030

650-ACC-1000



BOLT
964-MHR-1030

650-ACC-1010

PART		650-HLD-1000G	650-HLD-1000L	650-HLD-1000N	650-HLD-1000GL	650-HLD-1000GN	650-HLD-1001
1	650-HLD-1000G	■					
2	650-HLD-1000GL				■		
3	650-HLD-1000GN					■	
4	650-HLD-1001						■
5	650-HLD-1000L		■				
6	650-HLD-1000N			■			
7	650-ACC-1000 ¹	■	■	■			■
8	650-ACC-1010 ²				■	■	

TIP OPTIONS:

- 200-TIP-0511
- 200-TIP-0801
- 200-TIP-0803
- 200-TIP-0800
- 200-TIP-0802
- 200-TIP-0811

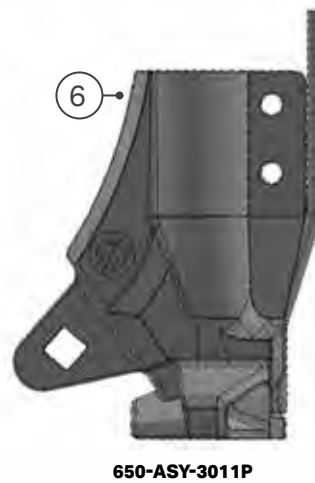
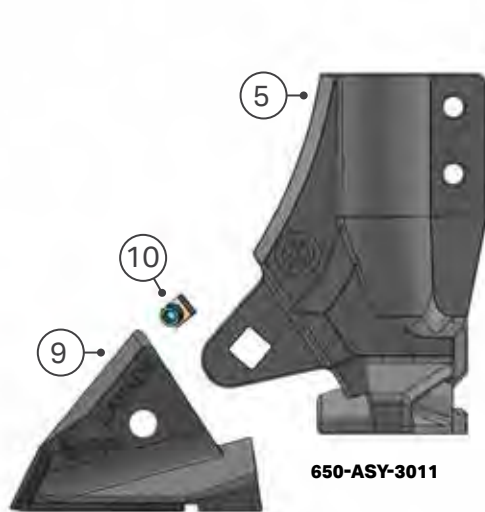
Tips sold separately. See pages 12-13.

NOTES: ¹650-ACC-1000 bracket is required on single fertilizer knives. ²650-ACC-1010 bracket is required for 650-HLD-1000GN and 650-HLD-1000GL. Required on units prior to 2017. **They are not included in the assembly and must be ordered separately.**

The metric bolts needed for installation of these bracket are included. Correct bracket installation is shown on page 40.

John Deere 1870 Conserva Pak

Seed Openers (Page 41). Assemblies on this page include the tip.



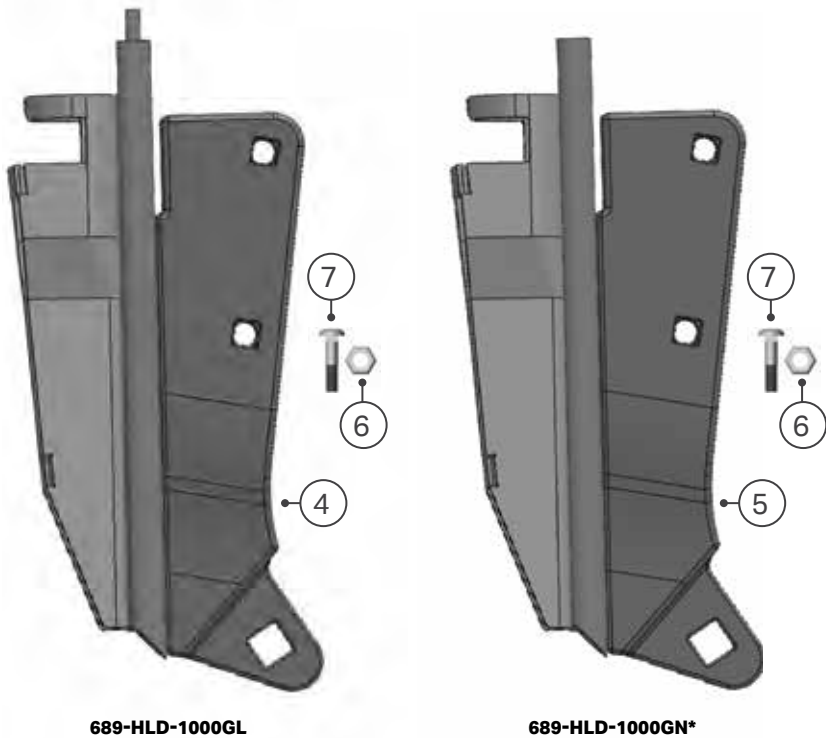
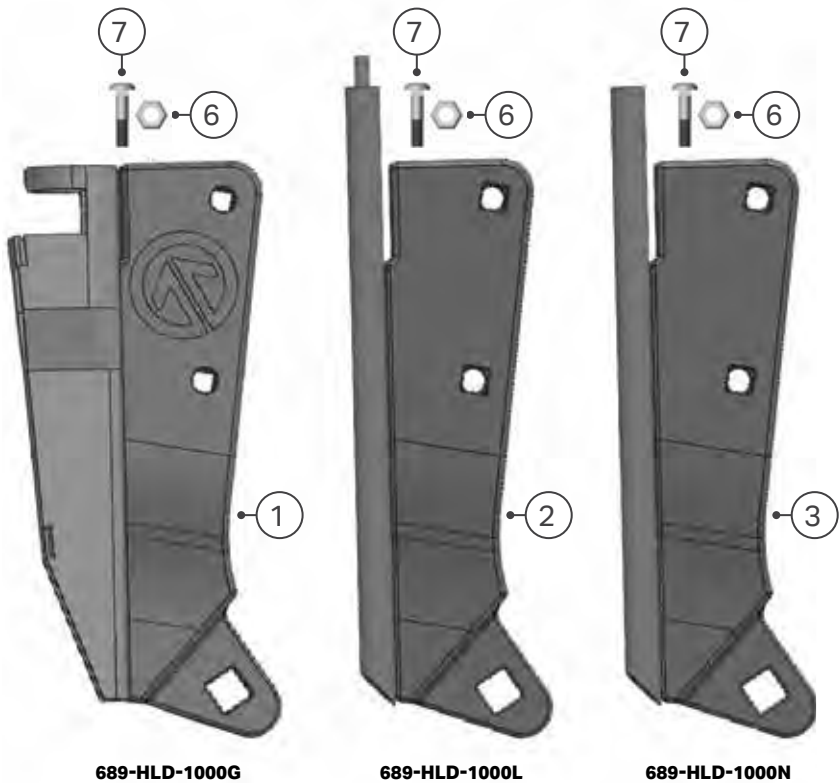
	G	G	P	P	G	P
	650-ASY-0711	650-ASY-0712	650-ASY-0711P	650-ASY-0712P	650-ASY-3011	650-ASY-3011P
1	■					
2		■				
3			■			
4				■		
5					■	
6						■
7	■		■			
8		■		■		
9					■	■
10	■	■	■	■	■	■

	PART	
1	650-HLD-0711	■
2	650-HLD-0712	■
3	650-HLD-0711P	■
4	650-HLD-0712P	■
5	650-HLD-3000	■
6	650-HLD-3000P	■
7	612-TIP-0711 (SHOWN)	■
8	612-TIP-0712	■
9	200-TIP-3011	■
10	200-BNC-3100	■

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Seed Master

Fertilizer Knives (Page 49)

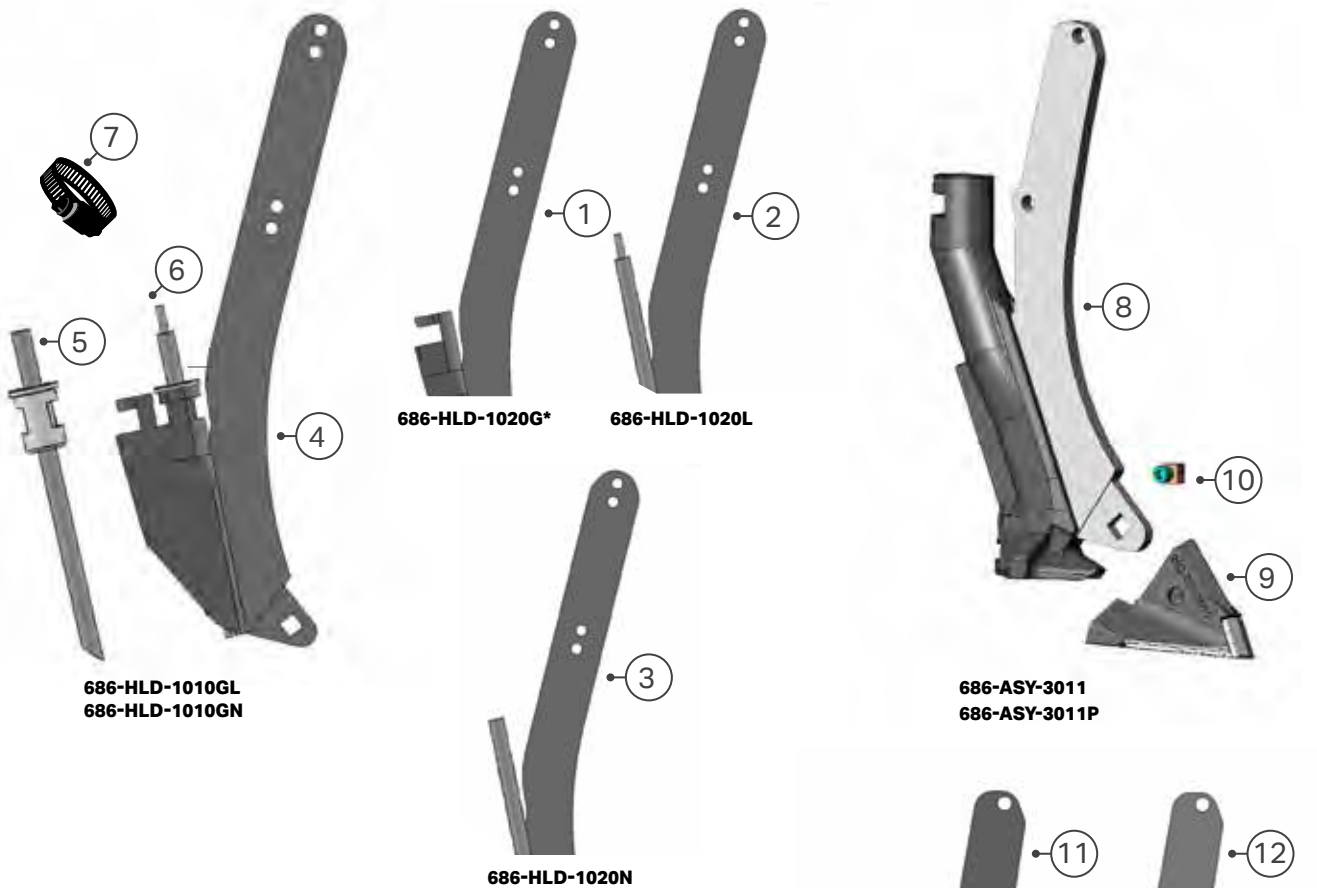


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Väderstad Seed Hawk

Fertilizer Knives (Page 50) and Seed Openers (Page 52)



PART		G	L	N	G	G	P	G	P
		686-HLD-1020G	686-HLD-1020L	686-HLD-1020N	686-HLD-1010GL	686-HLD-1010GN	686-ASY-3011	686-KNH-1001	686-KNH-1001P*
1	686-HLD-1020G	■							
2	686-HLD-1020L		■						
3	686-HLD-1020N			■					
4	686-HLD-1010				■	■			
5	880-TUB-8375					■			
6	880-TUB-8375L				■				
7	880-HCL-1828				■	■			
8	686-HLD-3000						■		
9	200-TIP-3011						■		
10	200-BNC-3100						■		
11	686-KNH-1001							■	
12	686-KNH-1001P*								■

TIP OPTIONS:

200-TIP-0511
200-TIP-0800
200-TIP-0801
200-TIP-0802
200-TIP-0803
200-TIP-0811

Tips sold separately. See pages 12-13.

NOTES: These openers are available with liquid phos options, please call the factory for more details.

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***BUILD TO ORDER**

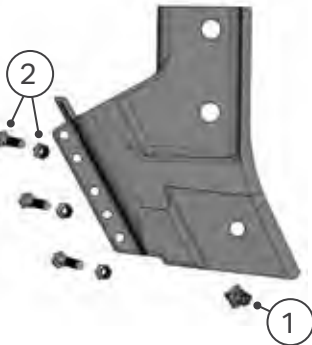
Titan Opener System

Page 54-55

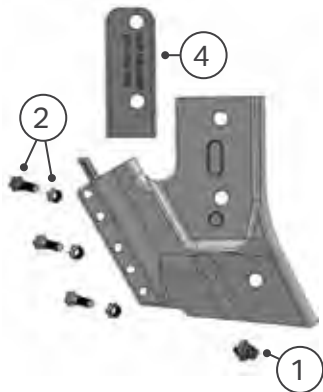
1 CHOOSE YOUR HOLDER



620-HLD-5000
FITS: 47° and 50 ° C-shank



688-HLD-5000
FITS: Horsch 84° Shank
NOTES: On older drills, customer needs to verify mounting bolt holes.
1/2" bolt hole requires **694-HLD-5000** (does not require 694-ACC-1000)
5/8" bolt hole requires **688-HLD-5000**



694-HLD-5000
FITS: Case IH AXT 700, NH P2060, Flexi-Coil 5500 & Concord Edge On (84° shanks only)
NOTES: 694-HLD-5000 requires 694-ACC-1000 (included). Not required when installing on the Concord.

PART		620-HLD-5000	688-HLD-5000	694-HLD-5000
1	200-BNC-3100	■	■	■
2	620-BNC-3100	■	■	■
3	628-BSH-1000			
4	694-ACC-1000			■

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2 CHOOSE YOUR SEEDSHOE



620-SSH-1000
2-3/4" Paired Row



620-SSH-4000
4" Paired Row



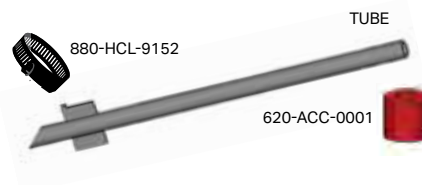
620-SSH-6000
6" Paired Row

3 CHOOSE YOUR TIP**620-TIP-0510****620-TIP-1510****620-TIP-4060**

880-CPL-2500 is
required (included).

4 CHOOSE YOUR FERTILIZER**620-TUB-1021***

1/2" (12mm) O.D. NH₃ tube for
620, 688 & 694 holders.

**620-TUB-1070**

1/4" (6mm) O.D. Aqua NH₃ + Phos tube
for **620, 688 & 694** series holders.

**620-TUB-4000**

0.4" O.D. Stainless Steel Liquid or NH₃
tube for **620, 688 & 694** series holders.

**620-TUB-4040**

0.4" O.D. Stainless Steel Aqua NH₃ +
Phos tube for **620, 688 & 694** series
holders.



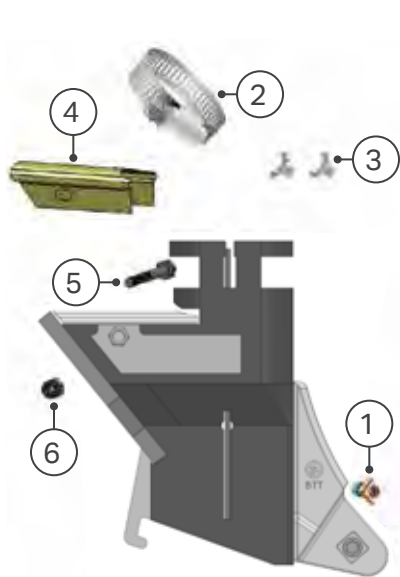
NOTES: The tube assemblies include the tube and any accessories shown.

*For pressurized NH₃ Systems (including MaxQuip) you will be given the standard NH₃ tube and then must consult with your pressurized system dealer for tubing inserts.

VOS (Versatile Opener System)

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1 CHOOSE YOUR HOLDER



610-HLD-2080HD
FITS: 47° and 50° C-shank



688-HLD-2080
FITS: Horsch 84° Shank
NOTE: When installing openers on Horsch 84° Shanks you have two options shown above.



693-HLD-2080
FITS: Morris Contour II and Morris Quantum

- STANDARD INSTALLATION
- 4° MORE PITCH

PART		610-HLD-2080HD	688-HLD-2080	693-HLD-2080	694-HLD-2080
1	200-BNC-3100	■	■	■	■
2	880-HCL-1828	■	■	■	■
3	880-HCL-0001 (x2)	■	■	■	■
4	610-CAP-1080	■			
5	942-HRG-2004	■			
6	908-NNI-2504	■			

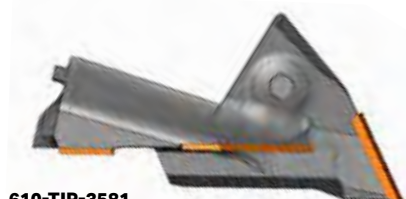
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2 CHOOSE YOUR TIP



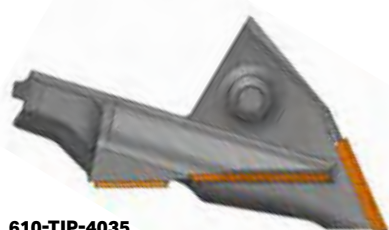
610-TIP-0802

Single Shoot Tip



610-TIP-3581

Paired Row Tip



610-TIP-4035

Paired Row Tip



610-TIP-4081

Paired Row Tip



610-TIP-4082

Paired Row Tip



610-TIP-6082

Paired Row Tip



3 CHOOSE YOUR FERTILIZER

L

880-TUB-1003¹ / 880-TUB-1004²

Precision Drills Liquid 1/4" (6mm) O.D. stainless tube



N L

880-TUB-1009¹ / 880-TUB-1010²

Precision Drills Liquid or Aqua NH₃ 0.40" (10mm) O.D. stainless tube



N P

880-TUB-1011¹ / 880-TUB-1012²

Precision Drills Aqua NH₃ + Phos 1/4" (6mm) O.D. stainless tube

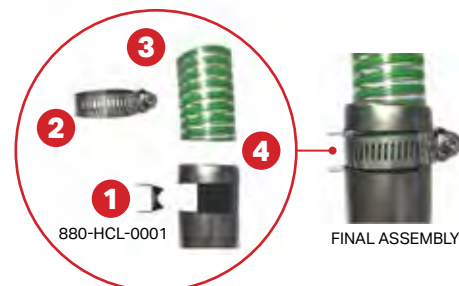


NOTES: All tubes come with bushings pictured.

¹ 880-TUB-1003, 1009 & 1011 are for everything other than C-shank.

² 880-TUB-1004, 1010 & 1012 are for C-shank openers, and are 1" longer.

PROPER INSTALLATION:



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