

2027

PRODUCT
CATALOGUE



BOURGAULT TILLAGE TOOLS



SEEDING & FERTILIZER OPENERS • TILLAGE TOOLS • SPECIALTY PARTS



Products Added



**Side Band Opener
to fit CNH**
Page 36



**Single Shoot Seed Opener to
fit John Deere & Seed Master**
Page 45 & 53



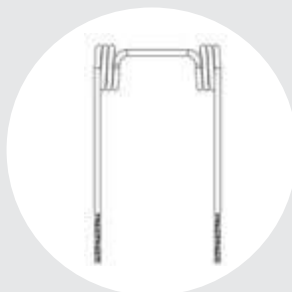
**1/2" Fertilizer Knife
to fit John Deere
& Seed Master**
Pages 44 & 52



**Compatible option to fit
Non-Freeze NH3 Speed-Loc™
fertilizer knives**
Pages 73, 79 & 126



Chrome Armour Series
Pages 98-102



**Harrow Tines to fit Wil-Rich,
Case, Kuhn Krause**
Page 103



**Niaux Disk Blade to fit
Degelman, Kinze**
Page 113



**Scraper to fit
Kinze 3000 Series**
Page 118



BTT Demo Program

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.



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Joseph Bourgault
President

Ryan Olson
Vice-President & General Manager

A Message from the Vice President

Preparing for Brighter Days

Like any industry, agriculture moves through cycles. Weather, commodity markets, global economics, trade, and many other factors can create periods of growth as well as periods when conditions become more challenging. What doesn't change through those cycles is the importance of agriculture and the people behind it. Farmers around the world are producing the food that people depend on every day, and we are proud to support them.

Throughout 2026, we continued to navigate a global agricultural downturn, increasing complexity in international trade, and the ongoing integration and growth of Herschel Parts and BTTUK. These challenges required our team to look closely at our operations and find new efficiencies throughout our business. Our goal has been to reduce costs where we can so that we can continue providing high-quality products at competitive and affordable prices for farmers.

At the same time, we have been careful not to allow short-term market conditions to change our long-term direction. We have maintained our investments in Quality, Customer Service, Research & Development, and key enterprise initiatives that we believe will position our company and our customers for brighter days ahead.

Building for the Future

2026 included several important milestones for our organization.

One of the largest was the successful implementation of a new ERP platform at both BTT and Herschel Parts. This was a significant undertaking for our teams and provided us with a common foundation that will help us better manage our operations, serve our customers, and support our continued growth.

We also expanded several important OEM relationships. Today, BTT products are increasingly being offered as standard equipment, or as options, on new agricultural machinery in Canada, the US, and Europe. Agriculture never stands still, and neither do we. We are committed to remaining on the leading edge of agricultural innovation, collaborating with some of the brightest minds in manufacturing and agriculture to anticipate changing conditions and develop solutions that help farmers become more productive, efficient, and resilient.

Our relationship with Herschel Parts also continues to evolve. This year marked the first time we actively introduced Herschel Part's tillage and harvest product offerings to many of our Canadian dealer partners. By bringing the capabilities of BTT and Herschel closer together, we believe we can provide our customers with a broader range of products while continuing to deliver the service and support they expect from us.

Members of our team travelled to the United Kingdom this year to spend time with our BTTUK team and meet with several of our valued customers in this market. We are also proud to be approaching an important milestone with 25 years of partnership with Industriebhof, our long-standing distribution partner in Europe. Relationships like these are a reminder that while agriculture is increasingly global, successful business is still built on people, trust, and partnerships developed over many years.

Our People and Communities

Through all the changes in our business, our greatest strength continues to be our people. We welcomed some outstanding new employees into our organization this year who bring new skills, experience, and ideas to our team. We also celebrated several familiar faces as they moved into retirement and the next chapter of their lives. Their contributions helped build the company we have today, and we are grateful for the years they spent as part of our organization.

This year also brought one of the most difficult moments for our team with the loss of our long-time colleague and friend, Kevin Mudrik. Kevin was the Director of our Accounting team. His friendship, humour, personality, and years of contributions to BTT left an impact on our organization and on the many people who had the opportunity to know him. Kevin also cared deeply about his community and had such an impact to those around him. Although this very much hurt our team, I think that it also reminded us about the importance of people and the impact of our relationships that extend far beyond our small community of St. Brieux. He is being honoured with a golf tournament in his name to raise funds for the community organizations that he so graciously supported all of these years.

Planning for the Next Season

One of the things agriculture teaches us is to always be thinking about the next season. For BTT, that means using challenging periods to become more efficient, strengthen our business, invest in our people and products, deepen our relationships with customers, and make sure we are positioned to support farmers when the next cycle begins.

To our employees, dealers, OEM partners, suppliers, and most importantly, the farmers who put their trust in our products, thank you for allowing us to be part of what you do.

Here's to the next season, and to brighter days ahead.

Ryan Olson

Vice President

BTT Manufacturing

Bourgault Tillage Tools | Herschel Parts



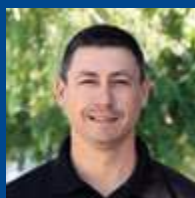
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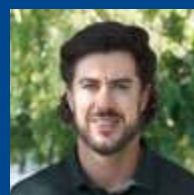
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Saskatchewan Warehouse

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St. Brieux, Sask., Canada S0K 3V0

Ontario Warehouse

(Goodreau Farm Supply)

2932 Quinn Line

Tilbury, Ontario, Canada N0P 2L0

Iowa Warehouse

(Herschel)

1301 N 14th Street

Indianola, Iowa, USA 50125



Introducing European Wearing Parts for tillage & seeding machines.

Now available in North America.

We are proud to announce our partnership
with **Industriehof**, a leading supplier of
high-quality wearing parts out of Germany.

This means direct access
to a full line of wearing parts
specifically for European implements.

- sweeps
- plow parts
- shanks & tines
- disk blades & bearings
- hoeing & weeding technology



INDUSTRIEHOF [®]
SCHERENBOSTEL

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 19.



Located in St. Brieux, Saskatchewan, Canada.



Dealer network stretching across 500+ locations.



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



An independent business, separate from Bourgault Industries since 1991.



A team of 85 employees located across Canada, USA, and the UK.



Bourgault Tillage Tools is proud to announce that we became ISO 9001 Certified in 2024.

This is a standard that ensures we are adhering to a high level of manufacturing and quality control on all parts we build.

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. Policy is non-transferable and full set proof of purchase may be required.

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 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.

150 Series Disk Blades

Our 150 series disk blades have a full replacement warranty on manufacturer defects, and 3 year pro-rated warranty on breakage.

DuraBlade Planter Disk Blades

Durablade Planter Blades (#550-200-1000 & 550-200-1010) have a lifetime warranty on breakage or failure due to a manufacturer's defect for the effective life of the blade as per OEM replacement recommendations.

OEM replacement recommendations are as follows:

John Deere: OEM recommended replacement measurement is 14 inches 355.6 (mm)

Case IH: OEM recommended replacement measurement is 14-1/2 inches 368.3 (mm)

Warranty is void if the blade diameter is less than the OEM recommendation.

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 at 1.800.878.7714.

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 13) | PAIRED ROW (PG 15) | SIDE BAND (PG 17) | FERTILIZER (PG 18)

REPLACEABLE TIPS



Single Shoot Replaceable Tips

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

VANTAGE
EDGE



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-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

Single Shoot Replaceable Tips

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



200-TIP-3000

CHROME SPREAD TIP

3" (76mm) tip.

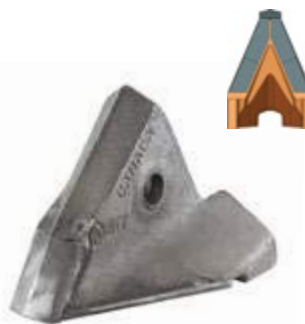
**Not recommended
in highly abrasive
conditions.**



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.

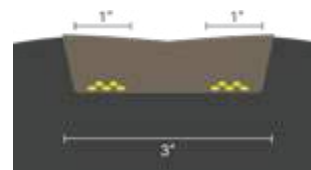


200-TIP-3020

CARBIDE UNDERSIDE OF WINGS

3" wide tip, high chrome casting used in conjunction with our Paired Row holders 686-HLD-3000 & 3000P, 650-HLD-3000 & 3000P & 333-HLD-3000 & 3000P.

This tip has a smaller footprint front to back as compared to the 200-TIP-3011 tip. This tip does not have a front nose carbide insert as it follows a deeper running fertilizer knife.



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.

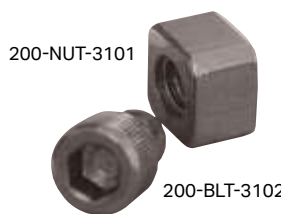


610-TIP-0802

CARBIDE 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 60-61.



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 128 for installation and removal instructions.

Paired Row Replaceable Tips

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



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. Can be used for single shoot or Paired Row to utilize more seedbed.



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 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 60-61.



610-TIP-4035

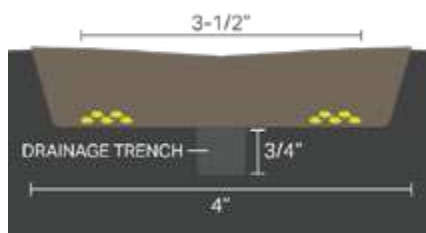
CARBIDE TIP

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.

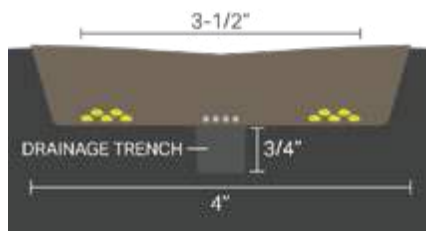
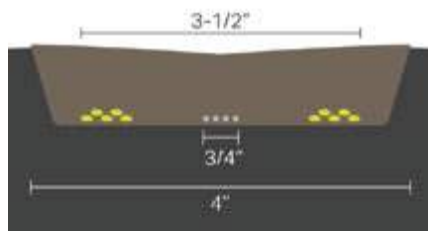
Carbide inserts on the underside of the wing to maintain a sharp cutting edge.

This Paired Row liquid or granular double shoot tip has no vertical seed/fertilizer separation.

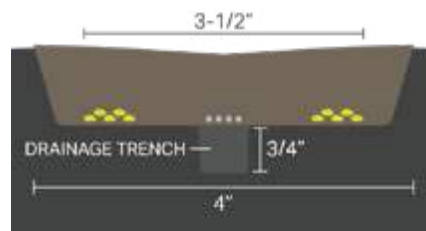
Fits VOS (Versatile Opener System).
See page 60-61.



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 19.

Paired Row Replaceable Tips

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



610-TIP-3581

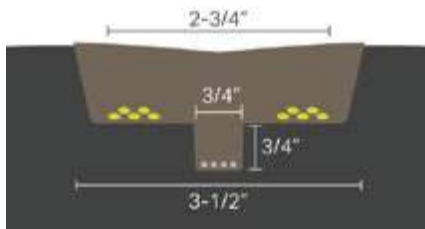
CARBIDE TIP

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 60-61.



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.

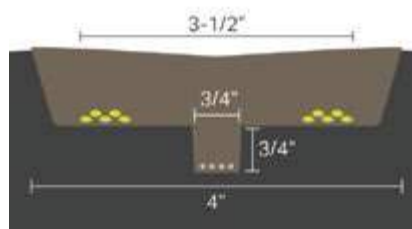
Carbide inserts on the underside of the wing maintain a sharp cutting edge. Carbide inserts on the back underside of the wings seal the fertilizer trench prior to seed placement.

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 60-61.



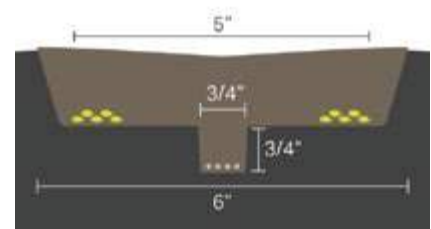
610-TIP-6082

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 60-61.



Side Band Replaceable Tips

These tips use bolt and nut combo 200-BNC-3100 for installation (see page 128).



612-TIP-0211

612-TIP-0211
612-TIP-0212

CARBIDE 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-0711
612-TIP-0712

CARBIDE 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-2711
614-TIP-2712

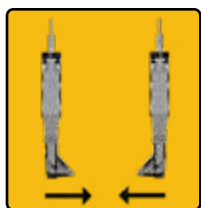
CARBIDE TIP

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.

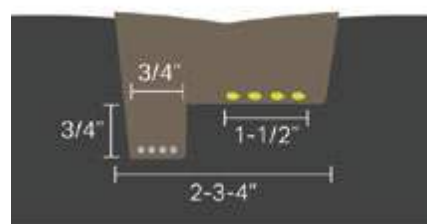
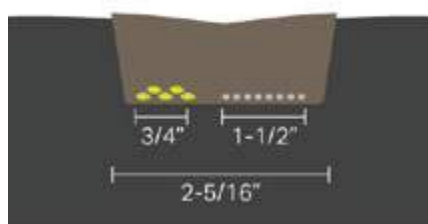
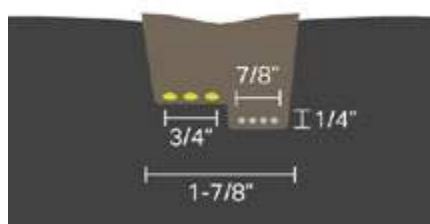
614-TIP-2711 LEFT WING
614-TIP-2712 RIGHT WING

PLEASE NOTE



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 19.

Fertilizer Replaceable Tips

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



600-TIP-7500

CHROME TIP

3/4" (19mm) chrome tip.

Fits 410, 599, 600, 602, 670 & 674 Series fertilizer knife holders.



600-TIP-7501

CARBIDE TIP

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

Fits 410, 599, 600, 602, 670 & 674 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, 670 & 674 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.



600-BNC-5000

BOLT & NUT COMBO

Used to secure 600 series tips onto the 410, 599, 600, 602, 670 & 674 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%.

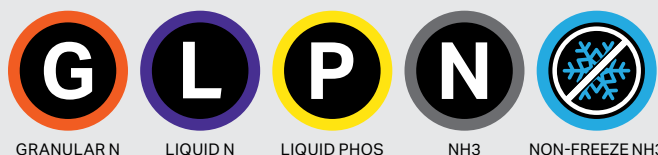
SEEDING DEPTH, PACKING & SPEED: These may compromise seed and fertilizer placement as well as the overall quality of the seeding operation.

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



OPENERS



Openers to Fit C-Shank

Single & Multi-Shoot Options

OPENERS TO FIT C-SHANK



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 13-14.

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 127. For an expanded view of this opener see page 135.

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 125.



047-ASY-1005P

SINGLE SHOOT OPENER

FITS: 47° and 50° C-Shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed or Liquid Phos w/ Seed

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 119.

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 13-14.

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 127.

50° shanks require either 880-WDG-0300 or 880-WDG-0301. See page 125.

For an expanded view of this opener see page 135.



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: 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 127.

Openers to Fit C-Shank

Single & Multi-Shoot Options



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 13-14.

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

NOTES: **Installation bolts sold separately.** Use Grade 8 hex head bolts. See page 132.

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 18.

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 129 and 132.



602-KNH-7540

SINGLE SHOOT OPENER

FITS: 47° and 50° C-Shank

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE:

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

602-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:

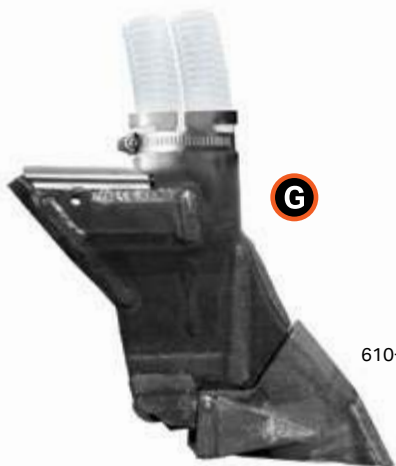
- 600-TIP-7500
- 600-TIP-7501
- 600-TIP-7502

Tips sold separately. See page 18.

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 129 and 132.

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



610-ASY-2712G

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

SIDE BAND OPENER



610-ASY-2712L

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

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) band below the seed bed. In less than ideal conditions, mixing between seed and fertilizer may occur. **See precautions and risk factors on page 19.**

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: 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.

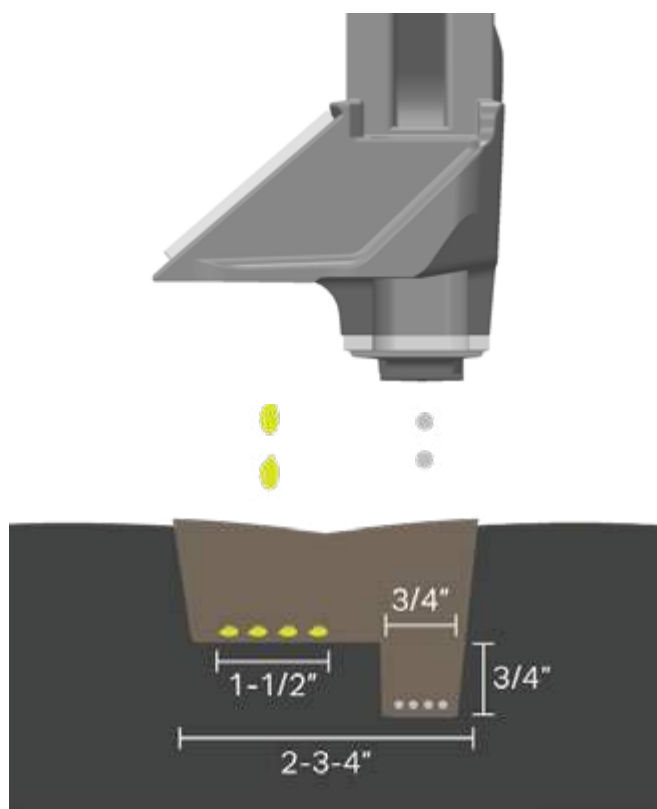
OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

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 127.

When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 125.

For an expanded view of these openers see page 141.

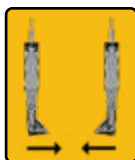


SEED FERTILIZER

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 19.

PLEASE NOTE



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-0712LP

G		G P		L		L P	
NOT AVAILABLE		610-ASY-0711GP 610-ASY-0712GP		NOT AVAILABLE		*BUILD TO ORDER	
612-ASY-0711 612-ASY-0712				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 19.**

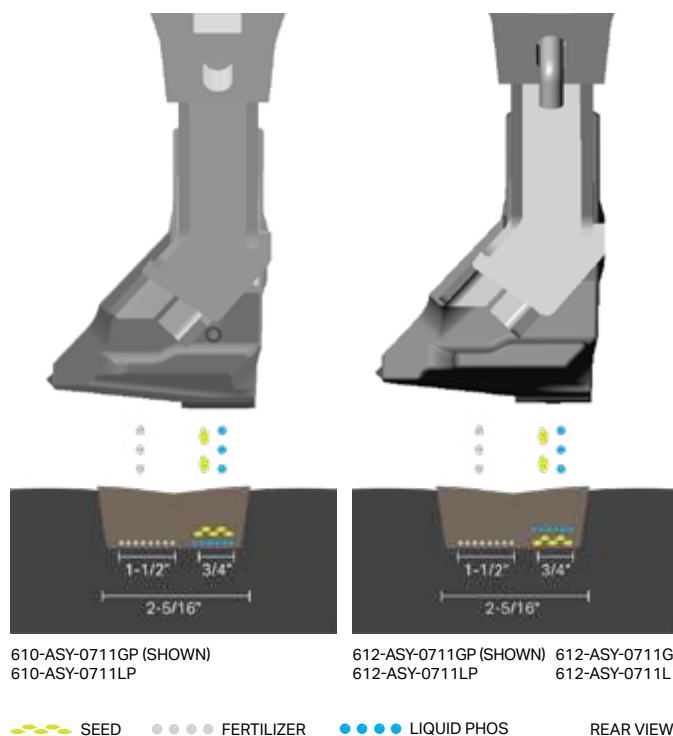
TIP: Replaceable cast chrome tip (612-TIP-0711 & 612-TIP-0712) with carbide inserts on the nose of the tip and the wing for excellent penetration and wear resistance. Narrow carbide cutting edge on the wing for exceptional penetration. **Assemblies on this page include the tip.**

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 121. **When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301.** See page 125.

For an expanded view of these openers see page 140.

610-ASY-0711GP (SHOWN)
610-ASY-0711LP612-ASY-0711GP (SHOWN) 612-ASY-0711G
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 19.

PLEASE NOTE



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.

Openers to Fit C-Shank

Single & Multi-Shoot Options

OPENERS TO FIT C-SHANK



SHOWN WITH
610-TIP-4081

610-HLD-2080HD

VOS (VERSATILE OPENER SYSTEM)

FITS: 47° and 50° C-Shank

FERTILIZER TYPE: Multiple options.
See pages 60-61.

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 60-61.

NOTES: Installation bolts sold separately.

Use Grade 8 carriage bolts. See page 127.

When installing on 50° shanks other than Bourgault or Ezee-On use wedge 880-WDG-0300 or 880-WDG-0301. See page 125.



SHOWN WITH
620-TIP-1510 & 620-SSH-1000

620-HLD-5000

TITAN OPENER SYSTEM

FITS: 47° and 50° C-Shank

FERTILIZER TYPE: Multiple options.
See pages 58-59.

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 58-59.

NOTES: Installation bolts sold separately.

Use 1/2" x 2-1/4" Grade 8 hex head bolts. See page 129.

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

VANTAGE

EDGE

Precision Placement. Minimal Disturbance. Maximum Efficiency.

Vantage Edge™, is a series of ultra-narrow openers that include products engineered for producers who demand precision, efficiency, and uncompromised performance in every pass.

Why Vantage Edge™?

- ▶ **1/2-Inch Narrow Profile**
Designed to compete with a coulter - perfect for tight seed rows or precise nutrient banding.
- ▶ **Low Soil Disturbance**
Maintains a clean seedbed while reducing moisture loss & weed germination potential.
- ▶ **Optimal Soil Flow Design**
Engineered contours and flow paths reduce plugging & ensure consistent operation - even in heavy residue or varying soil types.
- ▶ **Precision Placement**
Consistently delivers seed or fertilizer where it needs to be - at the right depth, right spacing, and with minimal variation.



FOCUS CLIP

PRECISION SEEDING MADE EASY!

DIRECTS SEED FLOW

Channels seeds to the front of the knife's funnel for more accurate placement.

IMPROVED SEED PLACEMENT

Ensures a concentrated seed deposit at the bottom of the trench for optimal germination.

QUICK & EASY INSTALLATION

Installs & removes in minutes — no special tools required!

BUILT TO LAST

Made from durable, UV-protected plastic for years of reliable performance.



**BTT PART #
880-FCP-1000**

Can currently
be used with:
680-KNF-1011
680-KNF-5000
680-KNF-5100
686-KNH-5010
686-KNF-5010P



Openers to Fit Bourgault PLDS/PLDX



333-KNF-1010

FERTILIZER KNIFE

FITS: Bourgault PLDS

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

NOTES: Installation bolts sold separately.

Use 5/8" x 2-3/4" Grade 8 hex head bolts and 5/8" locking nut.

***BUILD TO ORDER**



333-KNF-1030*

FERTILIZER KNIFE

FITS: Bourgault PLDS

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP: 3/4" (19mm) high chrome weld-on tip with extra long carbide inserts, provides longer wear life.

NOTES: Installation bolts sold separately.

Use 5/8" x 2-3/4" Grade 8 hex head bolts and 5/8" locking nut.

Funnel mounting hardware 5/16" x 1-1/4" carriage bolt x2, 5/16" flanged lock nut x2.



333-KNF-2000

SINGLE SHOOT SEED OPENER

FITS: Bourgault PLDS

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP: 1/2" (13mm) tip with carbide inserts on the nose for longer wear.

OVERVIEW: 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 1/2" locking nuts.

CROP SEEDED USING 333-ASY-3011
INLINE PAIRED ROW OPENER

Openers to Fit Bourgault PLDS/PLDX



333-KNF-2020

SINGLE SHOOT SEED OPENER

FITS: Bourgault PLDS

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

OVERVIEW: This knife has a front forward nose carbide minimizing debris hang up on the front of the knife.

NOTES: Installation bolts sold separately.

Use 1/2" x 1-3/4" Grade 8 hex head bolts and 1/2" locking nuts.

***BUILD TO ORDER**



333-KNF-2050*

VERTICAL SEEDING KNIFE

FITS: Bourgault PLDS

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

BOLT HOLE SPACING: N/A

TIP: 1" (25mm) vertical high chrome weld-on tip with double carbide inserts, nose provides long-lasting wear life.

OVERVIEW: Long wear vertical 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 1/2" locking nuts.



333-ASY-3011

INLINE PAIRED ROW OPENER

FITS: Bourgault PLDS

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

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

BOLT HOLE SPACING: N/A

TIP OPTIONS:

- 200-TIP-3011 (shown)
- 200-TIP-3001
- 200-TIP-3020

See page 14 for tip overview. Tips fit 333-HLD-3000.

OVERVIEW: This inline Paired Row opener delivers the seed rearward through the cast seed boot into two bands 2-1/3" apart (center to center). The replaceable 200-TIP-3011 tip will provide exceptional wear life accompanied by a durable long wear holder. **Assembly includes the 200-TIP-3011.**

NOTES: Installation bolts sold separately.

Use 1/2" x 1-3/4" Grade 8 hex head bolts and 1/2" locking nuts.

V Packer not recommended with this opener.

* Requires 880-BSH-1150 for drills <60' (using 1-3/8" seed hoses)



Openers to Fit Bourgault 3335 & 3545 PLS/PLX

Bourgault 3335 Series & 3545 Series Single Shoot Openers



680-HLD-1000

SINGLE SHOOT OPENER

FITS: Bourgault PLX, PLS, XTC, QDA

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 13-14.

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. (960-CRG-3755 & 907-NPF-3755) See page 127.

680-HLD-1000 does not have a bushing. If required please order 880-BSH-1130 separately. See page 125.

For an expanded view of this opener see page 137.



680-ASY-1000P

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

SINGLE SHOOT OPENER

FITS: Bourgault PLX, PLS, XTC, QDA

FERTILIZER TYPE: Starter Fertilizer w/ Seed or Seed w/ 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 132.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 13-14.

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. (960-CRG-3755 & 907-NPF-3755) See page 127. 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 137.



680-KNF-1011

SINGLE SHOOT OPENER

FITS: Bourgault PLX, PLS, XTC, QDA

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

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

TIP: 1" (25mm) vertical high chrome weld-on tip with double carbide inserts, nose provides long-lasting wear life.

OVERVIEW: This opener is designed around a smooth one piece casting. The vertical design produces an opener having minimal drag with less soil throw & pulls less stones. The opener is equipped with a fully welded 1" wide vertical style tip.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2" Grade 8 hex bolt (944-HRG-2005) & 3/8" flanged lock nut (907-NPF-3755) See page 127. When installing use bolt holes pictured in Fig. 1. 880-BSH-1130 is required if you use a 1-1/8" hose.



FIG. 1
(680-KNF-5000 SHOWN)



680-KNF-5000

SINGLE SHOOT OPENER

FITS: Bourgault PLX, PLS, XTC, QDA

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

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

TIP: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

OVERVIEW: This opener is designed around a smooth one piece casting. The design produces an opener having minimal drag with less soil throw. The opener is equipped with two nose carbides & added hardsurfacing to ensure a very long wear life. Heavier duty for rocky conditions.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2" Grade 8 hex bolt (944-HRG-2005) & 3/8" flanged lock nut (907-NPF-3755) See page 127. When installing use bolt holes pictured in Fig. 1. 880-BSH-1130 is required if you use a 1-1/8" hose.



680-KNF-5100

SINGLE SHOOT OPENER

FITS: Bourgault PLX, PLS, XTC, QDA

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

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

TIP: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

OVERVIEW: This opener is designed around a smooth one piece casting. The design produces an opener having minimal drag with less soil throw. The opener is equipped with two nose carbides & added hardsurfacing to ensure a very long wear life. For normal seeding conditions with all the same features as the 680-KNF-5000 without the weight.

NOTES: **Installation bolts sold separately.** Use 3/8" x 2" Grade 8 hex bolt (944-HRG-2005) & 3/8" flanged lock nut (907-NPF-3755) See page 127. When installing use bolt holes pictured in Fig. 1. 880-BSH-1130 is required if you use a 1-1/8" hose.

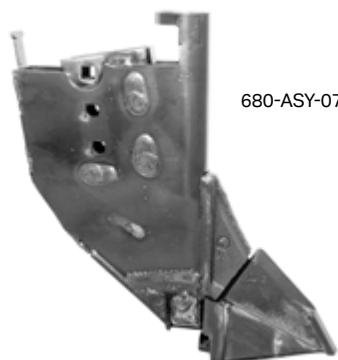
FOR MORE PRECISION DURING SEEDING

Try 880-FCP-1000 with 680-KNF-1011, 680-KNF-5000 & 680-KNF-5100



Openers to Fit Bourgault 3335 & 3545 PLS/PLX

Bourgault 3335 Series & 3545 Series, TriMax™ Triple-Shoot System



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 PLX, PLS, XTC, QDA

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 19.**

TIP: 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.

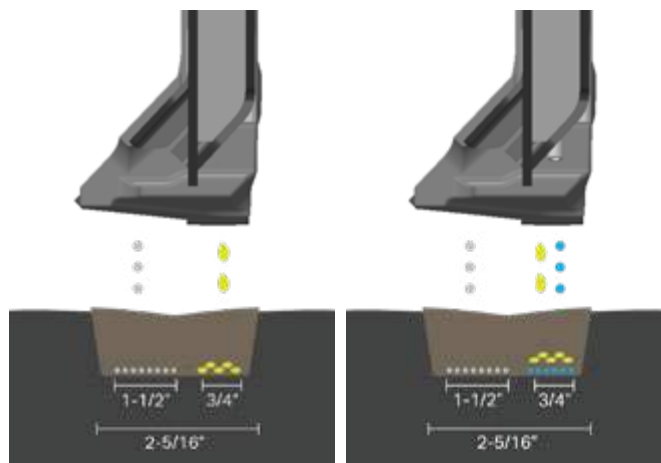
OVERVIEW: Unique design of the tip provides low disturbance, low draft and smoother fields. Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

NOTES: Installation bolts sold separately.

Use 3/8" x 2" Grade 8 hex bolt (944-HRG-2005) & 3/8" flanged lock nut (907-NPF-3755) See page 127.

When installing use bolt holes pictured in Fig. 2.

For an expanded view of these openers see page 140.



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

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

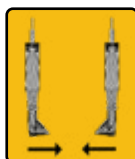
SEED FERTILIZER LIQUID PHOS REAR VIEW

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 19.



FIG. 2

PLEASE NOTE



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

***BUILD TO ORDER****G**

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

L

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

L**P**

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

SIDE BAND OPENERS

FITS: Bourgault PHD, XTC, QDA

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 LP openers deliver the liquid phos on top of the seed.

FERTILIZER PLACEMENT: Fertilizer is delivered down the center of the seed opener in a 3/4" band and 3/4" below the seedbed. In less than ideal conditions, mixing between seed and fertilizer may occur.

See precautions and risk factors on page 19.

TIP: 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.**

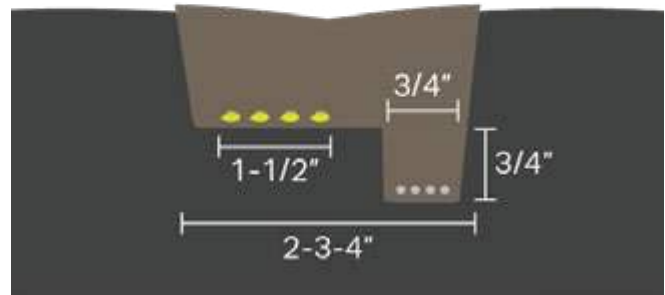
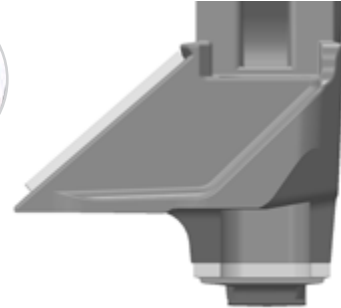
OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance.

NOTES: Installation bolts sold separately.

Use 3/8" x 2" Grade 8 hex bolt (944-HRG-2005) & 3/8" flanged lock nut (907-NPF-3755) See page 127. When installing use bolt holes pictured in Fig. 3. For an expanded view of these openers see page 141.



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 19.

PLEASE NOTE



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.



BOURGAULT
ORIGINAL EQUIPMENT



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.

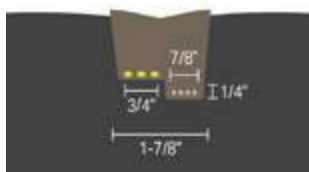
FERTILIZER PLACEMENT: Granular openers are fitted with a 1-1/4" (32mm) O.D. tube which places the granular phos or starter fertilizer to the side and slightly lower than the seed bed.

TIP: 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" Grade 8 hex bolt (944-HRG-2005) & 3/8" flanged lock nut (907-NPF-3755) See page 127. When installing on a Bourgault PHD use bolt holes pictured in Fig. 4A.

For an expanded view of these openers see page 138.



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 & risk factors on page 19.



FIG. 4A



FIG. 4



682-ASY-2063

682-ASY-2063
682-ASY-2064

SIDE BAND OPENER

FITS: Bourgault PHD, XTC, QDA

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 19.

TIP: 3/4" cast chrome welded tip with primary carbide inserts on the nose with extra long carbide. 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 127. When installing on a Bourgault PHD use bolt holes pictured in Fig. 4.

For an expanded view of these openers see page 138.

PLEASE NOTE



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.

Openers to Fit Bourgault Mid Row Shank

VANTAGE
EDGE

BOURGAULT
ORIGINAL EQUIPMENT



1/2" WIDE
050-MRA-5130

050-MRA-5120
050-MRA-5130

050-MRA-5122
050-MRA-5131

FERTILIZER KNIFE

FITS: Bourgault MRS and stand alone fertilizer applicators

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: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

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-5120 applies NH3.

050-MRA-5122 applies two streams of NH3.

050-MRA-5130 applies both NH3 + Granular.

050-MRA-5131 applies both Liquid + Granular.

050-MRF-0322 two 1/2" NH3 tubes.

NOTES: Installation bolts included.

Torque dry 110 ft. lbs.

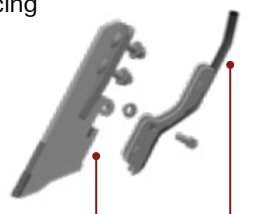
For other options see page 78.

For an expanded view of this opener see page 136.

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



050-MRH-5175 + 050-MRF-0020
050-MRA-5120



050-MRH-5175 + 050-MRF-0022
050-MRA-5122

DOUBLE NH3 TUBES FOR VAPOR



050-MRF-0322

DOUBLE NH3 TUBES FOR VAPOR + GRANULAR



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 13-14.

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 & 1/2" locking nuts. See page 129.

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).

Install on left side of shank.



FIG. 5



694-KNH-1000

**694-KNH-1000
694-KNH-1000P**

SINGLE SHOOT OPENER

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

FERTILIZER TYPE: Starter Fertilizer w/ Seed Only

TUBE SIZE:

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

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. Tip should not be wider than packer. **Tips sold separately.** See pages 13-14.

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 & 1/2" locking nuts. See page 129.

Openers to Fit CNH

Case IH, New Holland, Flexi-Coil & Concord

684-ASY-2711G



684-ASY-2711L



684-ASY-3712G

**G**

684-ASY-2711G
684-ASY-2712G
684-ASY-3711G
684-ASY-3712G

L***BUILD TO ORDER**

684-ASY-2711L*
684-ASY-2712L*
684-ASY-3711L*
684-ASY-3712L*

L**P**

684-ASY-2711LP*
684-ASY-2712LP*
684-ASY-3711LP*
684-ASY-3712LP*

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 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 19.**

TIP: 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. The new 684-ASY-3711G/3712G's have a straight holder whereas the current 684-ASY-2711G/2712G's have an offset holder. The current 684-ASY-2711G/2712G's were designed to mimic the OEM knives, having the fertilizer center placed with the packer tire. The new 684-ASY-3711G/3712G's are straight, without the offset, this allows the seed to be center placed with the packer tire.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2" Grade 8 hex head bolts & 1/2" locking nuts. See page 129.

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 141.



FIG. 6

684-SHM-0125

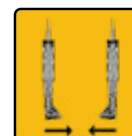
SHIM

Shim for aligning
684-ASY-3711G
& 684-ASY-3712G
to the packer



PLEASE NOTE

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. The holder is always bolted to the left side of the shank with the wings of the tip always facing the center of the drill.



Openers to Fit CNH

Case IH, New Holland, Flexi-Coil & Concord

SHOWN WITH
620-TIP-1510 &
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 58-59.

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-1510 and 620-SSH-1000.**

Components sold separately. See pages 58-59.

NOTES: **Installation bolts sold separately.** Use 1/2" x 2-1/2" Grade 8 hex head bolts & 1/2" locking nuts. See page 129.



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.



We had an existing Horsch 4m Sprinter with the standard "Duett" coulters, in 2015 we looked for an alternative system that caused less disturbance, but also gave us more consistency in seed depth.

We came across Bourgault Tillage Tools VOS at the Cereals event, the system looked right for us. Then with the explanation of how the tips worked, we decided to order a set for our Horsch Sprinter.

The BTT VOS has drilled a wide variety of products through the one tip (4" paired row), spring barley, beans, linseed, spring oats, vining peas, oilseed rape (canola) and wheat.

The VOS has also given us all the other benefits with a tip that causes less disturbance and consistency in seed placement, lower draft requirement, longevity of the product to name a few.

This drill remained with us on VOS until 2023. When it was time to think about changing the drill, for a new Horsch 6m Sprinter with a dual tank, having had the VOS system previously, there was no hesitation to upgrade the new drill to VOS fertilizer system.

The fertilizer was placed where we needed it on both the new & previous Horsch Sprinter systems using VOS.

Mike & James Porter
Porters Farms (Walpole) Suffolk, United Kingdom

Openers to Fit Horsch

Horsch Sprinter & CO, Cougar, Panther



SHOWN WITH
200-TIP-0802

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

SINGLE SHOOT SEED OPENER

FITS: Horsch 84° Shank, ST and CO

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 13-15.

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 4° 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, ST and CO

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.

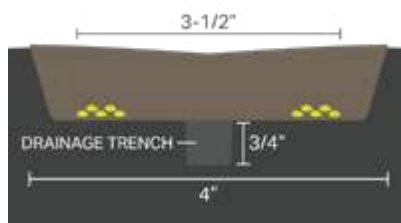
See pages 13-15.

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 4° when required.

Components sold separately.

See pages 60-61.

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



***BUILD TO ORDER**

SHOWN WITH
610-TIP-0802

688-HLD-1050*

SINGLE SHOOT HOLDER

FITS: Horsch Sprinter

FERTILIZER TYPE: Single shoot with Starter fertilizer

TIP OPTIONS:

- 200-TIP-2011
- 200-TIP-3011
- 610-TIP-4030
- 610-TIP-0802
Modified back cut off

Tips sold separately.

See pages 13-15.

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.**

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 19.

SHOWN WITH
610-TIP-4030



688-HLD-2000

PAIRED ROW OPENER

FITS: Horsch 84° Shank, ST and CO

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 19.

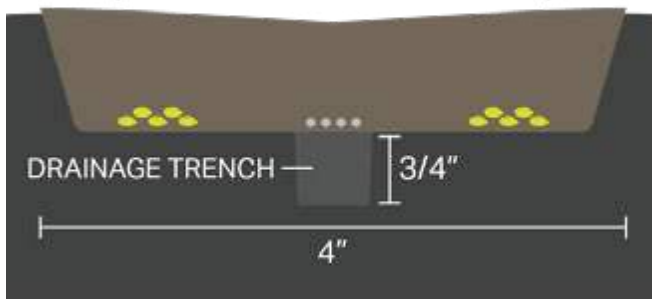
TIP OPTIONS:

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

Tips sold separately. See page 15.

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 41), 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 19.

SHOWN WITH
620-TIP-1510,
620-SSH-6000
& 688-HLD-5000



688-HLD-5000

TITAN OPENER SYSTEM

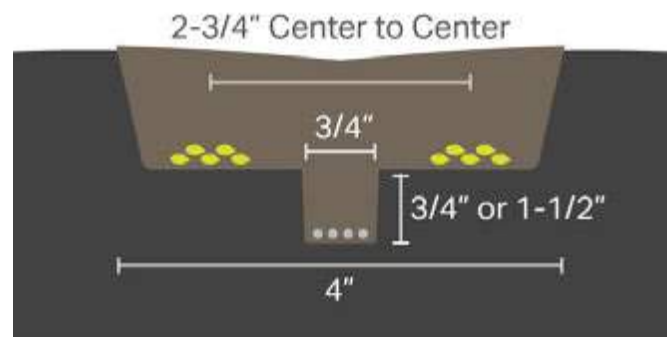
FITS: Horsch 84° Shank, ST and CO, Cougar, Panther

FERTILIZER TYPE: Multiple options. See pages 58-59.

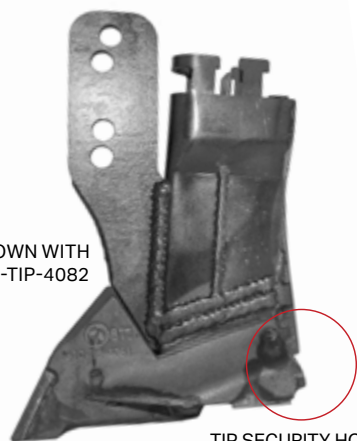
OVERVIEW: This holder is part of the Titan Opener System, an innovative system giving you the most horizontal and vertical seed separation. This system gives you the flexibility to choose the right tip, seed shoe and fertilizer tubes for your needs.

Components sold separately. See pages 58-59. For a more detailed view of these components pages 146-147.

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



SHOWN WITH
610-TIP-4082



TIP SECURITY HOOK

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

VOS (VERSATILE OPENER SYSTEM)

FITS: Horsch 84° Shank, ST and CO

FERTILIZER TYPE: Multiple options.
See pages 60-61.

TIP OPTIONS:

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

Tips sold separately.
See pages 14-16.

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 4° when required.

Components sold separately.
See pages 60-61

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

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

SHOWN WITH
610-TIP-0802



688-HLD-2088

FERTILIZER HOLDER

FITS: Horsch 84° Shank, ST and CO

FERTILIZER TYPE: Multiple options.
See pages 60-61.

TIP:

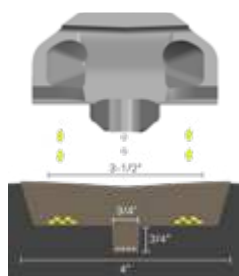
- 610-TIP-0802

Tip sold separately.
See pages 14-16.

OVERVIEW: This holder has two granular chambers sized to fit 1-7/16" OD hose. This is not a double shoot holder, it is for seed or fertilizer applications only. The holder comes with a second set of holes allowing you to adjust the pitch by 4° when required.

Components sold separately.
See pages 60-61.

NOTES: Installation bolts sold separately. Use M16 x 55 10.9 hex head bolts. Purchase through your local dealer. **No tip security hook.** Standard installation uses the bottom holes (pictured red in Fig. 8), for 4° more pitch use the top holes (pictured yellow).



610-TIP-4082

SHOWN WITH
610-TIP-0802



688-HLD-2093

FERTILIZER HOLDER

FITS: Horsch 84° Shank, ST and CO

TIP:

- 610-TIP-0802

Tip sold separately.
See pages 14-16.

OVERVIEW: This holder has three granular chambers sized to fit 1-7/16" OD and 1-1/4" ID hose. This is not a double shoot holder, it is for seed or fertilizer applications only. The holder comes with a second set of holes allowing you to adjust the pitch by 4° when required.

Components sold separately.
See pages 60-61.

NOTES: Installation bolts sold separately. Use M16 x 55 10.9 hex head bolts. Purchase through your local dealer. **No tip security hook.**

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



FIG. 8

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 13.

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.

For an expanded view of these openers see page 142.

L

OR

N



650-HLD-1001

FERTILIZER TYPE: Liquid or NH₃

TUBE SIZE: 0.4" O.D. stainless steel pipe

NOTES: Use with 650-ACC-1000.

G



650-HLD-1000G

FERTILIZER TYPE: Granular

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

NOTES: Use with 650-ACC-1000.

L



650-HLD-1000L

FERTILIZER TYPE: Liquid

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

NOTES: Use with 650-ACC-1000.

N



650-HLD-1000N

FERTILIZER TYPE: NH₃

TUBE SIZE: 1/2" (12mm) O.D. NH₃ pipe

NOTES: Use with 650-ACC-1000.



650-ROL-0375

OVERVIEW: 3/8 x 1 roll pin to hold fertilizer knives to shank



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.

N L



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.

P L



650-HLD-4040*

FERTILIZER TYPE: Aqua NH₃ + Liquid Phos.

TUBE SIZE: 0.400" O.D. stainless steel tube

NOTES: Use with 650-ACC-1000.

***BUILD TO ORDER**

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 or Seed w/ 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.

TIP: 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 143.



650-ASY-3011

***BUILD TO ORDER**

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

PAIRED ROW OPENER

FERTILIZER TYPE: Starter Fertilizer w/ Seed or Seed w/ 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.

TIP OPTIONS:

- 200-TIP-3011 (shown) **Assembly includes 200-TIP-3011.**
- 200-TIP-3001
- 200-TIP-3020

See page 14 for tip overview. Tips fit 650-HLD-3000.

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.

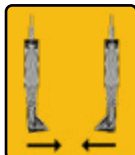
For Liquid Phos option order 650-ASY-3011P.

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 143.

PLEASE NOTE



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.

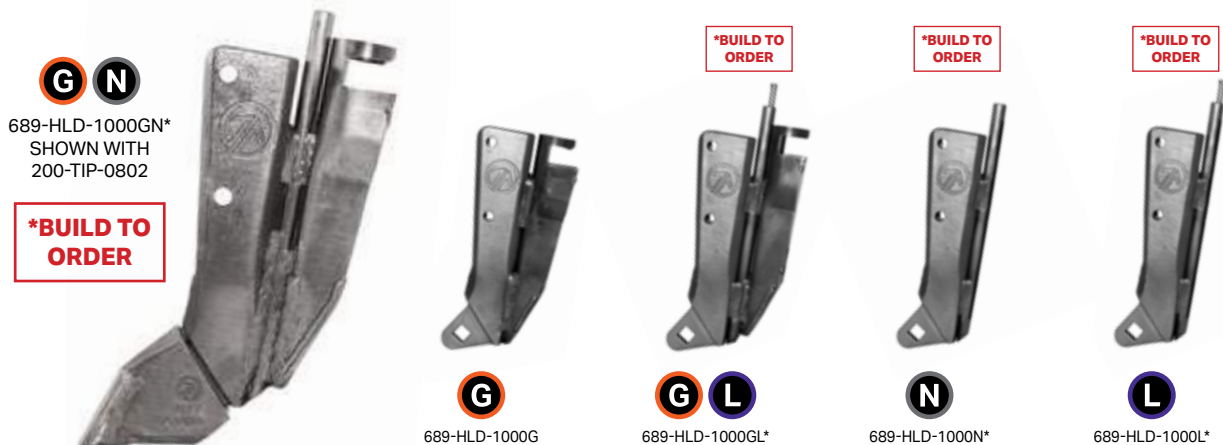


Check out scrapers to fit John Deere packers on page 119.



Fertilizer Knives to Fit John Deere

John Deere P670 & P680 Precision Air-Hoe Drill



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

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

689-HLD-1000N*

FERTILIZER HOLDER

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 13-14.

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" x 1-3/4" Grade 8 carriage bolts and 3/8" lock nuts. See page 129. For an expanded view of these openers see page 144. If using shields, longer bolts are required, use 3/8" x 2".

689-KNF-2000
689-KNF-2000GL

1/2" FERTILIZER KNIFE

FERTILIZER TYPE: Granular, Granular N + Liquid N

TUBE SIZE: **Granular:** 1-1/4" (32mm) O.D. **Liquid:** 1/4" (6mm) O.D. stainless steel

OVERVIEW: This is a non replaceable 1/2 inch tip fertilizer knife with extra hard surfacing along the critical wear areas and two piece of front carbide for maximum wear protection.

NOTES: **Installation bolts included.** Use 3/8" x 1-3/4" Grade 8 carriage bolts and 3/8" lock nuts. See page 129. For an expanded view of these openers see page 144. If using shields, longer bolts are required, use 3/8" x 2".



689-KNF-2025

1/2" FERTILIZER KNIFE

FERTILIZER TYPE: Liquid

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

OVERVIEW: This is a non replaceable 1/2 inch tip fertilizer knife with extra hard surfacing along the critical wear areas and two piece of front carbide for maximum wear protection.

NOTES: **Installation bolts included.** Use 3/8" x 1-3/4" Grade 8 carriage bolts and 3/8" lock nuts. See page 129. For an expanded view of these openers see page 144. If using shields, longer bolts are required, use 3/8" x 2".



Seed Openers to Fit John Deere

John Deere P670 & P680 Precision Air-Hoe Drill

689-KNF-1000 689-KNF-1000P

SINGLE SHOOT SEED OPENER

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

TUBE SIZE: 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 125.

OVERVIEW: The narrow design allows for more accurate seed placement behind the tip. The tip width is 5/8". Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts included.** Use 3/8" x 1-1/2" Grade 8 carriage bolts and 3/8" lock nuts. (960-CRG-1505 & 907-NPF-3755)

See page 129.



Openers to Fit Morris

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

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



NOTE:

Shim required when ordering any 680 or 682 openers for a Morris Maxim with the Edge-On shank. (680-SHM-1000)

680-HLD-1000

680-ASY-1000P

680-HLD-1000P

SINGLE SHOOT OPENER

FITS: Morris Maxim Edge On

FERTILIZER TYPE: Starter Fertilizer w/ Seed or Seed w/ 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 125.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 13-14.

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 127.

680-HLD-1000 and 680-HLD-1000P do not have bushings. For an expanded view of this opener see page 137.

***BUILD TO ORDER**

683-ASY-1000P*



P

693-ASY-1000P



MORRIS CONTOUR I

***683-ASY-1000P¹**
683-KNH-1000¹

MORRIS CONTOUR II
MORRIS QUANTUM

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 or Liquid Phos w/ Seed

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 125.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 13-14.

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 & 1/2" locking nuts. See page 129.

680-ASY-0711GP



680-ASY-0711LP



See note on page 45.
Reg Shim (680-SHM-1000).

***BUILD TO ORDER**

G

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

G P

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

L

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

L P

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 20.**

TIP: 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.

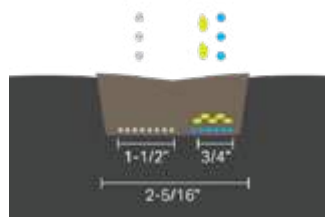
OVERVIEW: Unique design of the tip provides low disturbance, low draft and smoother fields. Hard facing is placed on critical wear areas to ensure a long-lasting holder and proper seed placement.

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 125.

NOTES: Installation bolts sold separately.

Use 3/8" x 2-1/4" Grade 8 carriage bolts & 3/8" flanged lock nuts. See page 127. For an expanded view of these openers see page 140.



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 19.

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.

Openers to Fit Morris

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

See note on
page 45. Reg Shim
(680-SHM-1000).

680-ASY-2711LP



683-ASY-2711G



693-ASY-2711LP



*BUILD TO ORDER			
G	G P	L	L P
MORRIS MAXIM EDGE ON 680-ASY-2711G ¹ 680-ASY-2712G ¹		680-ASY-2711L ^{1*} 680-ASY-2712L ^{1*}	680-ASY-2711LP ^{1*} 680-ASY-2712LP ^{1*}
MORRIS CONTOUR I 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*}
MORRIS CONTOUR II • QUANTUM 693-ASY-2711G ³ 693-ASY-2712G ³		693-ASY-2711L ^{3*} 693-ASY-2712L ^{3*}	693-ASY-2711LP ^{3*} 693-ASY-2712LP ^{3*}

FITS: ¹Morris Maxim Edge On, ²Morris Contour I, ³Morris Contour II, Quantum

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 19.**

TIP: 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.

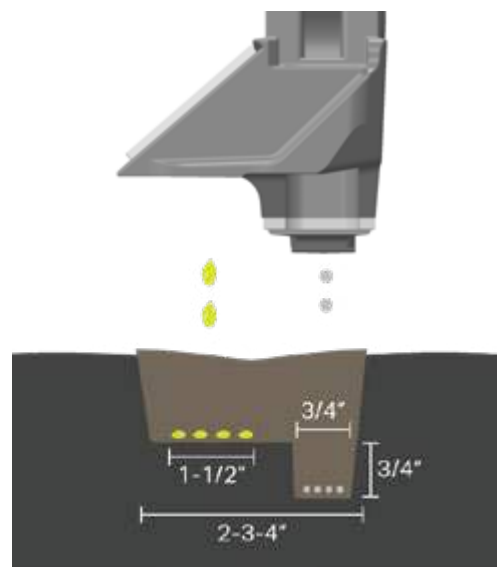
OVERVIEW: Hard facing is placed on critical wear points to ensure a long-lasting holder and proper seed placement. The streamlined holder design reduces plugging and allows for better trash clearance. Designed for use with 1-1/4" (31mm) O.D. hose. Bushings available for larger hoses. See page 125.

NOTES: Installation bolts sold separately.

680 openers use 3/8" x 2-1/4" Grade 8 carriage bolts. See page 127.

683 openers use 1/2" x 2" Grade 8 hex head bolts. See page 129.

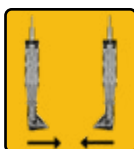
For an expanded view of these openers see page 141.



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 19.

PLEASE NOTE



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-HLD-2080
SHOWN WITH
610-TIP-4081



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



683-HLD-2080 693-HLD-2080

VOS (VERSATILE OPENER SYSTEM)

FITS: Morris Contour II, Morris Quantum

FERTILIZER TYPE: Multiple options. See pages 60-61.

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 60-61.

NOTES: Installation bolts sold separately.

Use 1/2" x 2" Grade 8 hex head bolts & 1/2" locking nuts. See page 30.

682-ASY-2063



See note on
page 45. Reg Shim
(680-SHM-1000).

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 19.**

TIP: 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.

680-ACC-0001 is required for Concord Edge-On shanks & is sold separately.

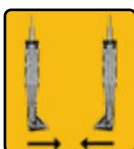
Use 3/8" x 2-1/4" Grade 8 carriage bolts & 3/8" flanged lock nuts. See page 127.

For an expanded view of these openers see page 138.

Interested in BTT Products?

Try before you buy with
the BTT Demo Program.
See page 2.

PLEASE NOTE



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.

Openers to Fit Morris

Morris Contour I, II & Quantum

G

***BUILD TO ORDER**



683-ASY-4020G1*

G

***BUILD TO ORDER**



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 19.

TIP: 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 125.

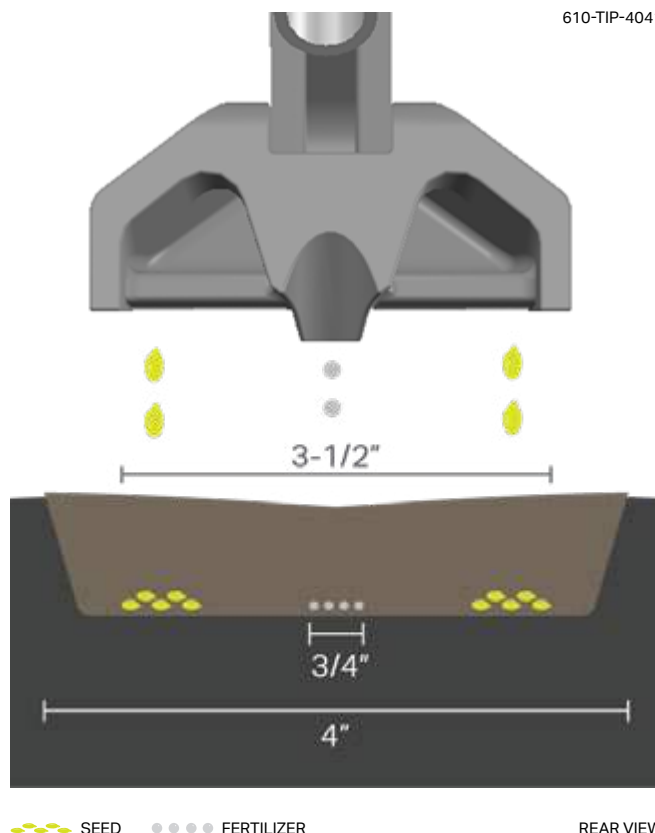
These openers provide the flexibility to easily switch between Granular and Liquid fertilizer. The above openers are available with liquid phos options. Please call the factory for more information.

NOTES: Installation bolts sold separately.

Use 1/2" x 2" Grade 8 hex head bolts & 1/2" locking nuts. See page 129.

For an expanded view of these openers see page 139.

610-TIP-4041



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 19.

Fertilizer Knives to Fit Salford

Salford Independent Series

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

Tips sold separately. See page 18.

OVERVIEW: Fits 84° shanks. 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).

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.

NOTES: 670-HLD-2000G*

Shank is 2-1/2" longer than 670-HLD-1000G for deeper penetration.



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



670-HLD-1000L*

***BUILD TO ORDER**



670-HLD-1000



670-HLD-1000GL



670-HLD-1000HG*

***BUILD TO ORDER**



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

***BUILD TO ORDER**



670-HLD-2000G*
SHOWN WITH
600-TIP-7501

***See note below**

***BUILD TO ORDER**



670-HLD-1000N



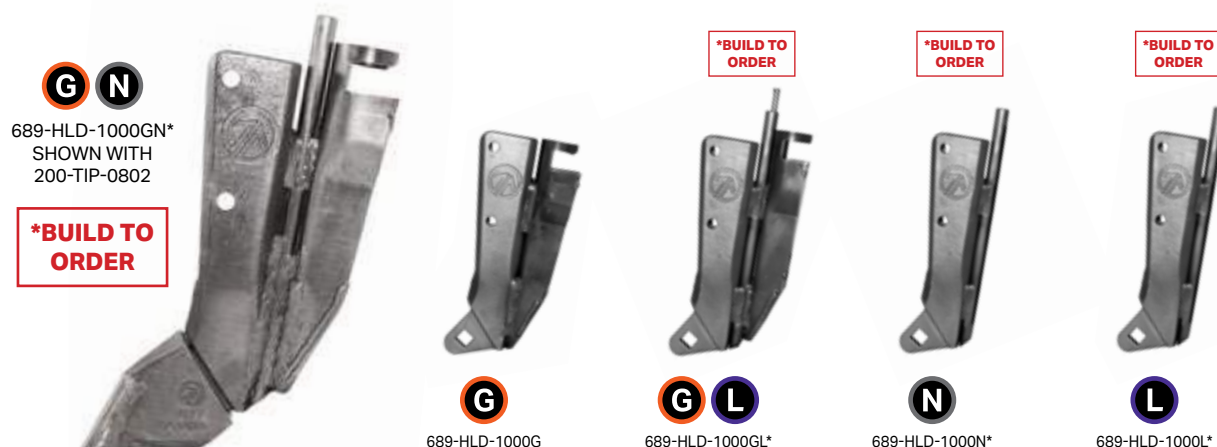
670-HLD-1000GN*



***BUILD TO ORDER**



Fertilizer Knives to Fit Seed Master



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

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

689-HLD-1000N*

FERTILIZER HOLDER

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 13-14.

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" x 1-3/4" Grade 8 carriage bolts and 3/8" lock nuts. See page 129. For an expanded view of these openers see page 144. If using shields, longer bolts are required, use 3/8" x 2".

689-KNF-2000
689-KNF-2000GL

1/2" FERTILIZER KNIFE

FERTILIZER TYPE: Granular, Granular N + Liquid N

TUBE SIZE: **Granular:** 1-1/4" (32mm) O.D. **Liquid:** 1/4" (6mm) O.D. stainless steel

OVERVIEW: This is a non replaceable 1/2 inch tip fertilizer knife with extra hard surfacing along the critical wear areas and two piece of front carbide for maximum wear protection.

NOTES: **Installation bolts included.** Use 3/8" x 1-3/4" Grade 8 carriage bolts and 3/8" lock nuts. See page 129. For an expanded view of these openers see page 144. If using shields, longer bolts are required, use 3/8" x 2".



689-KNF-2000GL

VANTAGE
EDGE

689-KNF-2025

1/2" FERTILIZER KNIFE

FERTILIZER TYPE: Liquid

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

OVERVIEW: This is a non replaceable 1/2 inch tip fertilizer knife with extra hard surfacing along the critical wear areas and two piece of front carbide for maximum wear protection.

NOTES: **Installation bolts included.** Use 3/8" x 1-3/4" Grade 8 carriage bolts and 3/8" lock nuts. See page 129. For an expanded view of these openers see page 144. If using shields, longer bolts are required, use 3/8" x 2".



VANTAGE
EDGE

Seed Knives to Fit Seed Master

689-KNF-1000 689-KNF-1000P

SINGLE SHOOT SEED OPENER

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

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

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

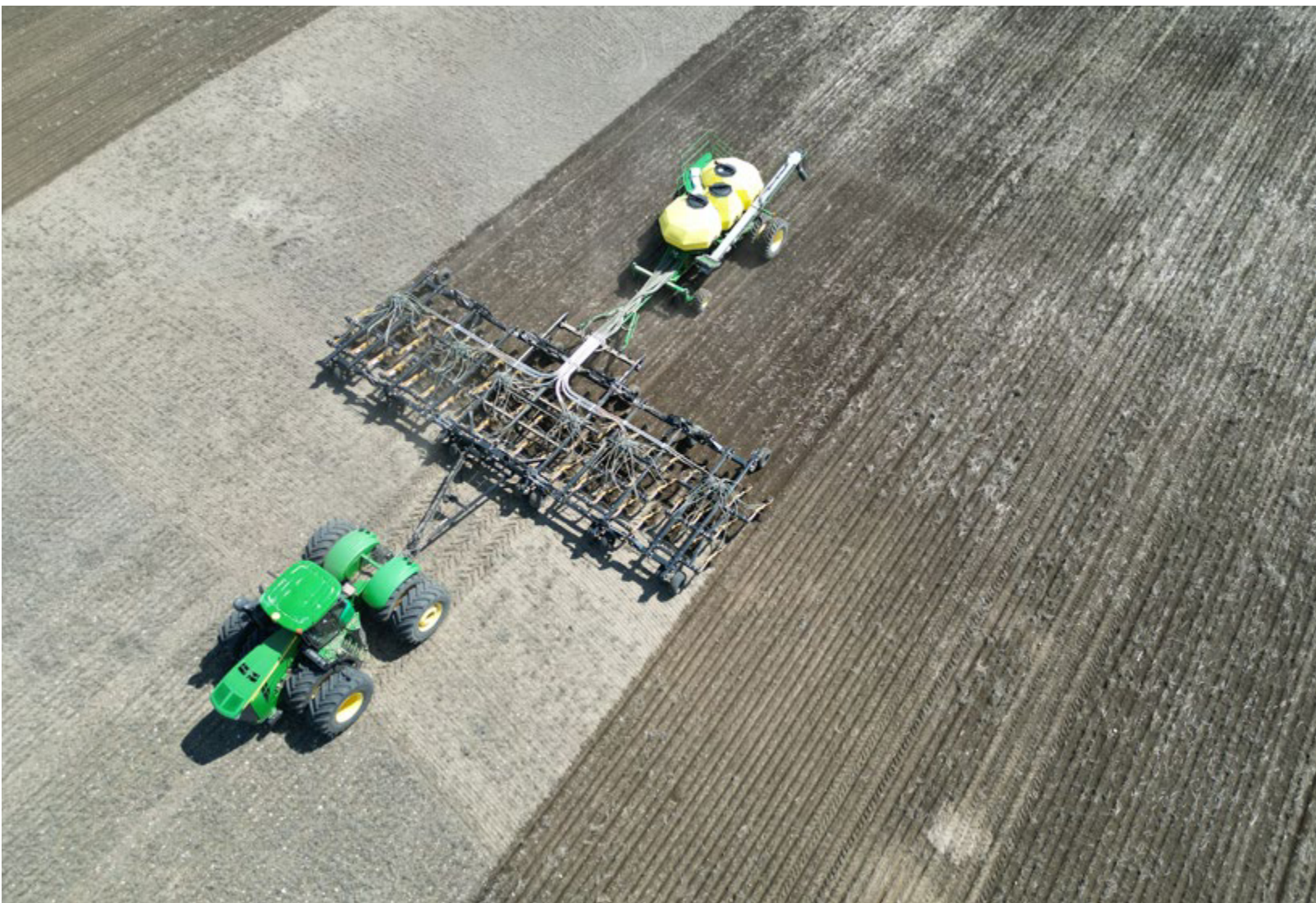
This can be converted to work with 1/4" (6mm) I.D. delivery hoses with 880-ASY-1010.

See page 125.

OVERVIEW: The narrow design allows for more accurate seed placement behind the tip. The tip width is 5/8". Extra hard surfacing on critical wear areas increases the life of the holder.

NOTES: **Installation bolts included.** Use 3/8" x 1-1/2" Grade 8 carriage bolts and 3/8" lock nuts. (960-CRG-1505 & 907-NPF-3755)

See page 129.



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: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

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

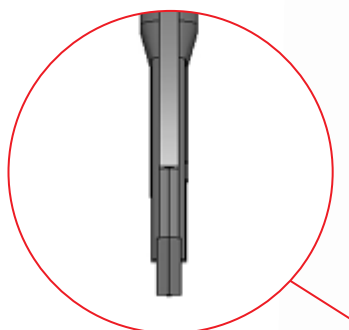
Body and fertilizer tubes are narrow with additional hard-surfacing on critical wear areas to increase the life of the holder.

NOTES: **Installation bolts sold separately.** Use 7/16" x 1-3/4" Grade 8 carriage bolts (962-CRG-1755) & stover lock nut (906-NPT-4375). Hose clamp part # 880-HCL-9152.

See page 129.



1/2" WIDE
686-KNH-5020G



1/2" WIDE
686-KNH-5020GL*

***BUILD TO ORDER**



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

***BUILD TO ORDER**



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

***BUILD TO ORDER**



1/2" WIDE
686-KNH-5020GN*

***BUILD TO ORDER**

Fertilizer Knives to Fit Väderstad Seed Hawk

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



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



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

Tips sold separately. See page 13.

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 7/16" x 1-3/4" Grade 8 carriage bolts and 7/16" locking nuts. See page 129.

For an expanded view of these openers see page 145.

I've been running BTT parts for over 18 years. I currently run an 80' Vaderstad Seedhawk, but have used their parts on other drills in the past as well. The parts are phenomenal and are built to last. Competitor parts I've tried in the past have worn too quickly. Their service can't be beat, 11 on a scale from 1-10! Being in a tough clay soil type creates a problem from the start. I received follow up calls numerous times to ensure I was happy with how my openers were performing. The reps and service & warranty manager are the reason I won't buy anything other than BTT parts. Price doesn't matter. Their service is worth it.

Danton Soloducha, Indian Head, Saskatchewan, Canada



Seed Knives to Fit Väderstad Seed Hawk



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 125.

TIP: 1/2" (13mm) tip with carbide inserts on the nose for a sharp cutting edge.

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 3/8" x 1-3/4" Grade 8 hex head bolts (944-HRG-1755) & nut (906-NPT-3755). See page 129.



**FOR MORE
PRECISION DURING
SEEDING**

**Try 880-FCP-1000
with 680-KNH-5010**

686-KNH-1001*
SHOWN WITH
200-TIP-0802

***BUILD TO
ORDER**

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 125.

TIP OPTIONS: Any 200 Series Single Shoot Replaceable Tip, allowing you to choose the right tip for your conditions. **Tips sold separately.** See pages 13-14.

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 3/8" x 1-3/4" Grade 8 hex head bolts (944-HRG-1755) & nut (906-NPT-3755).

See page 129.

For an expanded view of this opener see page 145.

686-ASY-3011P

686-ASY-3011

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 125.

TIP OPTIONS:

- 200-TIP-3011 (shown)
- 200-TIP-3001
- 200-TIP-3020

See page 14 for tip overview.
Tips fit 686-HLD-3000.

Assembly includes the 200-TIP-3011.

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 3/8" x 1-3/4" Grade 8 hex head bolts (944-HRG-1755) & nut (906-NPT-3755).

***Will not fit older Seed Hawk drills.**

For an expanded view of this opener see page 145.

TITAN MULTI-SHOOT SEEDING OPENERS TO FIT YOUR FARM OR OPERATION!

- The Titan Opener System provides horizontal & vertical separation between the seed & fertilizer.
- Multiple shank holder options to fit your drill.
- 1/2" Carbide tip for fertilizer placement.
- Carbide in high wear areas extends the wear life of individual components.
- Paired Row seed shoes to match your packer width.
- Minimal skewing on the hillsides.

Build a Titan opener to fit your drill.

ALL PRODUCTS ARE BACKED BY
A PERFORMANCE GUARANTEE &
A 3 YEAR LIMITED WARRANTY.

Titan Opener System

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

1 CHOOSE YOUR HOLDER



See picture of assembly on page 26.

620-HLD-5000

FITS: 47° and 50° C-shank



See picture of assembly on page 40.

688-HLD-5000

FITS: Horsch 84° shank.



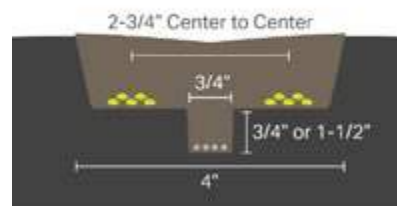
694-ACC-1000

See picture of assembly on page 37.

694-HLD-5000

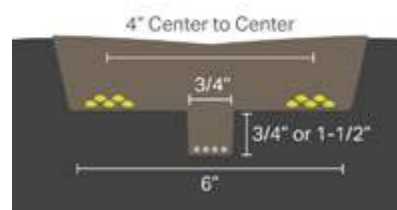
FITS: Case IH ATX 700, NH P2060, Flexi-Coil 5500 & Concord Edge On (84° shanks only). When installing on units other than Concord, insert **694-ACC-1000** is needed. See page 125.

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 (x3) to install shoes to holder.

For a more detailed view of these components see pages 146-147.

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

Titan Opener System

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

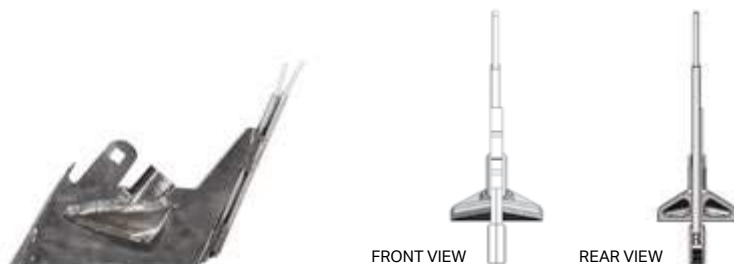
3 CHOOSE YOUR TIP



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.

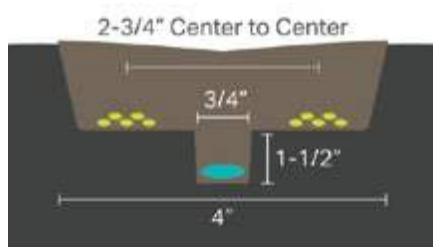
NOTES: Use bolt and nut combo 200-BNC-3100 to install tips. Use bolt and nut combo 620-BNC-3100 (5/16" x 1-1/2") to install shoe to holder.



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 1-1/2" 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

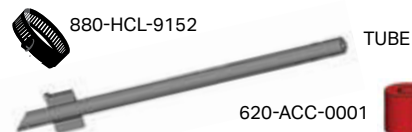
Drawings for illustration purposes only. All measurements shown are approximate. Results may vary with multiple factors including soil conditions, ground speed, application rates, fan speeds, and more. In less than ideal conditions, mixing between seed and fertilizer may occur. See precautions and risk factors on page 19.

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

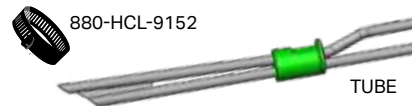
0.4" O.D. Stainless Steel Liquid or NH3 tube for **620, 688 & 694** series holders.



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



See picture of assembly on page 26.

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 125.



673-HLD-2080

FITS: Edge On, Bourgault PHD, Morris Maxim Edge On. When installing on Bourgault PHD, this holder is only recommended for use with 3/4" single shoot tip 610-TIP-0802.



See picture of assembly on page 41.

688-HLD-2080

FITS: Horsch 84° shank, ST and CO. 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.



MORRIS C1
683-HLD-2080



MORRIS C2
693-HLD-2080

See picture of assembly on page 49.

683-HLD-2080 693-HLD-2080

FITS: Morris C1 & C2 Contour

2 CHOOSE YOUR TIP



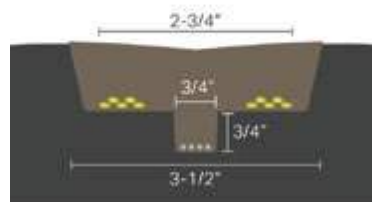
610-TIP-0802

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.



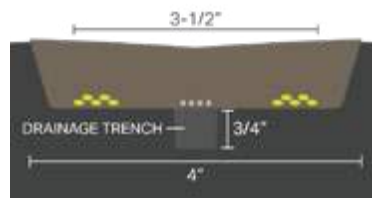
610-TIP-3581

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.



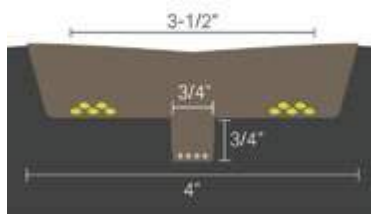
610-TIP-4035

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.

FERTILIZER OPTIONS: Granular or Liquid

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



610-TIP-4081 / 4082 / 4085

PAIRED ROW TIP

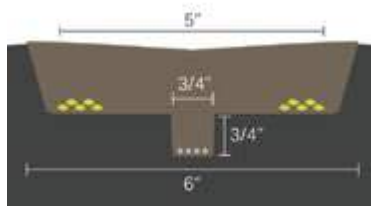
4" (102mm) paired row tip with 3/4" (19mm) vertical seed/fertilizer separation. Extra long nose carbide, narrow carbide on the cutting edges of the wings and under the wing to seal the fertilizer trench, and firm up the seed bed prior to seed placement. **610-TIP-4082** has additional carbide along the 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 19.

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

3 CHOOSE YOUR FERTILIZER

688-TUB-1001

Fits new long version of 688-HLD-2080.

880-TUB-1003

Fits old short version 688-HLD-2080, 683-HLD-2080 and 693-HLD-2080.

880-TUB-1004

Fits 610-HLD-2080HD.

L

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



880-BSH-1000

880-TUB-1009

Fits old short version 688-HLD-2080, 683-HLD-2080 and 693-HLD-2080.

880-TUB-1010

Fits 610-HLD-2080HD.

N L

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



880-BSH-1000

688-TUB-1025

Fits new long version 688-HLD-2080.

N

NH₃ 1/2" (12mm) O.D. tube



880-BSH-1000

NOTES: All tubes come with bushings as pictured above.

PROPER INSTALLATION:



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: 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 66-67.



200-KNF-0811

**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 66-67.



200-KNF-0813

SINGLE SHOOT OPENER

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

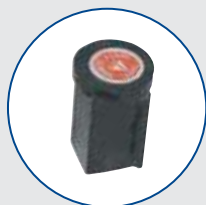
TUBE SIZE: N/A

TIP: 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 66-67.



To ensure proper installation of *Speed-Loc™* products, use the appropriate driver listed with each product. For a chart of all drivers see page 84.



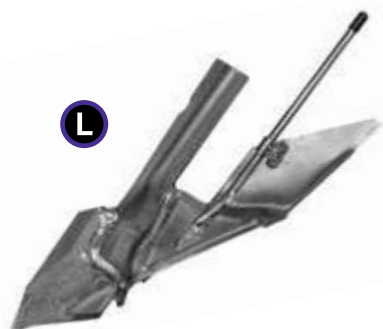
The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from *Speed-Loc™* Adapters. See page 84.

Seeding Openers to Fit *Speed-Loc*™

Single Shoot & Side Band Options

SEEDING OPENERS TO FIT *SPEED-LOC*™

L



200-KNF-0863

SIDE BAND OPENER

FITS: 200 Series *Speed-Loc*™

FERTILIZER TYPE: Liquid N

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

TIP: 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: 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: 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 66-67.

Interested in BTT Products?

Try before you buy with the BTT Demo Program.
See page 2.

Seeding Openers to Fit *Speed-Loc™*

Single Shoot & Side Band Options



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 13-14.

INSTALLATION DRIVER:
Depends on tip used. See page 84.

OVERVIEW: Works with knife attachment 300-ATM-1035 of the Seed Boot System. See pages 66-67.



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 13-14.

INSTALLATION DRIVER:
Depends on tip used. See page 83.

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 66-67.



410-KNF-0801

SINGLE SHOOT OPENER

FITS: 410 Series *Speed-Loc™*

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

TIP: 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 66-67.

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

Seeding Openers to Fit *Speed-Loc™*

Single Shoot & Side Band Options

SEEDING OPENERS TO FIT *SPEED-LOC™*



200-VRT-1040

SINGLE SHOOT OPENER

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE:
Granular

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

TIP: 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

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-0308

SINGLE SHOOT OPENER

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

INSTALLATION DRIVER:
400-DRV-1000

OVERVIEW: 3" (76mm)
spread.

Has 5/16"
(8mm) material for
increased wear life.



BLUE ARMOUR

410-SPN-0308

SINGLE SHOOT OPENER

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE: N/A

TUBE SIZE: N/A

INSTALLATION DRIVER:
400-DRV-1000

OVERVIEW: 3" (76mm)
spread.

Has 5/16"
(8mm) material for
increased wear life.



To ensure proper installation of *Speed-Loc™* products, use the appropriate driver listed with each product. For a chart of all drivers see page 84.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from *Speed-Loc™* Adapters. See page 84.

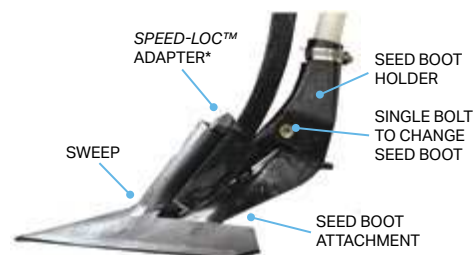
Quick Change Seed Boot System

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 1-1/4" (32mm) O.D. hose.
- Bushing 300-BSH-1200 is required for older holders with 1-1/8" (29mm) I.D. bore to adapt to 1-1/4" (32mm) hose. See page 125.
- 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.

Quick Change Seed Boot System

Match seed spread to opener width.

SEED BOOT ATTACHMENTS

600-NUT-3754



300-BLT-4414



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.

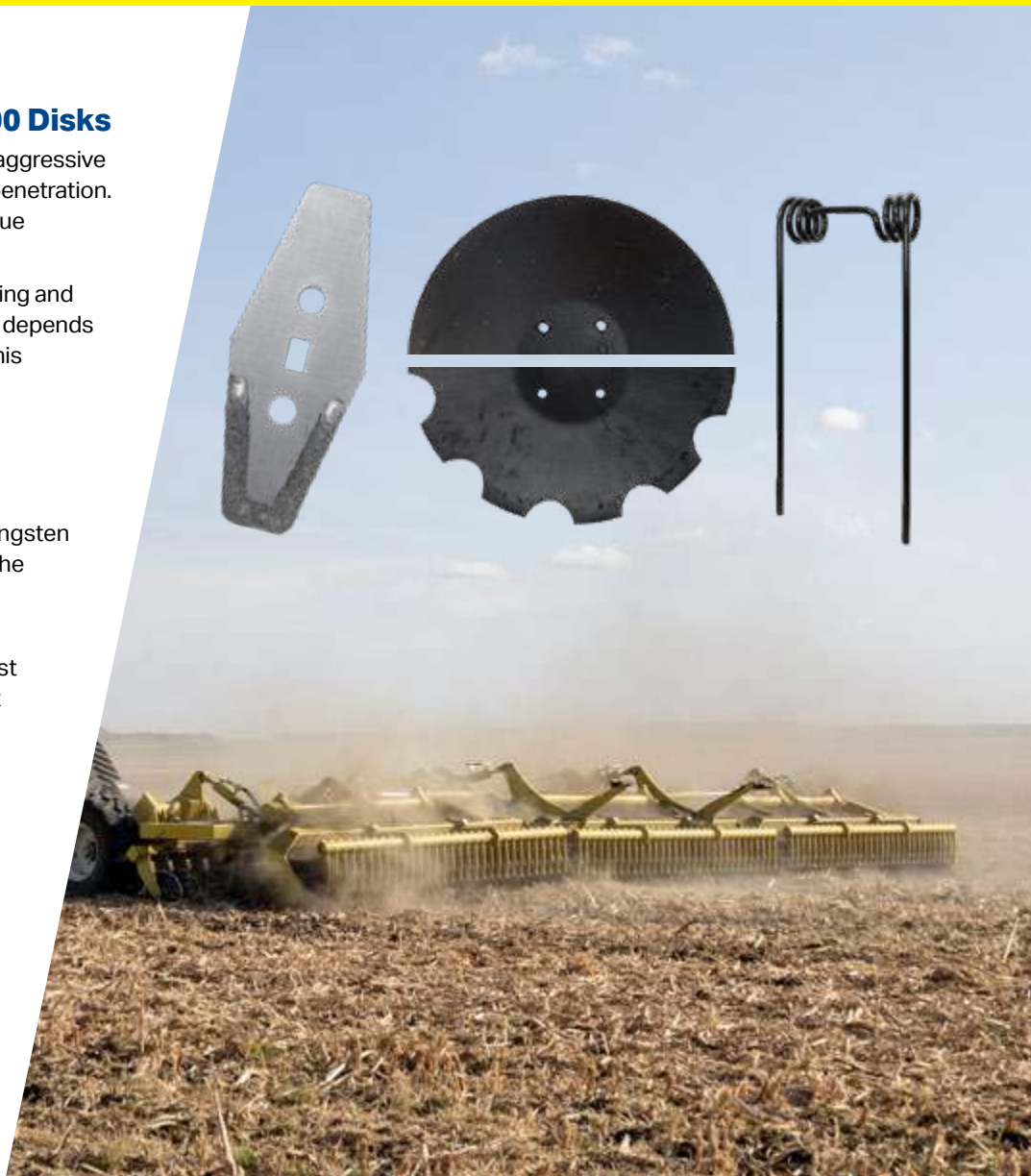
Aftermarket *MAX LIFE* Harrow Tines last 6X longer than competitor tines and fit Degelman Heavy Harrows.

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



FERTILIZER KNIVES



Fertilizer Knives to Fit *Speed-Loc™*

Cold Flow NH3 + Hot Gas NH3 + Granular + Liquid Phos



200-KNF-7521

FERTILIZER KNIFE

FITS: 200 Series *Speed-Loc™*

FERTILIZER TYPE:

Cold Flow NH3

TUBE SIZE:

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

TIP: 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: 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: 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.



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.

Fertilizer Knives to Fit *Speed-Loc™*

Cold Flow NH₃ + Hot Gas NH₃ + Granular + Liquid Phos



410-KNF-0826

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: 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.

Inquire about adding vapor tubes.



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: 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. Longer tube to prevent stocks from pulling hose off.



410-KNF-0831

410-KNF-0831
410-KNF-0835

FERTILIZER KNIFE

FITS: 410 Series
Speed-Loc™

FERTILIZER TYPE:

Hot Gas NH₃

TUBE SIZE:

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

TIP: 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.

410-KNF-0831

Regular tube

410-KNF-0835

Longer tube for working in heavy trash conditions.

Can be converted to a Liquid system.

Call for details.



600-HHA-0750

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.

Fertilizer Knives to Fit *Speed-Loc™*

Cold Flow NH3 + Hot Gas NH3 + Granular + Liquid Phos



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 125.

TIP: 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-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 125.

410-KNF-7551: Cold Flow NH3, 1/2" (12mm) O.D.

410-KNF-7553: Hot Gas NH3, 3/8" (9mm) O.D.

TIP: 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:

Aqua NH3 + Liquid Phos

TUBE SIZE:

0.400" O.D. stainless steel tubing

TIP: 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.

***BUILD TO ORDER**



410-KNH-7524

410-KNH-7524
410-KNH-7526*

FERTILIZER HOLDER

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

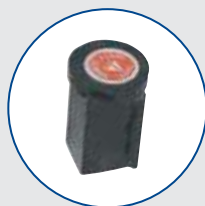
Tips sold separately.
See page 18.

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 84.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from *Speed-Loc™* Adapters. See page 84.

**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
13-14.

INSTALLATION DRIVER:
Depends on tip used.
See page 81.

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.

**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.

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

FITS: 200 Series
Speed-Loc™

FERTILIZER TYPE:
Non-Freeze NH3

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

TIP: 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: 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 18.

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.**

**200-ASY-0001**

Non-Freeze NH3 Rear Assembly. The replacement
works with Non-Freeze NH3 Speed-Loc™ fertilizer
knives.

**200-ASY-0002**

This replaces 200-ASY-0001 as a compatible option
with an extra tube for vapor line on Non-Freeze NH3
Speed-Loc™ fertilizer knives.

Fertilizer Knives to Fit C-Shank

Cold Flow NH₃ + Granular + Liquid Phos



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 13-14.

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 129.

**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 119.

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 18.

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 129.



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 18.

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

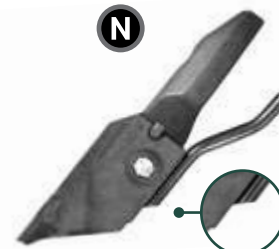
600-HLD-7500 regular
use

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 129.

**For 43° shank use a 7°
wedge.**

See page 125.



**602-KNH-7520
602-KNH-7522
602-KNH-7525**

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 18.

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 130. **For 43°
shank use a 7° wedge.**
See page 125.

602-KNH-7525

Longer tube for working
in heavy trash conditions.

602-KNH-7522

Extra tube for vapor line.

**Can be converted to
a pressurized NH₃ or
Liquid system.**

Call for details.

**All 600 HLD Holders are replaced with
the 602 HLD Series (heavy duty).**

Fertilizer Knives to Fit C-Shank

Cold Flow NH₃ + Granular + Liquid Phos



602-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 18.

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 129.

**For 43° shank use a 7°
wedge.** See page 125.



602-KNH-7531

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

FERTILIZER TYPE:
Hot Gas NH₃, Liquid or
Aqua NH₃

TUBE SIZE:
602-KNH-7530 3/8"
(9mm) O.D.

602-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 18.

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 129.

**For 43° shank use a 7°
wedge.** See page 125.



602-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 18.

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 129.

**For 43° shank use a 7°
wedge.** See page 125.



602-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.

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 18.

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 129.

**For 43° shank use a 7°
wedge.** See page 125.

**Can be converted to a
liquid system.**

Call for details.

**All 600 HLD Holders are replaced with
the 602 HLD Series (heavy duty).**

Fertilizer Knives to Fit C-Shank

Cold Flow NH₃ + Granular + Liquid Phos



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 125.

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 18.

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 129.

For 43° shank use a 7° wedge. See page 125.



602-KNH-7560

FERTILIZER KNIFE

FITS: 47°, 50° C-Shank

FERTILIZER TYPE:

Aqua + P

TUBE SIZE:

Stainless steel 0.40" 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 18.



602-KNH-7585

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

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 18.

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 129.



602-KNH-7586

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

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 18.

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 129.

All 600 HLD Holders are replaced with the 602 HLD Series (heavy duty).

Fertilizer Knives to Fit C-Shank

Cold Flow NH₃ + Granular + Liquid Phos

FERTILIZER KNIVES TO FIT C-SHANK



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 18.

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

NOTES: Installation bolts sold separately.

Use 1/2" Grade 8 hex head bolts.

See page 129.

For 43° shank use a 7° wedge.

See page 125.



602-KNH-7787

FERTILIZER KNIFE

FITS: 43°, 47°, 50° C-Shank

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 18.

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.

The NH₃ pipe has a smooth curve to allow for easier insertion & removal of pressurized NH₃ pipes.

NOTES: Installation bolts sold separately.

Use 1/2" Grade 8 hex head bolts.

See page 129.



SHOWN WITH
200-TIP-0802

030-HLD-2000

HOLDER

FITS: John Deere 2210 & 2230 with 47° shanks, 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.

Hex bolts required.

Tips sold separately.

See pages 13-14.



SHOWN WITH
200-TIP-0802

030-HLD-2040

HOLDER

FITS: John Deere 2210 & 2230 with 47° shanks, 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.

TUBE SIZE: 400" O.D. stainless steel tube.

Hex bolts required.

Tips sold separately.

See pages 13-14.

All 600 HLD Holders are replaced with the 602 HLD Series (heavy duty).



1/2" WIDE
050-MRA-5130



050-MRA-5120 **050-MRA-5130**
050-MRA-5122 **050-MRA-5131**

FERTILIZER KNIFE

FITS: C-shank with 1-3/4" bolt spacing. 47°

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.

Torque dry 110 ft. lbs.

TIP: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

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-5120 applies NH₃

050-MRA-5122 applies NH₃

050-MRA-5130 applies NH₃ + Granular

050-MRA-5131 applies Liquid + Granular

050-MRF-0322 applies NH₃ + Granular + Vapor

For an expanded view of this opener see page 136.

Torque Specification: 110 ft. lbs (1/2" bolts)



1/2" WIDE
050-MRA-5222



050-MRA-5220 **050-MRA-5230**
050-MRA-5222

FERTILIZER KNIFE

FITS: C-shank with 2-1/4" bolt spacing. 50°

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. Torque dry 110 ft. lbs.

TIP: 1/2" (13mm) tip with double carbide inserts on the nose for a sharp cutting edge.

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-5220 applies NH₃

050-MRA-5222 applies NH₃

050-MRA-5230 applies NH₃ + Granular

050-MRF-0322 applies NH₃ + Granular + Vapor

For an expanded view of this opener see page 136.

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

050-MRH-5175 + 050-MRF-0020
050-MRA-5120

050-MRH-5175 + 050-MRF-0030
050-MRA-5130

050-MRH-5225 + 050-MRF-0020
050-MRA-5220

050-MRH-5225 + 050-MRF-0030
050-MRA-5230

050-MRH-5175 + 050-MRF-0022
050-MRA-5122
DOUBLE NH₃ TUBES FOR VAPOR

050-MRH-5175 + 050-MRF-0031
050-MRA-5131

050-MRF-0322
DOUBLE NH₃ TUBES FOR VAPOR + GRANULAR

050-MRH-5225 + 050-MRF-0022
050-MRA-5222
DOUBLE NH₃ TUBES FOR VAPOR

Fertilizer Knives to Fit Edge On Shanks

Granular N + NH₃ + Liquid N + Non-Freeze NH₃ + Cold Flow NH₃ + Hot Gas NH₃



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

670-HLD-1000N
670-HLD-1000L*
670-HLD-2000G*
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

Tips sold separately. See page 18.

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.

670-HLD-2000G: Shank is 2-1/2" longer than 670-HLD-1000G for deeper penetration.

NOTES: Installation bolts sold separately.

Use 1/2" x 2-1/4" Grade 8 hex head bolts (946-HRG-2255) & stover nut (906-NPT-5005).

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 18.

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 1/2" x 2-1/4" Grade 8 hex head bolts (946-HRG-2255) for top hole & slot & stover nut (906-NPT-5005). Lower hole is larger & would require 5/8" x 2-1/2" Grade 8 hex head bolts (948-HRG-2505) & stover nut (906-NPT-6255).



200-ASY-0001

Non-Freeze NH₃ Rear Assembly. The replacement works with Non-Freeze NH₃ Speed-Loc™ fertilizer knives.



200-ASY-0002

This replaces 200-ASY-0001 as a compatible option with an extra tube for vapor line on Non-Freeze NH₃ Speed-Loc™ fertilizer knives.

Fertilizer Applicators to Fit Edge On Shanks



SHOWN WITH
600-TIP-7501

***BUILD TO
ORDER**

676-HLD-7531*

FERTILIZER HOLDER

FITS: CNH Nutriplacer 930, 940, 2800 & 5300

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

TUBE SIZE:

0.4" stainless steel delivery pipe

TIP OPTIONS:

- Requires a replaceable 600 Series tip, 600-TIP-7501 or 600-TIP-7502

Tips sold separately. See page 18.

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 1/2" x 2-1/2" Grade 8 hex head bolts (946-HRG-2505) & stover nut (906-NPT-5005). If using the new type of mounting system for the 940 use 3" x 1/2" bolts (946-HRG-3004).



N

***BUILD TO
ORDER**

676-KNF-7531*

FERTILIZER KNIFE

FITS: CNH Nutriplacer 930, 940, 2800 & 5300

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

TUBE SIZE:

0.4" stainless steel delivery pipe

TIP: 3/4" (19mm) high chrome weld-on tip with carbide insert, provides longer wear life.

OVERVIEW: Fully welded 3/4" carbided tip.

NOTES: Installation bolts sold separately.

Use 1/2" x 2-1/2" Grade 8 hex head bolts (946-HRG-2505) & stover nut (906-NPT-5005). If using the new type of mounting system for the 940 use 3" x 1/2" bolts (946-HRG-3004).



SPEED-LOC™



200 Series Quick Change Adapters

See the *Speed-Loc™* adapter chart on pages 85-86.



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 129.



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 130.
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.

NOTES: Use for seeding only. Not recommended for deep, heavy 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.
See page 130.

NOTES: Use for seeding only. Not recommended for deep, heavy tillage.

For 43° shank use a 7° wedge.
See page 125.

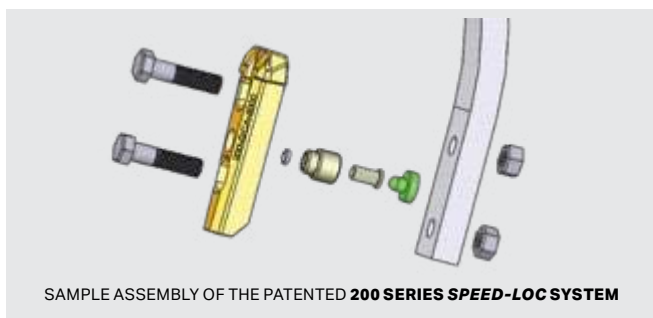


200-QCA-5020

FITS: European built shanks

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

BOLTS:
M12-Din 608 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 84.

Not sure which adapter or bolts you need? See the *Speed-Loc* adapter chart on pages 85-86. For a complete list of bolt lengths, see page 129.



200-QCA-5030

FITS: Horsch shanks

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

BOLTS:
M12-Din 608 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 130.

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 129.

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 130.



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-5080

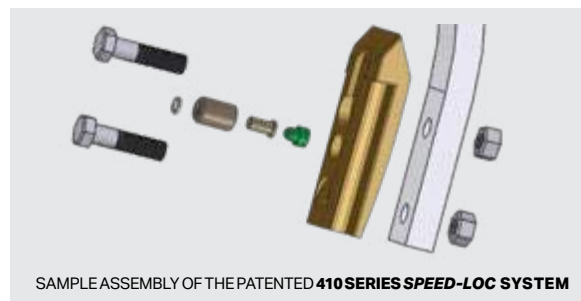
FITS: 50° Shanks on some older and current model John Deere 2410 and 2430 chisel plows, and Summers Superchisel.

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. See page 130.

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 125.

For 43° shank use a 7° wedge. See page 130.



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

Replacement bushing for all 200 Series adapters. Comes complete with dust seal.



200-SLC-1010

Replacement dust seal for all 200 & 410 Series adapters.



200-SLC-1020

Replacement locking pin for all 200 & 410 Series adapters purchased after Nov 1, 2008.



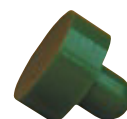
200-SLC-1030

Replacement spring ball for 200-QCA-4700 adapters.



200-SLC-1035

Replacement spring ball for 200-QCA-4710, 200-QCA-5000, 200-QCA-5010 adapters.



200-SLC-1037

Replacement spring ball for 200-QCA-5020 adapters.



200-SLC-1038

Replacement spring ball for 200-QCA-5020 adapters. For use in special applications.



200-SLC-1039

Replacement spring ball for 200-QCA-5030 adapters.



410-SLC-1001

Replacement bushing for 410-QCA-5000, 410-QCA-5010, 410-QCA-5020 adapters. Comes complete with dust seal.



410-SLC-1030

Replacement spring ball for 410-QCA-5000, 410-QCA-5010, 410-QCA-5020, 410-QCA-5080 adapters.



410-SLC-1050

Replacement package for 410 Series adapters. Includes pin, bushing, spring ball, dust seal.



100-HAM-4000

This 4lb (1.8kg) hammer is ideal for installing all quick change products.



200-REL-1010

The speed release tool must be used to remove 200 and 410 Series sweeps and openers off *Speed-Loc* 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					■	



100-DRV-1010



100-DRV-1020



200-DRV-1013



200-DRV-1030



400-DRV-1000



400-DRV-1010

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
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					■				
GEISSNER												
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.

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
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	■							
MANDAKO											
CHISEL FLEX	50°	1/2	2-1/4							■	
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	■							

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	400-WDG-0700
ST 830 WITH 350 LB TRIP	47°	1/2	1-3/4		■								
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: ³880-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).

Speed-Loc™ Installation & Removal

Scan the QR code with your smart phone camera to watch the how-to video.

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 82.

- 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.



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.

Removal

When removing the product always use safety glasses and Speed-Release Tool (200-REL-1010). See page 84.

- 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.





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

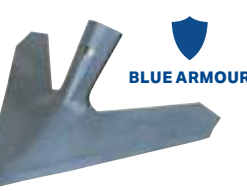
TILLAGE



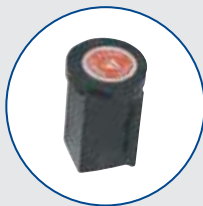
200 Series Speed-Loc™

Blue Armour options available. Look for the blue shield!

Fits: All BTT 200 Series Speed-Loc™ Adapters.

 4" (200-PWV-0400)	SIZE	THICKNESS	PRODUCT NO.	 5" (200-PWV-0500)
	4" (100mm)	1/4" (6mm)	200-PWV-0400	
 7" (200-PWV-0700)	5" (140mm)	1/4" (6mm)	200-PWV-0500	 9" (200-PWV-0908)
	5" (140mm)	5/16" (8mm)	200-PWV-0508	
	7" (180mm)	1/4" (6mm)	200-PWV-0700	
 10" (200-PWV-1000)	7" (180mm)	5/16" (8mm)	200-PWV-0708	 11" (200-PWV-1108)
	9" (230mm)	1/4" (6mm)	200-PWV-0900	
	9" (230mm)	5/16" (8mm)	200-PWV-0908	
 12" (200-PWV-1208)	10" (254mm)	1/4" (6mm)	200-PWV-1000	 13" (200-PWV-1308)
	10" (254mm)	5/16" (8mm)	200-PWV-1008	
	11" (280mm)	1/4" (6mm)	200-PWV-1100	
 14" (200-PWV-1408)	11" (280mm)	5/16" (8mm)	200-PWV-1108	 16" (200-PWV-1608)
	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 84.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from Speed-Loc™ Adapters. See page 84.



200-GFO-0308

GOOSEFOOT

Fits: BTT 200 Series Speed-Loc™ Adapters

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

Fits: BTT 200 Series Speed-Loc™ Adapters

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.

200-PWV-0528



200-PWV-0428 200-PWV-0528

SWEEP W/ HARDENED WEAR PAD

Fits: BTT 200 Series Speed-Loc™ Adapters

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

Fits: BTT 200 Series Speed-Loc™ Adapters

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.



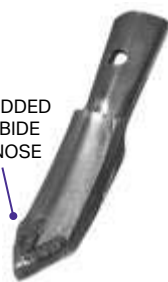
200-SPK-0200

SPIKE

Fits: BTT 200 Series Speed-Loc™ Adapters

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

Fits: BTT 200 Series Speed-Loc™ Adapters

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

Fits: BTT 200 Series Speed-Loc™ Adapters

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

Fits: BTT 200 Series Speed-Loc™ Adapters

This spike 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!

Fits: All BTT 410 Series Speed-Loc™ Adapters.

 **BLUE ARMOUR**



4" (410-PWV-0400)

 **BLUE ARMOUR**



6" (410-PWV-0600)
(410-PWV-0608)

 **BLUE ARMOUR**



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

 **BLUE ARMOUR**



18" (410-PWV-1800)
(410-PWV-1808)

 **BLUE ARMOUR**



16" (410-PWV-1600)
(410-PWV-1608)

 **BLUE ARMOUR**

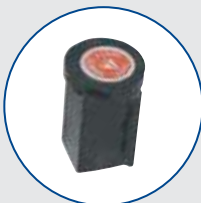


12" (410-PWV-1200)
(410-PWV-1208)

 **BLUE ARMOUR**



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 84.



The Speed Release Tool 200-REL-1010 must be used when removing openers, sweeps and spikes from Speed-Loc™ Adapters. See page 84.

410 Series Speed-Loc™



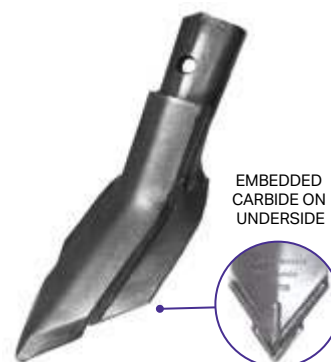
410-PWV-0418

CHISEL W/ HARDENED WEAR PAD

This chisel 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 chisel runs at a 13° pitch, steeper than the regular 410 Series chisel and provides more disturbance. This tool is ideal for primary tillage or banding fertilizer.



410-PWV-0418ML

MAX LIFE™ CHISEL W/ HARDENED WEAR PAD

This chisel has a 3/8" x 2" hardened wear pad (52-56 HRC) for longer life.

The chisel is 5/16" (8mm) thick and 4" (100mm) wide.

Heat applied, embedded carbide has been added to the underside.

This chisel runs at a 13° pitch, steeper than the regular 410 Series chisel and provides more disturbance. Ideal for primary tillage or banding fertilizer.



410-PWV-0518

CHISEL W/ HARDENED WEAR PAD

This chisel 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 chisel.



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.

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

Please refer to page 131 for plow bolt requirements dependent on make & model.

Bolt-On Sweeps, Spikes & Chisels

Blue Armour options available. Look for the blue shield!



070-RCH-0451

REVERSIBLE CHISEL

SIZE: 5/16" (8mm) thick x 4" (100mm) wide x 16" (400mm) long

Bolt hole spacing 1-3/4" (45mm) to fit light and medium-duty field cultivators.

*Use Plow bolts.

It is used mostly for primary tillage in the fall or early spring.



070-RCH-0452

REVERSIBLE CHISEL

SIZE: 5/16" (8mm) thick x 4" (100mm) wide x 16" (400mm) long

Bolt hole spacing 2-1/4" to 2-1/2" (57-63mm)

*Use Plow bolts.

It is used mostly for primary tillage in the fall or early spring.



070-RSP-0200A

REVERSIBLE SPIKE

SIZE: 2" (50mm) wide x 5/8" (16mm) thick x 14-1/2" (368mm) long.

Bolt hole spacing 1-3/4" to 2" (45-57mm)

*Use Plow bolts.

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: Morris LH 755 shank.

On 43° machines the shank curvature may interfere with installation.

SIZE: 2" (50mm) wide x 5/8" (16mm) thick x 17" (431mm) long

Bolt hole spacing 2-1/4" (57mm) and is flat through the bolt hole section.

*Use Plow bolts.



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.

SIZE: 2" (50mm) wide x 5/8" (16mm) thick x 16-1/2" (419mm) long

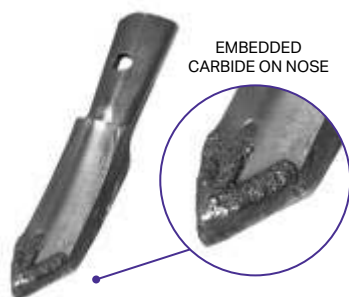
Bolt hole spacing 2-1/4" to 2-1/2" (57-63mm) and is curved at the bolt hole section.

*Use Plow bolts.

***Please refer to page 131 for plow bolt requirements dependent on make & model.**

MAX LIFE™ Spikes & Chisels

Speed-Loc™ & Bolt-On Options



200-SPK-0200ML

QUICK CHANGE SPIKE

FITS: 200 Series Speed-Loc™ (47° shank)

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.



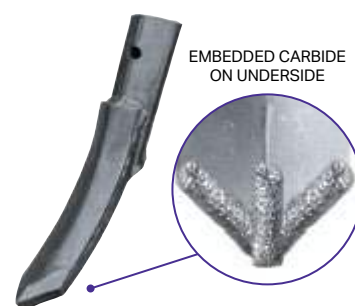
200-PWV-0405ML

QUICK CHANGE CHISEL

FITS: 200 Series Speed-Loc™ (47° shank)

This chisel 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 chisel 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.



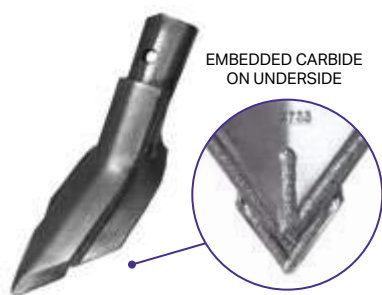
410-SPK-0200ML

QUICK CHANGE SPIKE

FITS: 410 Series Speed-Loc™ (47° shank)

This 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.



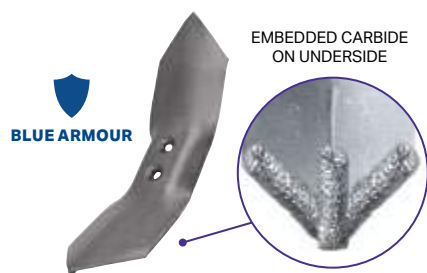
410-PWV-0418ML

QUICK CHANGE CHISEL

FITS: 410 Series Speed-Loc™ (47° shank)

This chisel 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 chisel runs at a 13° pitch, steeper than the regular 410 Series chisel.

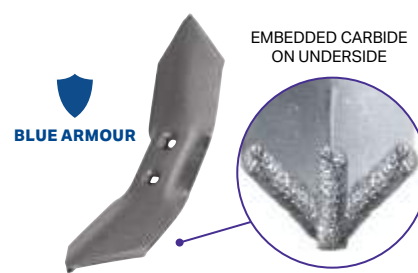


070-RCH-0451ML

REVERSIBLE CHISEL

This reversible chisel has heat applied, embedded carbide added to the underside. It is 5/16" (8mm) thick, 4" (100mm) wide and 16" long. 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

REVERSIBLE CHISEL

This chisel is 4" (100mm) wide, 5/16" (8mm) thick and 16" long. The bolt hole spacing is 2-1/4" to 2-1/2" (57-63mm). 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.



CHROME
ARMOUR

Chrome Armour Cast Sweeps & Chisels



ONLY AVAILABLE IN CANADA

PRODUCT NO.	SIZE	FITS	OVERVIEW	BOLT INSTALLATION SIZES*
810-SIH-0700	7" (180mm)	Case IH	47°, 1-3/4" Centers, 7/16" Bolt	7/16" x 2" grade 5, 7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
810-SIH-0900	9" (230mm)	Case IH	47°, 1-3/4" Centers, 7/16" Bolt	7/16" x 2" grade 5, 7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
810-SJD-0700	7" (180mm)	John Deere	47°, 1-3/4" Centers, 7/16" Bolts	7/16" x 2" grade 5, 7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
810-SJD-0900	9" (230mm)	John Deere	47°, 1-3/4" Centers, 7/16" Bolts	7/16" x 2" grade 5, 7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
810-RQJ-0700	7" (180mm)	John Deere	Permaloc Adapter	Knock-on
810-RQJ-0900	9" (230mm)	John Deere	Permaloc Adapter	Knock-on
810-SAL-0400	4" (100mm)	Salford	47°, 1-3/4" Centers, 7/16" Bolts	7/16" x 2" grade 5, 7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
810-SKG-0275	2-3/4" (70mm)	Kongsilde	Single 7/16" Bolt	7/16" x 2" grade 5, 7/16" flange nylock lock nut
810-SKG-0400	4" (100mm)	Kongsilde Duck Foot	Duck Foot, Single 7/16" Bolt	7/16" x 2" grade 5, 7/16" flange nylock lock nut
810-CPP-0200	2" (51mm)	C-Shank	Reversible, 1-3/4" - 2-3/4" Centers	1/2 x 3" grade 8, 1/2 x 3-1/2" grade 8 1/2" flange nylock lock nut
810-CPP-0750	7-1/2" (190mm)	C-Shank	Wing, 50°, 2-1/4" Centers, 1/2" Bolts	1/2 x 3" grade 8, 1/2 x 3-1/2" grade 8 1/2" flange nylock lock nut

* Different shank thicknesses require different bolt sizes



7" (810-SIH-0700)



9" (810-SIH-0900)



7" (810-SJD-0700)

Chrome Armour Ripper Points



ONLY AVAILABLE IN CANADA

PRODUCT NO.	SIZE	FITS	OVERVIEW	BOLT INSTALLATION SIZES*
815-RIH-0300	3"	Case IH, DMI	1-1/4" Parabolic, 1 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RIH-0500	5"	Case IH, DMI	1-1/4" Parabolic, 1 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RIH-0700	7"	Case IH, DMI	1-1/4" Parabolic, 1 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RIH-1000	10"	Case IH, DMI	1-1/4" Parabolic, 1 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RIH-1400	14"	Case IH, DMI	1-1/4" Parabolic, 1 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RJD-0300	3"	John Deere, Kuhn Krause Dominator	1-1/4" Parabolic, 2 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RJD-0500	5"	John Deere, Kuhn Krause Dominator	1-1/4" Parabolic, 2 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RJD-0700	7"	John Deere, Kuhn Krause Dominator	1-1/4" Parabolic, 2 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RJD-1000	10"	John Deere, Kuhn Krause Dominator	1-1/4" Parabolic, 2 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RJD-1400	14"	John Deere, Kuhn Krause Dominator	1-1/4" Parabolic, 2 Hole Ripper Point	7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
815-RPU-0070	2"	Unverferth Models 112, 122, 132	2" in line subsoiler, Ripper Point, Fits 3/4 Shank	112" x 2" Roll Pin Part # 910-RLP-2050



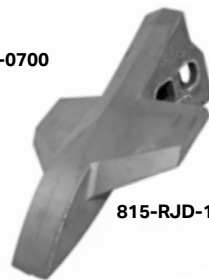
815-RIH-0300



815-RJD-0700



815-RIH-0700



815-RJD-1000



815-RJD-0300



815-RPU-0070

Chrome Armour Shank Savers



ONLY AVAILABLE
IN CANADA

**RICHMOND
BROTHERS
EQUIPMENT LLC**



815-RSS-0010-N

SHANK SAVER

FITS: Case IH 870 & 875

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.



815-RSS-0010-W

SHANK SAVER

FITS: Case IH 870 & 875

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.



815-RSS-0020-N

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.



815-RSS-0020-W

SHANK SAVER

FITS: Krause Dominator

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.



815-RSS-0030-N

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.



815-RSS-0030-W

SHANK SAVER

FITS: John Deere

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.



815-RSS-0040-N

SHANK SAVER

FITS: Landoll-style Parabolic Shanks

OVERVIEW: Nugget style design single shank saver. Designed to fill with dirt first so that your tillage tools remain protected.



815-RSS-0040-W

SHANK SAVER

FITS: Landoll-style Parabolic Shank

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.



815-RSS-0070-W

SHANK SAVER

FITS: Unverferth Zone-BUILDER 112, 122, 132

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.

Chrome Armour Cast Sweeps & Chisels



ONLY AVAILABLE IN THE USA

PRODUCT NO.	SIZE	FITS	OVERVIEW	BOLT INSTALLATION SIZES*
810-CPP-0200-S	2"	C-Shank	Reversible, 1-3/4" - 2-3/4" Centers	1/2 x 3" grade 8, 1/2 x 3-1/2" grade 8 1/2" flange nylock lock nut
810-CPP-0750-S	7-1/2"	C-Shank	Wing, 50°, 2-1/4" Centers, 1/2" Bolts	1/2 x 3" grade 8, 1/2 x 3-1/2" grade 8 1/2" flange nylock lock nut
810-RQC-0700-S	7"	Nichols	Nichols Adapter	Knock-on
810-RQC-0900-S	9"	Nichols	Nichols Adapter	Knock-on
810-RQJ-0700-S	7"	John Deere	Permaloc Adapter	Knock-on
810-SAL-0400-S	4"	Salford	47°, 1-3/4" Centers, 7/16" Bolts	7/16" x 2" grade 5, 7/16" x 1-3/4" grade 5 7/16" flange nylock lock nut
810-SKG-0275-S	2-3/4"	Kongskilde, John Deere	On 2 bolt shank use both holes (2x hardware) On single bolt shanks use top hole 7/16" Bolt	7/16" x 2" grade 5, 7/16" flange nylock lock nut
810-SKG-0400-S	4"	Kongskilde, John Deere	On 2 bolt shank use both holes (2x hardware) On single bolt shanks use top hole 7/16" Bolt	7/16" x 2" grade 5, 7/16" flange nylock lock nut

*** Different shank thicknesses require different bolt sizes. See back for torque specifications.**



810-SAL-0400-S



For Landoll & John Deere
S-Tine machines part
#810-WDG-2000
is required.

810-SKG-0275-S



For Landoll & John Deere
S-Tine machines part
#810-WDG-2000
is required.

810-SKG-0400-S



810-BSP-0225

Spacer insert for 2.25"
C-C Reversible Points



810-CPP-0200-S



810-CPP-0750-S



810-RQC-0700-S



810-RQC-0900-S



810-RQJ-0700-S

Chrome Armour Rippers & Shank Savers



ONLY AVAILABLE IN THE USA

PRODUCT NO.	SIZE	FITS	OVERVIEW	BOLT INSTALLATION SIZES*
815-RIH-0700-S	7"	Case IH, DMI	1-1/4" Parabolic, 1 Hole	7/16" x 1-3/4" grade 5, 7/16" flange nylock lock nut
815-RJD-0500-S	5"	John Deere	1-1/4" Parabolic, 2 Hole	7/16" x 1-3/4" grade 5, 7/16" flange nylock lock nut
815-RJD-0700-S	7"	John Deere	1-1/4" Parabolic, 2 Hole	7/16" x 1-3/4" grade 5, 7/16" flange nylock lock nut
815-RJD-1000-S	10"	John Deere	1-1/4" Parabolic, 2 Hole	7/16" x 1-3/4" grade 5, 7/16" flange nylock lock nut
815-RPU-0070-S	2"	Unverferth Models 112, 122, 132	2" in line subsoiler, Ripper Point, Fits 3/4 Shank	11/2" x 2" Roll Pin Part # 910-RLP-2050



815-RJD-0500-S



815-RJD-0700-S



815-RJD-1000-S



815-RIH-0700-S



815-RPU-0070-S



815-RSS-0010W-S

SHANK SAVER

FITS: Case IH 870 & 875

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.



815-RSS-0070W-S

SHANK SAVER

FITS: Unverferth Zone-BUILDER 112, 122, 132

OVERVIEW: Wedge style shank saver offers least draft and helps keep trash from digging into the shank.

MAX LIFE

HARROW TINES

6X
LONGER WEAR

3YR
LIMITED WARRANTY

HEAT APPLIED EMBEDDED CARBIDE



**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.

MAX LIFE™ Tungsten Carbide Harrow Tines

NEW FOR 2027

NEW!

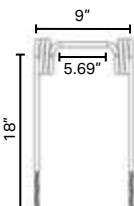
010-WRH-4375ML

COIL I.D.: 2-1/8"

DIMENSIONS: 7/16" X 9" X 18"

FITS:

Wil-Rich (OEM #67886)



NEW!

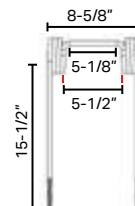
010-HAR-4402ML

COIL I.D.: 2-3/4"

DIMENSIONS: 7/16" X 8-5/8" X 15-1/2"

FITS:

Case Tiger-Mate (OEM #47559052)



NEW!

010-HAR-4401ML

COIL I.D.: 2-3/4"

DIMENSIONS: 7/16" X 9-3/16" X 15-1/2"

FITS:

Case Tiger-Mate (OEM #33443707)



NEW!

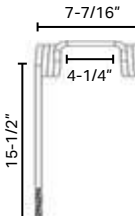
010-HAR-4403ML

COIL I.D.: 2-1/8"

DIMENSIONS: 7/16" X 7-7/16" X 15-1/2"

FITS:

Case Tiger-Mate (OEM #33404416)
Kuhn Krause (OEM #Q4033600)



MAX LIFE™ Tungsten Carbide Harrow Tines

Ask your BTT dealer for the latest additions to our lineup!

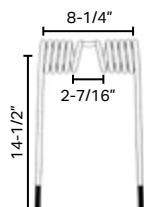
010-HAR-3814ML

COIL I.D.: 1-15/16"

DIMENSIONS: 3/8" X 8-1/4" X 14-1/2"

FITS:

Summers/Herman (OEM #8H1110S)



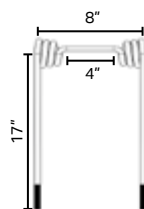
010-HAR-3817ML

COIL I.D.: 1-13/16"

DIMENSIONS: 3/8" X 8" X 17"

FITS:

Bourgault (OEM #2070-27)



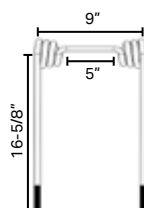
010-HAR-3818ML

COIL I.D.: 1-11/16"

DIMENSIONS: 3/8" X 9" X 16-5/8"

FITS:

Degelman (OEM #143101)



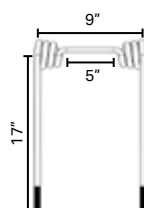
010-HAR-3819ML

COIL I.D.: 2"

DIMENSIONS: 3/8" X 9" X 17"

FITS:

Summers (OEM #8H1150S)



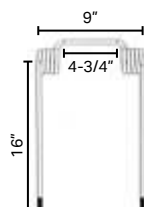
010-HAR-4309ML

COIL I.D.: 2-1/16"

DIMENSIONS: 7/16" X 9" X 16"

FITS:

John Deere (OEM #N236890)



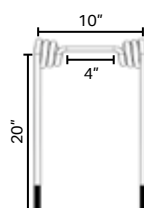
010-HAR-4375ML

COIL I.D.: 2-1/8"

DIMENSIONS: 7/16" X 10" X 20"

FITS:

Bourgault 6000/Delmar 5500
(OEM #2070-77, #2070-77-01)



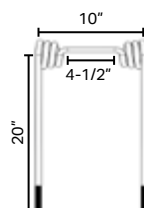
010-HAR-5000ML

COIL I.D.: 2-9/16"

DIMENSIONS: 1/2" X 10" X 20"

FITS: Salford (OEM #R60000),

Penta Harrows (OEM #10029373)



010-HAR-5001ML

COIL I.D.: 2-11/16"

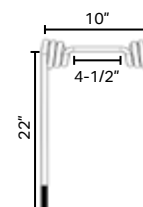
DIMENSIONS: 1/2" X 10" X 22"

FITS:

Bourgault XR770 (OEM #2070-79,
2070-79-01)

NOTES: Installation bolts sold separately. Please check OEM specs.

Use 1/2" x 3-3/4" Shoulder Bolt
946-HRG-3754. See page 129.



010-HAR-5008ML

COIL I.D.: 2-5/8"

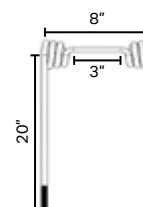
DIMENSIONS: 1/2" X 8" X 20"

FITS:

Bourgault 8800/8810/8910 series
Cultivator, SPS 270/360/365, and
9000 Series CP (OEM #2070-76)

NOTES: Installation bolts sold separately. Please check OEM specs.

Use 1/2" x 3-3/4" Shoulder Bolt
946-HRG-3754. See page 129.



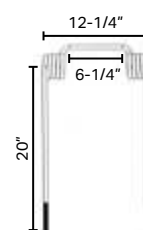
010-HAR-5020ML

COIL I.D.: 2"

DIMENSIONS: 1/2" X 12-1/4" X 20"

FITS:

John Deere (OEM #N236516)



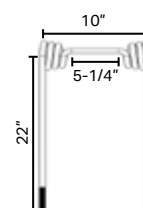
010-HAR-5022ML

COIL I.D.: 2-3/4"

DIMENSIONS: 1/2" X 10" X 22"

FITS:

Elmer's (OEM #21370, 12137000)



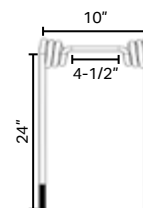
010-HAR-5024ML

COIL I.D.: 2-3/4"

DIMENSIONS: 1/2" X 10" X 24"

FITS:

Rite Way (OEM #404-0039)



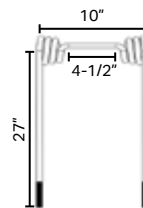
010-HAR-5027ML

COIL I.D.: 2-5/8"

DIMENSIONS: 1/2" X 10" X 27"

FITS:

Morris (OEM #H27900)



3 YEAR Limited Warranty

From the date of purchase against breakage for three years prorated to a maximum of 100%.

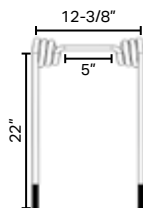
010-HAR-5028ML UNIVERSAL

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)



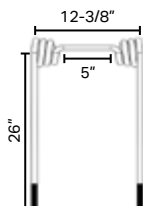
010-HAR-5029ML UNIVERSAL

COIL I.D.: 2-5/8"

DIMENSIONS: 1/2" X 12-3/8" X 26"

FITS:

Summers (OEM #8H1184S)



010-HAR-5625ML UNIVERSAL

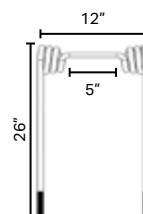
COIL I.D.: 2-5/8"

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)
Mandako Field Sergeant (OEM #212-033, Carbide 212-145)
Pillar (OEM #212-033, 212-145)
Rite Way (OEM #404-0010)
Summers/Herman (OEM #8H1190S)

NOTES: Installation bolts sold separately. Please check OEM specs. Use 1/2" x 3-3/4" Shoulder Bolt 946-HRG-3754. See page 129.



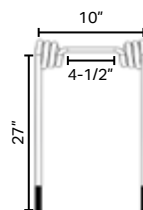
010-HAR-5627ML

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 10" X 27"

FITS:

Morris (OEM #H49499)



010-HAR-5628ML

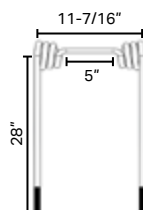
COIL I.D.: 2-3/4"

DIMENSIONS: 9/16" X 11-7/16" X 28"

FITS:

Rite Way (OEM #404-0028, 404-0035)

NOTES: Installation bolts sold separately. Please check OEM specs. Use 1/2" x 3-3/4" Shoulder Bolt 946-HRG-3754. See page 129.



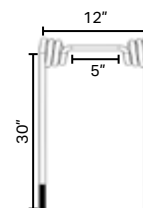
010-HAR-6230ML

COIL I.D.: 2-3/4"

DIMENSIONS: 5/8" X 12" X 30"

FITS:

Degelman (OEM #143509)



010-HAR-6250ML UNIVERSAL

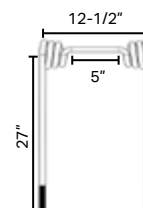
COIL I.D.: 2-5/8"

DIMENSIONS: 5/8" X 12-1/2" X 27"

FITS:

Bourgault (OEM #2070-70, 8606-13)
Brandt (OEM #B021751, C516584, C501587)
Gates (OEM #120229, 120230)
Rite Way (OEM #404-0030)
Summers/Herman (OEM #8H1195S)

NOTES: Installation bolts sold separately. Please check OEM specs. Use 1/2" x 3-3/4" Shoulder Bolt 946-HRG-3754. See page 129.



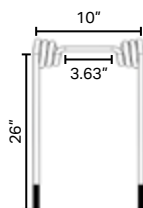
010-HAR-5002ML

COIL I.D.: 2.625"

DIMENSIONS: 1/2" X 10" X 26"

FITS:

Degelman (OEM #143513)
Strawmaster Pro



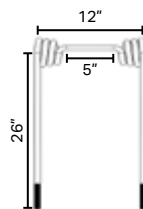
010-DEG-5626ML

COIL I.D.: 2-5/8"

DIMENSIONS: 9/16" X 12" X 26"

FITS:

Degelman (OEM #143112, 143517)



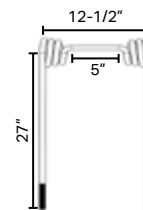
010-DEG-6227ML

COIL I.D.: 2-5/8"

DIMENSIONS: 5/8" X 12-1/2" X 27"

FITS:

Degelman (OEM #143113, 143507, 143516)



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
	#C501587	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
CASE			
CASE TIGER-MATE	#33443707	7/16" x 9-3/16" x 15-1/2"	010-HAR-4401ML
CASE TIGER-MATE	#47559052	7/16" x 8-5/8" x 15-1/2"	010-HAR-4402ML
CASE TIGER-MATE	#33404416	7/16" x 7-7/16" x 15-1/2"	010-HAR-4403ML
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
	#143513	1/2" x 10" x 26"	010-DEG-5000ML
	#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
KUHN KRAUSE			
	#Q4033600	7/16" x 7-7/16" x 15-1/2"	010-HAR-4403ML
MANDAKO			
	#212-033	9/16" x 12" x 26"	010-HAR-5625ML Universal
	#212-145	9/16" x 12" x 26"	010-HAR-5625ML Universal
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

MAX LIFE™ Harrow Tine Quick Reference

OEM	OEM NUMBER	DIMENSIONS	BTT PART NUMBER
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
WIL-RICH			
	#67886	7/16" x 9" x 18"	010-WRH-4375ML



NIAUX 200

BOOST
YOUR PERFORMANCE

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 our patented transitional heat treatment results in a consistently longer wearing blade with less dulling on the leading edge and without sacrificing durability. Niaux 200 is the disk blade of choice for leading OEMs and farmers around the world.

LONG-LASTING

Thanks to increased hardness in the working area, Niaux 200 disks have the longest lifespan 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.

Niaux 200 uses **patented technology** that has set a new **quality standard** in the field of agricultural disk blades. This range of products for seeders, disk harrows and tillage equipment represent a **great long-term investment**.



**Maximum hardness
& wear resistance**
(55-58 HRC)

Transition area
(50-55 HRC)

Maximum flexibility
(48-50 HRC)

150 SERIES

DISK BLADES

**PUT IT BESIDE
ANY BLADE.
IT HOLDS ITS
GROUND.**

BUILT FOR THE REAL TEST - THE FIELD.

When conditions get tough, your disk blades shouldn't be the weak link. The 150 Series is engineered to stand up to the acres-delivering dependable performance, consistent wear, and the durability you can count on.



BUILT TO KEEP GOING

These blades are built to keep going, season after season.



CONSISTENT WEAR PERFORMANCE

Engineered to wear evenly and maintain performance alongside any leading blade on the market.



BUILT TO COMPETE

Put it beside any blade in the field - 150 Series holds its ground, acre after acre.



SMART VALUE

Premium-level performance without the premium price tag. More acres. Better return.

**FEWER REPLACEMENTS.
MORE UPTIME.
BETTER VALUE PER ACRE.**



BUILT TO PERFORM. PRICED TO MOVE.

DURABLADE

THE NEW LONG LIFE PLANTER BLADE

**BUILT TO LAST.
BUILT FOR YOUR BOTTOM LINE.**

550-200-1000

FITS: JOHN DEERE / HORSCH / KINZE

XP, XP Pro, MaxEmerge®5,
Exact Emerge Row Units,
Horsch Maestro, Kinze



BTC ENGINEERED
AGRICULTURAL
BEARING



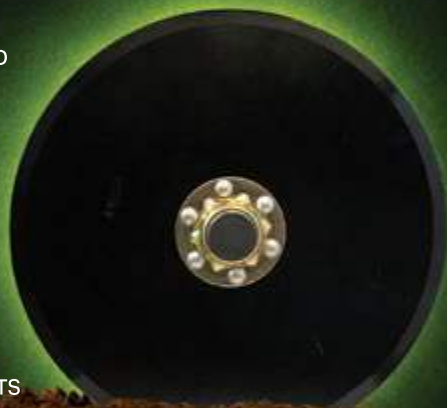
PRECISION FIT -
≤ 1 MM WOBBLE



DOUBLE ROW
BALL BEARING
WITH TRIPLE
LIP SEALS



HEAVY DUTY
5 MM HUB
WITH 8 MM RIVETS



Replaces OEM Part #	AA110173, AA105716 & G10018801
Disk Type	3.5 mm Rivited Blade Assembly
Dimensions	15" x 3.5mm
Dust Cap	included

550-200-1010

FITS: CNH

2000 Series Planter

SKF ENGINEERED
AGRICULTURAL
BEARING



PRECISION FIT -
≤ 1.5 MM WOBBLE



LARGE SINGLE ROW
BALL BEARING
WITH DUAL
TRIPLE LIP SEALS



HEAVY DUTY
MACHINED
8 MM HUB WITH
8 MM RIVETS



Replaces OEM Part #	92217955, 51691765 & 48118295
Disk Type	Leading/Trailing Seeding Blade
Dimensions	15" x 4.5mm



**LIFETIME WARRANTY ON BLADE BREAKAGE
OR BEARING/HUB FAILURE.**

**DURABLADE PLANTER BLADES ARE BUILT TO LAST.
FIELD-TESTED. FARMER TRUSTED.**



**PRECISION
ENGINEERED**



**AGRICULTURE
TOUGH**



**LONGER LIFE
LESS DOWNTIME**

Durablade Planter Blades (#550-200-1000 & 550-200-1010) have a lifetime warranty on breakage or failure due to a manufacturer's defect for the effective life of the blade as per OEM replacement recommendations.

OEM replacement recommendations are as follows:

John Deere: OEM recommended replacement measurement is 14 inches 355.6 (mm)

Case IH: OEM recommended replacement measurement is 14-1/2 inches 368.3 (mm)

Warranty is void if the blade diameter is less than the OEM recommendation.


522-200-1050
FITS: AMAZONE

Catros

Replaces OEM Part #	78201966
Disk Type	Notched Concave
Dimensions	20" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	4


500-200-1025
FITS: AMITY / CONCORD

Replaces OEM Part #	34354
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3.625"
# of Bolt Holes	4


500-200-1000
500-150-1000
FITS: BOURGAULT

 Bourgault MRB® III, 3720 Coulter Drill
Original Manufacturer's Part

Replaces OEM Part #	2085-04
Disk Type	Flat Coulter Single Bevel
Dimensions	20-1/2" x 5mm
Pilot Hole Size	3.660"
# of Bolt Holes	4 Beveled Holes



926-PRG-1250



905-NRG-5000


500-200-1015
500-150-1015
FITS: BOURGAULT

 Bourgault MRB® ID, 3820 Coulter Drill
Original Manufacturer's Part

Replaces OEM Part #	2085-05
Disk Type	Flat Coulter Single Bevel
Dimensions	20-1/2" x 5mm
Pilot Hole Size	3.660"
# of Bolt Holes	4



961-CRG-1005



905-NRG-5000

 When ordering a full set of 500-200-1015, you will need
2 of the 500-200-1000 for the hitch/hinge assembly.

500-200-1005
500-150-1005
FITS: CNH
Case: IH 500, 5w00T
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
CIH, DMI: 530C & 730C
CNH: 870 & 875
Salford: I-5100 & 5200

Replaces OEM Part #	87457566
Disk Type	Plain Concave
Dimensions	24.75" x 6.5mm
Pilot Hole Size	4"
# of Bolt Holes	5

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**522-200-1055****FITS:** CNH / SPEED-TILLER

Speed-Tiller 475

Replaces OEM Part #	9SD2406S & 44920144
Disk Type	Notched Concave
Dimensions	24" x 6.5mm
Pilot Hole Size	2.80"
# of Bolt Holes	4

**550-200-1010****FITS:** CNH

2000 Series Planter

Replaces OEM Part #	92217955, 51691765 & 48118295
Disk Type	Leading/Trailing Seeding Blade
Dimensions	15" x 4.5mm

**517-200-1005****517-150-1005****FITS:** DEGELMAN / KINZE**Degelman:** Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143556
Disk Type	Plain Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**517-200-1010****FITS:** DEGELMAN / KINZE**Degelman:** Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143550
Disk Type	Plain Concave
Dimensions	18" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**517-200-1025****517-150-1025****FITS:** DEGELMAN / KINZE**Degelman:** Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143562
Disk Type	Plain Concave
Dimensions	22" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**522-200-1010****522-150-1010****FITS:** DEGELMAN / KINZE**Degelman:** Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143557
Disk Type	U Notch Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**522-200-1020****FITS:** DEGELMAN / KINZE

Degelman: Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143553
Disk Type	Double V Notch Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**522-200-1025****FITS:** DEGELMAN / KINZE

Degelman: Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143566
Disk Type	Double V Notch Concave
Dimensions	22" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**522-200-1030****522-150-1030****FITS:** DEGELMAN / KINZE

Degelman: Pro-Till
Kinze: Mach Till
JD: HSD29

Replaces OEM Part #	143563
Disk Type	U Notch Concave
Dimensions	22" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**522-200-1045****FITS:** DEGELMAN / KINZE

Degelman: Pro-Till
Kinze: Mach Till

Replaces OEM Part #	143577
Disk Type	Double V Notch Concave
Dimensions	26" x 8mm
Pilot Hole Size	N/A
# of Bolt Holes	4



946-HRG-1505



907-NPF-5005

**508-150-1005****FITS:** DMI, YETTER, BLU-JET, CNH & OTHERS

Case-IH 920, NPX2800, DMI 2800, 9203, 9204, 9205, 9206, 9207, White 423, 425, 426, 427, 428, 435, 445 Conservation Chisel, Glencoe CC4450, Landoll 1230

Replaces OEM Part #	Nutriplacer 443627A1
Disk Type	Fluted Coulter Plain Edge
Dimensions	20" x 5mm
Pilot Hole Size	4.040"
Bolt Circle	5" or 5-1/4"

**510-200-1000****FITS:** GREAT PLAINS

Turbo Chopper, Turbo-Max, Turbo Till & Turbo Till II

Replaces OEM Part #	820-011C
Disk Type	20 Wave RT Coulter
Dimensions	20.5" x 6.5mm
Pilot Hole Size	1.75" Round
# of Bolt Holes	N/A


511-200-1000
FITS: GREAT PLAINS

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


522-150-3000
FITS: HORSCH

Joker

Replaces OEM Part #	3060030 & 04559503
Disk Type	Notched Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	5


500-200-1010
500-150-1010
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


506-200-1000
FITS: JOHN DEERE

MaxEmerge®2, Plus, Pro, XP, XP Pro, ME5, EE planters; 1530, 1535 drills

Replaces OEM Part #	A72680
Disk Type	Coulter 25 Wave
Dimensions	16" x 4.5mm
Pilot Hole Size	2.125"
# of Bolt Holes	5


517-200-1030
517-150-1030
FITS: JOHN DEERE / NORWOOD

JD 2680H, HSD Series, Norwood Kwik-Till, Quivogne

Replaces OEM Part #	JD 5NS90340003 NW 18199A & 19028A
Disk Type	Plain Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4


522-200-1040
522-150-1040
FITS: JOHN DEERE / NORWOOD

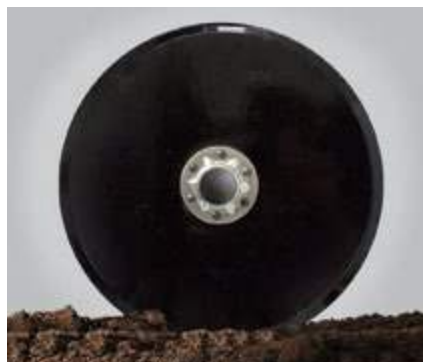
JD 2680H, HSD Series, Norwood Kwik-Till, Quivogne

Replaces OEM Part #	JD 5NS90340002 NW 18354A
Disk Type	Notched Concave
Dimensions	20" x 6.5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**550-200-1000****FITS:** JOHN DEERE / HORSCH / KINZE

XP, XP Pro, MaxEmerge®5, Exact Emerge Row Units, Horsch Maestro, Kinze

Replaces OEM Part #	AA110173 AA105716 & G10018801
Disk Type	3.5 mm rivited blade assembly
Dimensions	15" x 3.5mm
Dust Cap	included

**550-200-1003****FITS:** JOHN DEERE, KINZE & WHITE

JD 1530 (Tru-Vee), 1535 (Tru-Vee Integral Grain), 1760, 1780, 7000 (MaxEmerge), 7100 (MaxEmerge), 7200 (MaxEmerge 2), 7300 (MaxEmerge 2), White 6000 Series Planter

Replaces OEM Part #	JD AA20242, AA37474, AA55927, Kinze # GD11306, White 700167073
Disk Type	3.5 mm rivited blade assembly
Dimensions	15" x 3.5mm
Dust Cap	included

**522-200-1070****FITS:** KOCKERLING, FARMET, BEDNAR, SMS

N/A

Replaces OEM Part #	910964,9002598- 3007653, KM060174
Disk Type	Notched Concave
Dimensions	20" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**525-200-1025****FITS:** KUHN KRAUSE

Excelerator 8005 & XT8010

Replaces OEM Part #	Q8014420
Disk Type	32 Wave Concave Razor
Dimensions	22.5" x 6.5mm
Pilot Hole Size	1.75" Round
# of Bolt Holes	N/A

**522-200-1000****FITS:** LEMKEN

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

Rubin 9

Replaces OEM Part #	3490467
Disk Type	Notched Concave
Dimensions	24.625" x 6mm
Pilot Hole Size	N/A
# of Bolt Holes	5

**522-200-1006****FITS: LEMKEN**

Rubin 10

Replaces OEM Part #	34910029- 34910031
Disk Type	Notched Concave
Dimensions	25" x 6mm
Pilot Hole Size	N/A
# of Bolt Holes	5

**522-200-1007****FITS: LEMKEN**

Rubin 12

Replaces OEM Part #	34910017
Disk Type	Notched Concave
Dimensions	29" x 6mm
Pilot Hole Size	N/A
# of Bolt Holes	6

**522-200-1035****FITS: LEMKEN**

Heliodor 9

Replaces OEM Part #	34910027
Disk Type	Notched Concave
Dimensions	20" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**522-200-1065****FITS: POTTINGER**

Terradisc

Replaces OEM Part #	9771.03.025.1
Disk Type	Notched Concave
Dimensions	23" x 5mm
Pilot Hole Size	N/A
# of Bolt Holes	4

**500-200-1020****FITS: PILLAR**

DH Series, Barton Openers

Replaces OEM Part #	206-007
Disk Type	Flat Coulter
Dimensions	18" x 5mm
Pilot Hole Size	3.625"
# of Bolt Holes	4

**505-200-1000****505-150-1000****FITS: SALFORD**

Salford I-1100 & I-1200

Replaces OEM Part #	10010764 & CT512008
Disk Type	8 Wave Coulter
Dimensions	20" x 4.5mm
Pilot Hole Size	4"
# of Bolt Holes	4

**505-200-1005****505-150-1005****FITS: SALFORD**

Salford I-1100 & I-1200

Replaces OEM Part #	10010766 & CT512013
Disk Type	13 Wave Coultter
Dimensions	20" x 4.5mm
Pilot Hole Size	4"
# of Bolt Holes	4

**505-200-1010****505-150-1010****FITS: SALFORD**

Salford 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 Coultter
Dimensions	21.75" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**505-200-1015****505-150-1015****FITS: SALFORD**

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 Coultter
Dimensions	22.75" x 5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1017****FITS: SALFORD / SUNFLOWER**

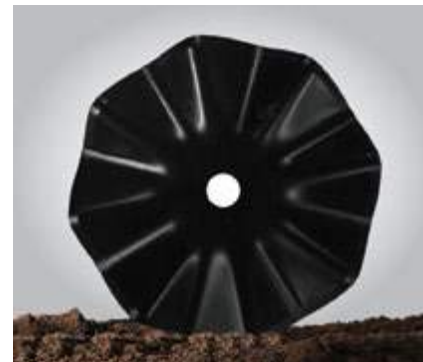
Salford: I-4100 (first 2 rows), I-4200
 (front row) & I-5100 (all)
Sunflower: 4410, 4411, 4412, 4510,
 4511 & 4530

Replaces OEM Part #	CT512250 & 10010771
Disk Type	Plain Concave
Dimensions	22.25" x 6.5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**517-200-1020****FITS: SALFORD / CNH / DMI**

Salford: I-5100 & 5200
CIH/DMI: 530C & 730C
CNH: 870 & 875

Replaces OEM Part #	CT503059 & 10010727
Disk Type	Plain Concave
Dimensions	24.75" x 6.5mm
Pilot Hole Size	4"
# of Bolt Holes	5

**505-200-1020****FITS: SUMMERS**

Summers Super Coultter
 & Coultter Chisel

Replaces OEM Part #	8J1020
Disk Type	8 Wave Coultter
Dimensions	20" x 6.5mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**505-200-1025****FITS:** SUMMERSSummers Super Coulter
& Coulter Chisel

Replaces OEM Part #	8J1021N
Disk Type	8 Wave Notch Coulter
Dimensions	22.5" x 6.5mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**515-200-1000****FITS:** SUMMERS

Summers DK Series Disk

Replaces OEM Part #	8K5026
Disk Type	Plain Concave
Dimensions	26.25" x 6.5mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**521-200-1000****FITS:** SUMMERS

Summers DK Series Disk

Replaces OEM Part #	8K5025N
Disk Type	Notched Concave
Dimensions	25" x 8mm
Pilot Hole Size	2" Round
# of Bolt Holes	N/A

**506-150-1005****FITS:** UNVERFERTH / KMC
/ RAWSONZone-Builder 110, 112, 120, 122,
130, 132

Replaces OEM Part #	93934
Disk Type	Fluted Coulter
Dimensions	20" x 5mm
Pilot Hole Size	3.775"
# of Bolt Holes	6

**570-HBA-1000**

HUB & BEARING

FITS: Kockerling,
Farmet, Bednar,
SMS, Norwood
Kwik-Till, John
Deere 2680H,
John Deere HSD
Series, Quivogne**REPLACES
OEM PART****#:** 9031.40.12
(Gregoire
Besson), 910974
Kockerling,
F06160015R
(Maschio),
JD2680H,
Norwood Kwik-Till
5NS 90340028**HARDWARE:**
Includes1 x lock nut
(964-MNP-2201)**570-HBA-1005**

HUB & BEARING

FITS: John Deere
750A, 1560, 1590,
1690, 1835, 1860,
1890, 1895, 1990**REPLACES OEM
PART #:** AN281856**570-HBA-1015L**

BEARING ASSEMBLY

FITS: Lemken
MODEL: Heliodor
HARDWARE:
Includes
1 x WASHER
LEMKEN HEL 9
(018-WSH-3500)
1x (571-NUT-
2400L)**570-HBA-1015R**

BEARING ASSEMBLY

FITS: Lemken
MODEL: Heliodor
HARDWARE:
Includes
1 x WASHER
LEMKEN HEL 9
(018-WSH-3500)
1x (571-NUT-2400R)**570-HBA-1020**

HUB & BEARING

FITS: Degelman
MODEL: ProTill
**REPLACES
OEM PART #:**
950HFT2005 &
901FWS7505**NEW!****016-KIN-3001**

SCRAPER

FITS: Kinze 3000 Series**DESCRIPTION:** Cast Kinze seed tube guard / inner scraper**REPLACES OEM PART #:** GB0301 / G10038601MPP**HARDWARE:** Included

MAX LIFE™ Scrapers

Keep disks and packer wheels clean and free of debris.



015-JDS-2680

FITS: John Deere HSD Series, 2680H Norwood

REPLACES OEM#:
John Deere 5NS55401605



015-SRC-0001

FITS: John Deere 1870 Conserva Pak

REPLACES OEM#:
John Deere A88182

NOTES: Packer scraper. Sized to fit multiple mounting brackets.



***BUILD TO ORDER**

015-SRC-0004*

FITS: Wishek Tandem Disk Model 814NT, 842NT & 862NT

REPLACES OEM#:
Wishek W105216
Flaman PW105216

NOTES: Disk Scraper



010-DEG-1001ML

FITS: Degelman Pro-Till

REPLACES OEM#:
572957

NOTES: This scraper has MAX LIFE™ tungsten embedded carbide applied to wear edges.

Interested in BTT Products?

Try before you buy with the BTT Demo Program.
See page 2.

MAX LIFE

WELDABLE WEAR STRIPS



EXTENDED WEAR PART LIFE. EXCEPTIONAL VALUE.

Built to extend the life of your wear parts, where you need it, when you need it.

MAX LIFE weldable wear strips are made using the same weld-infused embedded tungsten carbide found on our harrow tines.

They have a 1/4" base and are available in multiple sizes.

Use a full strip or break them into tiles.

6

SIZES
AVAILABLE

CUSTOM WEAR PROTECTION. MORE POTENTIAL.

MAX LIFE Weldable Wear Strips can be heated and bent to protect curved areas, increasing the usage scenarios on a wide range of machines and ground engaging tools. It's ideal for combating sliding wear, preventing thinning, or "washing" and in situations where brazing is not an option, and hard facing is too slow. Machines that most commonly use wear strips are seed drills, subsoilers, cultivators, ploughs, manure spreaders, root harvesters, sugar cane harvesters, buckets, mowers, augers, and scrapers.

OTHER SIZES AVAILABLE UPON REQUEST.

MAX LIFE™ Weldable Wear Strips

Extended wear part life. Exceptional value.



010-WWS-0662

WELDABLE WEAR STRIP

SIZE: 7.6" long x 0.6" wide, divided into 6 tiles.

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.



010-WWS-0762

WELDABLE WEAR STRIP

SIZE: 7.25" long x 0.625" wide, divided into 7 tiles.

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.



010-WWS-1202

WELDABLE WEAR STRIP

SIZE: 8" long x 0.5" wide, divided into 2 tiles.

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.



010-WWS-1509

WELDABLE WEAR STRIP

SIZE: 7.5" long x 0.6" wide, divided into 9 tiles.

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.



010-WWS-2506

WELDABLE WEAR STRIP

SIZE: 9.5" long x 1" wide, divided into 6 tiles.

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.

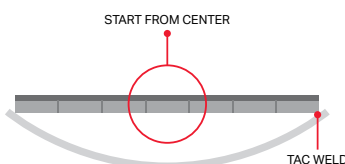
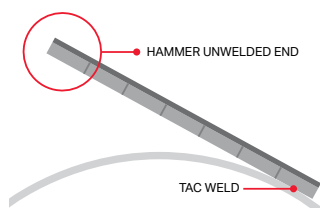


010-WWS-9520

WELDABLE WEAR STRIP

SIZE: 9.5" long x 2" wide, divided into 6 tiles.

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.



See page 128 for installation instructions

Cost Effective Solution

Investing in weldable wear strips can provide significant cost savings in the long run. By protecting expensive equipment & machinery from wear & damage, they help avoid costly repairs, replacements, and downtime.

Unique Farms. Unique Needs.

Our line of specialty products is always expanding. Tell us what you'd like to see!



018-RYT-0320LML

ROTARY HARROW TINE

FITS: Kubota/Kverneland

KUBOTA MODEL# 3300-3350-3400-3450

OVERVIEW: *MAX LIFE™*

Power harrow tines to fit Kubota and Kverneland power harrows.

REPLACE'S OEM#:

MA44010151 = 018-RYT-0320LML



018-RYT-0320RML

ROTARY HARROW TINE

FITS: Kubota/Kverneland

KUBOTA MODEL# 3300-3350-3400-3450

OVERVIEW: *MAX LIFE™*

Power harrow tines to fit Kubota and Kverneland power harrows.

REPLACE'S OEM#:

MA44010150 = 018-RYT-0320RML



018-RYT-2500ML

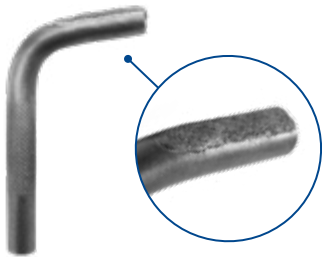
CARROT BEDDER SPIKE

FITS: Falc, Rau, Breviglieri

REPLACES OEM#: 240131, E23374, 01680

OVERVIEW: *MAX LIFE™* coated rotary tines for carrots

NOTES: Use existing hardware to install pins



010-BTP-0750

THRESHING PIN

FITS: Pickett Equipment & Colombo

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.



012-MAN-1000

MANURE PADDLE

FITS: JBS Manure Spreaders

OVERVIEW: *MAX LIFE™* coated manure paddle

"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 threshing with less time and cost on maintenance."

Tim van der Hoek
Alberta, Canada

Power Hiller Tines

MAX LIFE™ weld-infused embedded tungsten carbide applied to the leading edge for a longer wear life.



010-PHT-1020

POWER HILLER TINES

FITS: Struik (Long Tines)

SIZE: 1/2" x 14-1/2"

OVERVIEW: *MAX LIFE™* coated Power Hiller Tiller tines

NOTES: Use existing hardware to install. Bolt spacing 3.15" (80mm). Bolt hole size 0.57" (14.5mm).



010-PHT-2010

POWER HILLER TINES

FITS: Bauman Tillers

SIZE: 3/8" x 12-1/4"

OVERVIEW: *MAX LIFE™* coated Power Hiller Tiller tines

NOTES: Use existing hardware to install. Bolt spacing 3.13" (79.38mm). Bolt hole size 0.52" (13.08mm).



010-PHT-4010

POWER HILLER TINES

FITS: Baselier

SIZE: 2" x 15"

OVERVIEW: *MAX LIFE™* coated Power Hiller Tiller tines

NOTES: Use existing hardware to install. Bolt spacing 3.95" (100.33mm). Bolt hole size 0.57" (13.08mm).



010-PHT-5011

POWER HILLER TINES

FITS: Grimme

SIZE: 1/2" x 14-7/8"

OVERVIEW: *MAX LIFE™* coated Power Hiller Tiller tines

NOTES: Use existing hardware to install. Bolt spacing 3.94" (100mm). Bolt hole size top: 0.65" (16.50mm) bottom: 0.57" (14.5mm).



010-PHT-9010 UNIVERSAL

POWER HILLER TINES

FITS: Struik and Baselier

SIZE: 3/8" x 8-5/8"

OVERVIEW: Bolt-on, universal short length tine is more durable than tile carbide in rocky conditions.

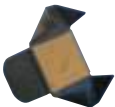
Laser cut from hardened steel with *MAX LIFE™* weld-infused embedded tungsten carbide applied to the leading edge for a longer wear life.

NOTES: Use existing hardware to install. Bolt spacing top to second hole 2.375" (60.33mm), top to third hole 3.16" (80.25mm). Bolt hole size 0.49" (12.5mm).

ACCESSORIES & REFERENCE



						
047-ACC-1001	047-ACC-1002	047-CAP-1000	100-WDG-0700	200-WDG-0206	200-WDG-0506	200-WDG-1006
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-REL-1010	400-WDG-0300	400-WDG-0700	880-WDG-0300	880-WDG-0301	600-HHA-0750	614-ACC-1000
The speed release tool must be used to remove 200 and 410 Series sweeps and openers off <i>Speed-Loc</i> adapters.	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-0004	680-ACC-1000	684-SHM-0125	880-ASY-1010	300-BSH-1200
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 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.	Shim for aligning 684-ASY-3711G & 684-ASY-3712G to the packer.	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..	This bushing adapts air hoses from a 1-1/8" (28mm) O.D. hose up to a 1-1/4" (32mm) O.D. hose.
						
880-BSH-1000	880-BSH-1130	880-BSH-1150	880-BSH-2000	880-CPL-1010	880-CPL-2500	880-ORF-0001
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 is to be used on John Deere split shanks with bolt ons and QCAs.	This barb and compression fitting is 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.

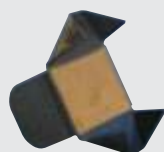
						
880-GRD-1000	880-GRD-1010	880-HCL-0001	880-HCL-9152	200-BNC-3100	300-BNC-4414	600-BNC-5000
This guard is used to protect liquid hose on all side band liquid openers in heavy trash conditions.	This guard is used to protect liquid phos tubes on 047 & 680 liquid phos openers in heavy trash conditions.	This clip eliminates hose movement, as the sharp corners embed into the granular pipe.	Hose gear clamp size: 1.06" to 2".	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.
						
200-ASY-0001	200-ASY-0002	901-FWS-7505	905-NRG-5000	905-NPF-5005	926-PRG-1250	944-HRG-2005
This replacement rear assembly works with all Non-Freeze NH3 Speed-Loc™ fertilizer knives.	This replaces 200-ASY-0001 as a compatible option with an extra tube for vapor line on Non-Freeze NH3 Speed-Loc™ fertilizer knives.	This washer is used with bolt 950-HFT-2005 on hub & bearing 570-HBA-1020. Flat 25/32 x 2-1/4" x 1/4"	This 1/2" Flange Nut is used on disk blades 500-200-1000, 500-150-1000, 500-200-1015, 500-150-1015 Used with 926-PRG-1250. Serrated, Grade 5	This 1/2" Flange Nut is used on disk blades 517-200-1005, 517-150-1005, 517-200-1010, 517-200-1025, 517-150-1025, 522-200-1010, 522-150-1010, 522-200-1020, 522-200-1025, 522-200-1030, 522-150-1030, 522-200-1045 Used with 946-HRG-1505. Grade 8	This Plow Bolt is used on disk blades 500-200-1000, 500-150-1000 Used with 905-NRG-5000. 1/2" x 1.25" UNC long shoulder.	3/8" x 2" Hex Bolt Grade 8 Used on 680-KNF-1011, 680-KNF-5001, 680-KNF-5000
						
946-HRG-1505	946-HRG-3754	950-HFT-2005	961-CRG-1005	964-MNP-2201		
This Hex Bolt is used with 905-NPF-5005 on Degelman disk blades. 1/2" x 1-1/2" Grade 8 PL	This 1/2" x 3-3/4" Shoulder Bolt is used on harrow tines 010-HAR-5001ML, 010-HAR-5008ML, 010-HAR-5625ML, 010-HAR-5628ML, 010-HAR-6250ML Grade 5	This Hex Bolt is used with washer 901-FWS-7505 on hub & bearing 570-HBA-1020. 3/4" x 2" Flange Grade 8	This 1/2" x 1" Carriage Bolt is used on disk blades 500-200-1015, 500-150-1015 Used with 905-NRG-5000. Grade 5	Nut for 570-HBA-1000		

Hoses popping out?

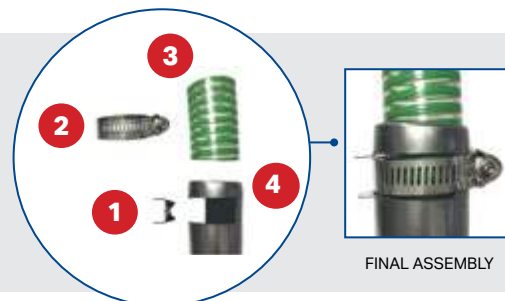
Don't forget the hose clip.

This clip eliminates hose movement, as the sharp corners embed into the granular pipe.

See illustration to right for proper installation.



HOSE CLIP
880-HCL-0001



FINAL ASSEMBLY

C-shank

For 602 & 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 125.

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 used with lock washer and regular nut

Edge On

For Bourgault 3310 & 3320 Edge On Shank, PLS & PLX

- **Use 3/8" x 2-1/4" Grade 8 Carriage Bolts** (960-CRG-3755)
- **Use 3/8" Stover Lock Nut** (907-NPF-3755)

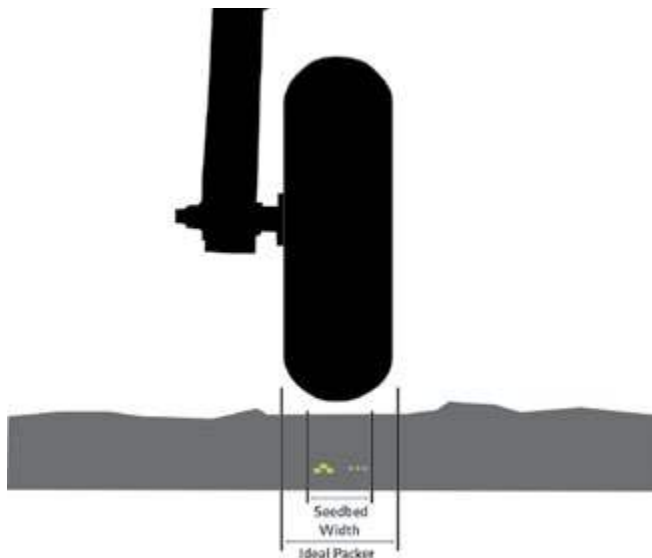
For Morris Maxim Edge On Shank

- **Use 3/8" x 2-1/4" Grade 8 Carriage Bolts** (960-CRG-3755)
- **Use 3/8" Stover Lock Nut** (907-NPF-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.

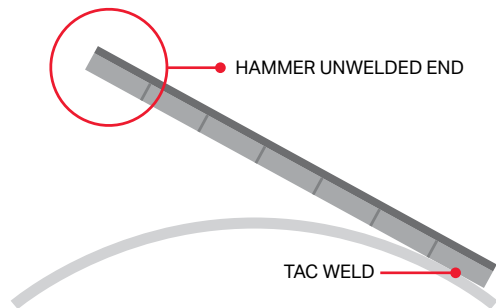


MAX LIFE™ Weldable Wear Strips Installation

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.

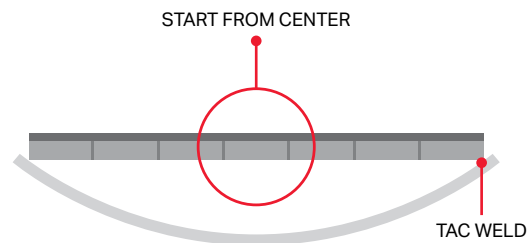
FOR OUTSIDE CURVES

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.

Do not use 1/2" impact driver or larger power tools to install. Abide by torque specification above. 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.

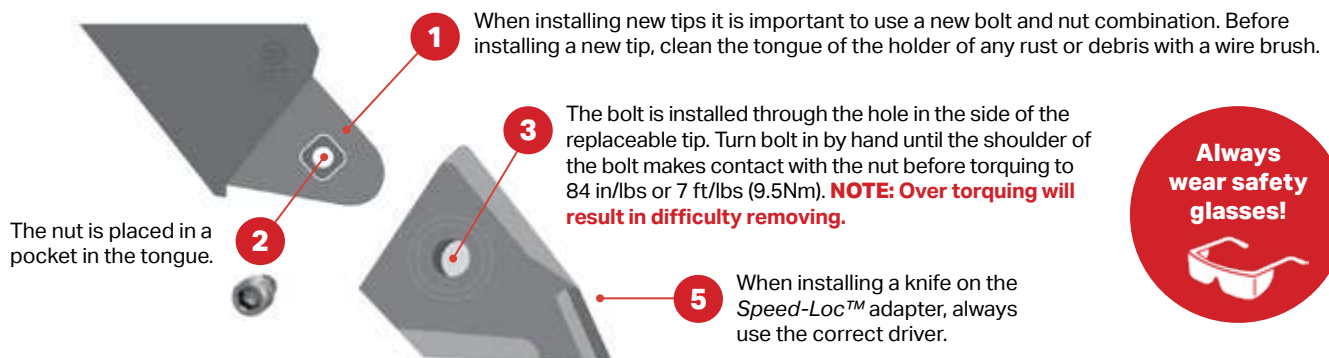
Replaceable Tips Installation & Removal

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 #
Carriage Bolt – Grade 8	3/8" x 1-1/2"	960-CRG-1505
Carriage Bolt – Grade 8	3/8" x 1-3/4"	960-CRG-1755
Carriage Bolt – Grade 8	3/8" x 2"	960-CRG-2005
Carriage Bolt – Grade 8	3/8" x 2-1/4"	960-CRG-3755
Carriage Bolt – Grade 8	1/2" x 1"	961-CRG-1005
Carriage Bolt – Grade 8	1/2" x 2"	961-CRG-2005
Carriage Bolt – Grade 8	1/2" x 2-1/4"	961-CRG-2255
Carriage Bolt – Grade 8	1/2" x 2-1/2"	961-CRG-2505
Carriage Bolt – Grade 8	7/16" x 1-3/4"	962-CRG-1755
Hex Head Bolt	1/4" x 3/4"	942-HRG-0754
Hex Head Bolt	1/4" x 2"	942-HRG-2004
Hex Head Bolt - Grade 8	3/8" x 1-3/4"	944-HRG-1755
Hex Head Bolt - Grade 8	3/8" x 2"	944-HRG-2005
Hex Head Bolt - Grade 8	7/16" x 1-1/2"	945-HRG-1505
Hex Head Bolt	1/2" x 1-3/4"	946-HRG-1754
Hex Head Bolt	1/2" x 2-3/4"	946-HRG-2754
Hex Head Bolt	1/2" x 3"	946-HRG-3004
Hex Head Bolt	1/2" x 3-1/4"	946-HRG-3254
Hex Head Bolt	1/2" x 3-1/2"	946-HRG-3504
Hex Head Bolt – Grade 8	1/2" x 2"	946-HRG-2005
Hex Head Bolt – Grade 8	1/2" x 2-1/4"	946-HRG-2255
Hex Head Bolt – Grade 8	1/2" x 2-1/2"	946-HRG-2505
Hex Head Bolt – Gr. 5 Shld Blt	1/2" x 3-3/4"	946-HRG-3754
Hex Head Bolt – Grade 8	5/8" x 2-1/2"	948-HRG-2505
Hex Head Bolt – O/S Hd Shld Blt	7/16" x 1-3/4"	933-HOS-1754
Hex Head Bolt – O/S Hd Shld Blt	7/16" x 2"	933-HOS-2004
Lock Nut – Stover	1/4"	906-NPT-2505
Lock Nut – Stover	3/8"	906-NPT-3755
Lock Nut – Stover	7/16"	906-NPT-4375
Lock Nut – Stover	1/2"	906-NPT-5005

DESCRIPTION	SIZE	PART #
Lock Nut – Stover	5/8"	906-NPT-6255
Lock Nut - Nylon Insert	1/4"	908-NNI-2504
Lock Washer	1/2"	902-LWS-5000
Nut – Grade 5	7/16"	904-NRG-4374
Nut – Grade 5	1/2"	904-NRG-5004
Flanged Lock Nut - Grade 5	1/2"	905-NRG-5000
Flanged Lock Nut	3/8"	907-NPF-3755
Flanged Lock Nut	7/16"	907-NPF-4375
Flanged Lock Nut	1/2"	907-NPF-5005
Plow Bolt	1/2" x 1-1/4"	926-PRG-1250
Plow Bolt	1/2" x 1-3/4"	926-PRG-1754
Plow Bolt	1/2" x 2"	926-PRG-2004
Plow Bolt	1/2" x 2-1/4"	926-PRG-2254
Plow Bolt	1/2" x 2-1/2"	926-PRG-2504
Plow Bolt	1/2" x 2-3/4"	926-PRG-2754
Plow Bolt	1/2" x 3"	926-PRG-3004
Plow Bolt	1/2" x 3-1/2"	926-PRG-3504
Plow Bolt – O/S Hd Low Shld	3/8" x 1-1/2"	922-POL-1504
Plow Bolt – O/S Hd Low Shld	3/8" x 1-3/4"	922-POL-1754
Plow Bolt – O/S Hd Low Shld	3/8" x 2"	922-POL-2004
Plow Bolt – O/S Hd	3/8" x 2-1/4"	922-POR-2254
Plow Bolt – O/S Hd Low Shld	7/16" x 1-3/4"	924-POL-1754
Plow Bolt – O/S Hd	7/16" x 2"	924-POR-2004
Plow Bolt – O/S Hd	7/16" x 2-1/4"	924-POR-2254
Plow Bolt – O/S Hd	7/16" x 2-1/2"	924-POR-2504
Plow Bolt – O/S Hd	7/16" x 2-3/4"	924-POR-2754
Plow Bolt – O/S Hd	7/16" x 3"	924-POR-3004
Screw – Pan Head	3/8"	911-SCR-1038
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" w/ 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

410-QCA-5080 Speed-Loc™ Quick Change Adapter

APPLICATION	TOP HOLE	BOTTOM HOLE	SPECIAL NOTES
1-1/4" John Deere shank w/o seed boot or wedge	1/2" x 3"	1/2" x 3"	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, stover lock nut
1" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, stover lock nut
1" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2-1/4"	1/2" x 2"	Plow bolts, stover lock nut
7/8" Bourgault shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, stover lock nut
7/8" Bourgault shank w/ Bourgault round tube seed boot	1/2" x 2"	1/2" x 1-3/4"	Plow bolts, stover lock 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, stover lock nut
3/4" Bourgault shank w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, stover lock 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, stover lock nut
3/4" Bourgault shank w/ Bourgault square tube seed boot	1/2" x 2"	1/2" x 1-3/4"	Plow bolts, stover lock nut
3/4" Degelman shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Plow bolts, stover lock nut
7/8" Flexi-Coil shank w/o seed boot	7/16" x 1-3/4"	7/16" x 1-3/4"	Plow bolts, stover lock nut
1/2" Morris Challenger shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, stover lock nut
5/8" Morris Challenger shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, stover lock nut
5/8" John Deere shank w/o seed boot	7/16" x 1-1/2"	7/16" x 1-1/2"	Plow bolts, stover lock nut
9/16" CIL shank w/o seed boot	3/8" x 1-1/2"	3/8" x 1-1/2"	Plow bolts, stover lock nut
1/2" Case IH shank w/o seed boot	7/16" x 1-1/2"	7/16" x 1-1/2"	Plow bolts, stover lock 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, stover lock nut
1" Bourgault shank w/ Bourgault splitter seed boot #6505-42	1/2" x 2-1/4"	1/2" x 2"	Plow bolts, stover lock nut
1-1/4" Bourgault shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, stover lock 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, stover lock nut
1" John Deere shank w/o seed boot	1/2" x 1-3/4"	1/2" x 2"	Plow bolts, stover lock nut
3/4" Degelman shank (50°) w/o seed boot	1/2" x 1-3/4"	1/2" x 1-3/4"	Plow bolts, stover lock 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, stover lock nut
1" Morris shank (43°) w/o seed boot	1/2" x 2"	1/2" x 2"	Plow bolts, stover lock nut
1-1/4" CIL shank w/o seed boot	1/2" x 2-1/4"	1/2" x 2-1/4"	Plow bolts, stover lock 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, stover lock 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, stover lock 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" plow bolts, stover lock nut	1/2" x 2-3/4" plow bolts, stover lock nut	Hex head, regular nut
1" Morris shank for granular knives	1/2" x 3" plow bolts, stover lock nut	1/2" x 2-3/4" plow bolts, stover lock nut	Hex head, regular nut
1-1/4" CIL shank, 2-1/2" hole center-to-center	1/2" x 3-1/4" plow bolts, stover lock nut	1/2" x 2-3/4" plow bolts, stover lock nut	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

Chrome Armour Torque Values

SIZE	GRADE 5 COARSE	GRADE 5 FINE	GRADE 8 COARSE	GRADE 8 FINE
1/4"	6.3	7.3	9	10
5/16"	13	14	18	20
3/8"	23	26	33	37
7/16"	37	41	52	58
1/2"	57	64	80	90
9/16"	82	91	115	129
5/8"	112	128	159	180
3/4"	200	223	282	315
7/8"	322	355	454	501
**1	483	541	682	764

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.

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-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

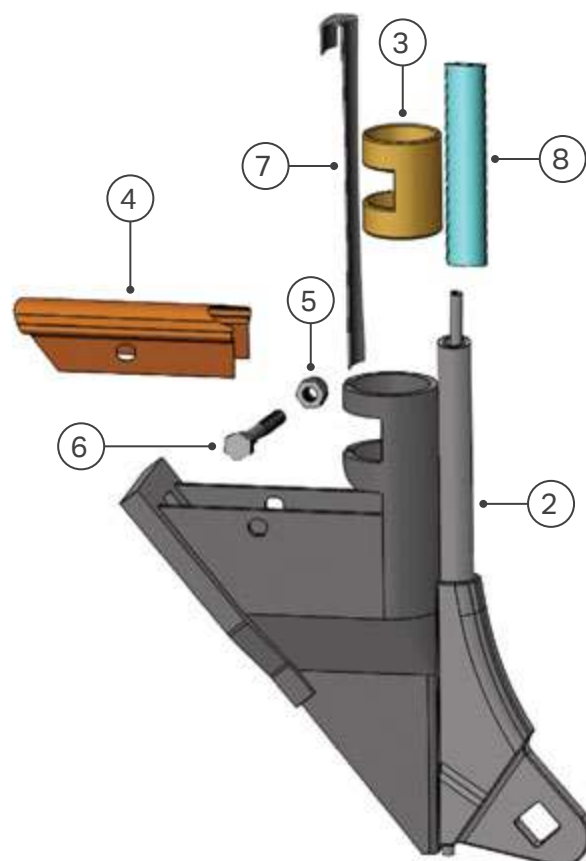
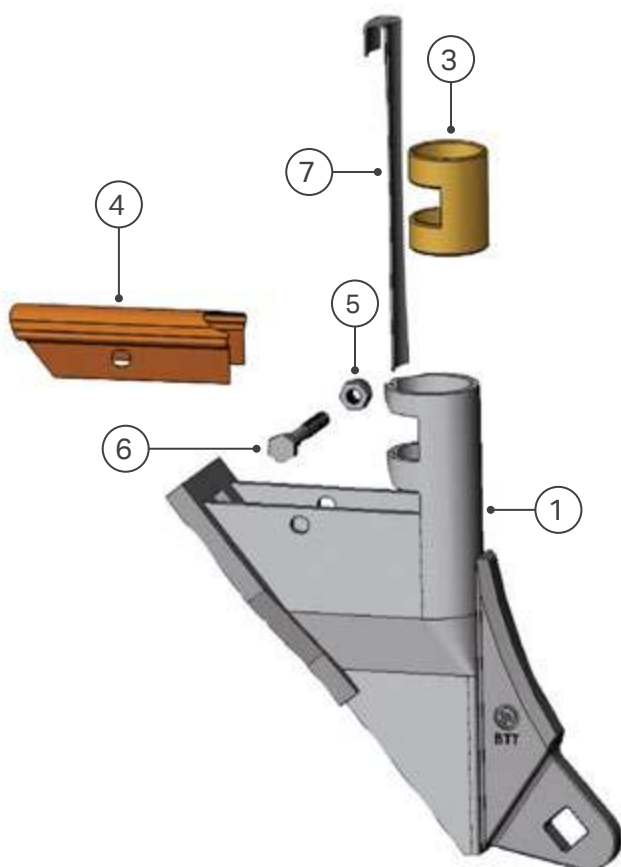
DEPTH (IN INCHES)						PART #
5	4	3	2	1	0	
						200-SPK-0200 / 0215
						200-VRT-1011 / 1000 / 1016 / 1040
						200-VRT-1061
						410-KNF-0800 / 0801 / 0813 / 0824 / 0825
						410-KNF-0830 / 0831 / 7551 / 7553 / 7560
						410-KNH-4000 W/ 200-TIP-0801
						410-KNH-7524 / 7540 W/ 600-TIP-7501
						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 21)

047-ASY-1005P

Single Shoot Seed Openers (Page 21)



PART		047-ASY-1000	047-ASY-1005P
1	047-HLD-1000	■	■
2	047-HLD-1005P	■	■
3	880-BSH-1130	■	■
4	047-CAP-1000	■	■
5	908-NNI-2504	■	■
6	942-HRG-2004	■	■
7	047-ACC-1001*	■	■
8	680-HOS-1000**	■	■

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 13-14.

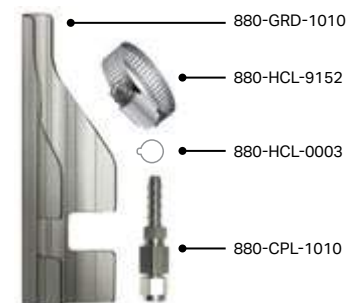
NOTES: Curved 50° shanks require either 880-WDG-0300 or 880-WDG-0301. **Sold separately.** See page 125.

*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-5120 & 5122

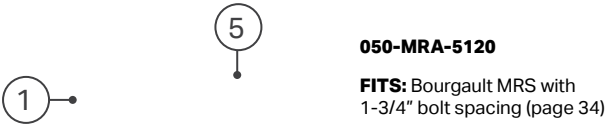
050-MRA-5130 & 5151

Bourgault Mid Row Shank Fertilizer Knives

050-MRA-5220 & 5222

050-MRA-5230

C-Shank Fertilizer Knives



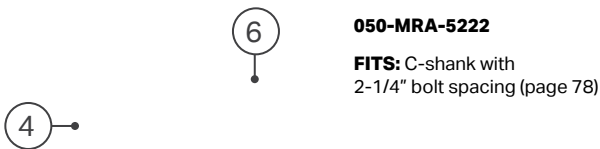
050-MRA-5120
FITS: Bourgault MRS with 1-3/4" bolt spacing (page 34)



050-MRA-5220
FITS: C-shank with 2-1/4" bolt spacing (page 78)



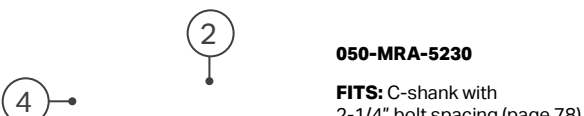
050-MRA-5122
FITS: C-shank with 2-1/4" bolt spacing (page 34)



050-MRA-5222
FITS: C-shank with 2-1/4" bolt spacing (page 78)



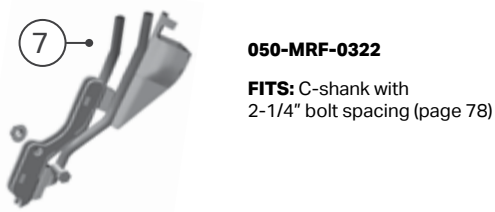
050-MRA-5130
FITS: Bourgault MRS with 1-3/4" bolt spacing (page 34)



050-MRA-5230
FITS: C-shank with 2-1/4" bolt spacing (page 78)



050-MRA-5131
FITS: Bourgault MRS with 1-3/4" bolt spacing (page 34)



050-MRF-0322
FITS: C-shank with 2-1/4" bolt spacing (page 78)

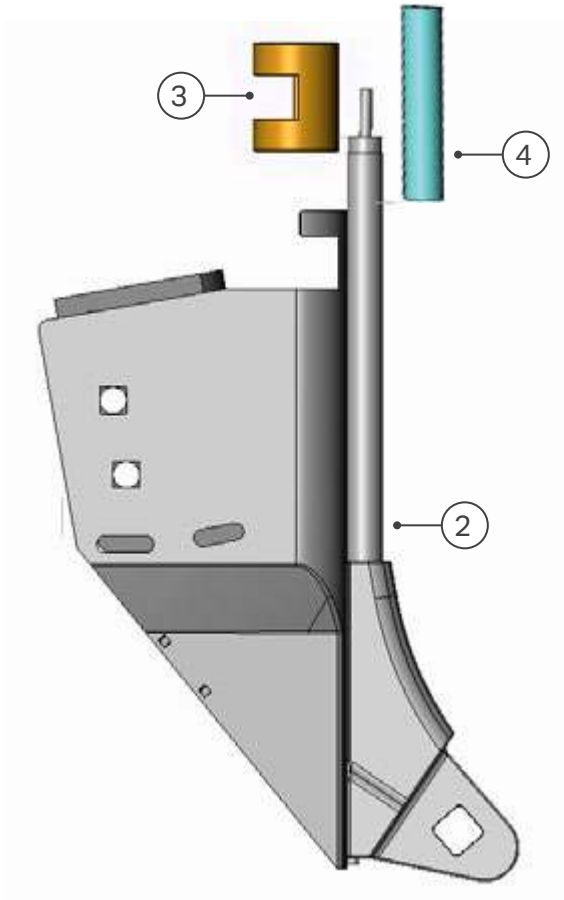
PART		050-MRA-5120	050-MRA-5122	050-MRA-5130	050-MRA-5131	050-MRA-5220	050-MRA-5222	050-MRA-5230
1	050-MRH-5175	■	■	■	■			
2	050-MRF-0030			■				■
3	050-MRF-0031				■			
4	050-MRH-5225					■	■	■
5	050-MRF-0020	■				■		
6	050-MRF-0022		■				■	
7	050-MRF-0322			■				■

Nuts and bolts are included.

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680-ASY-1000P

Single Shoot Seed Openers (Page 30 & 46)



PART		680-ASY-1000P
1	680-HLD-1000	
2	680-HLD-1000P	■
3	880-BSH-1130	■
4	680-HOS-1000	■

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

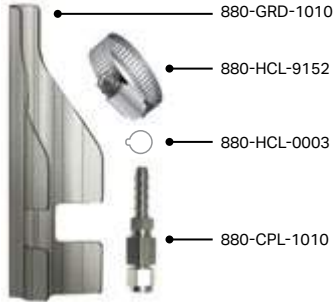
Tips sold separately. See pages 13-14.

200-BNC-3100
907-NPF-3755 & 960-CRG-3755

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.**

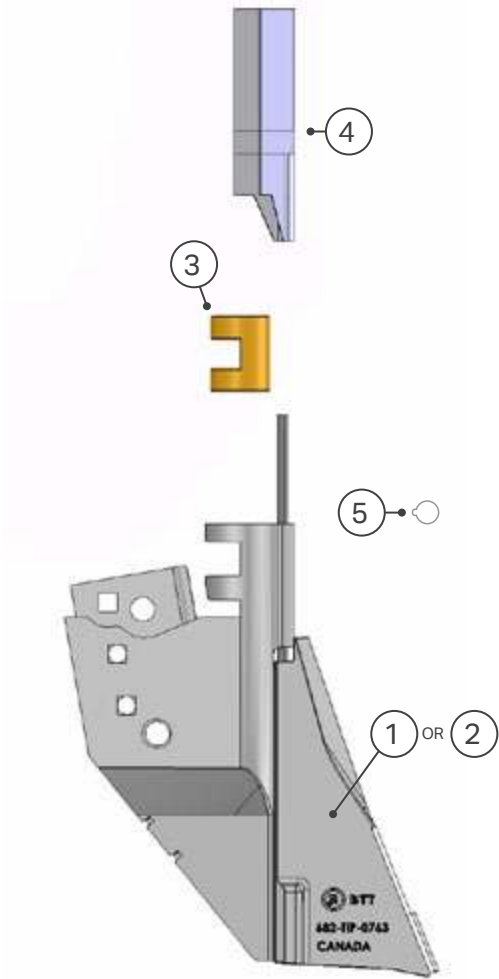


682-ASY-2063/2064

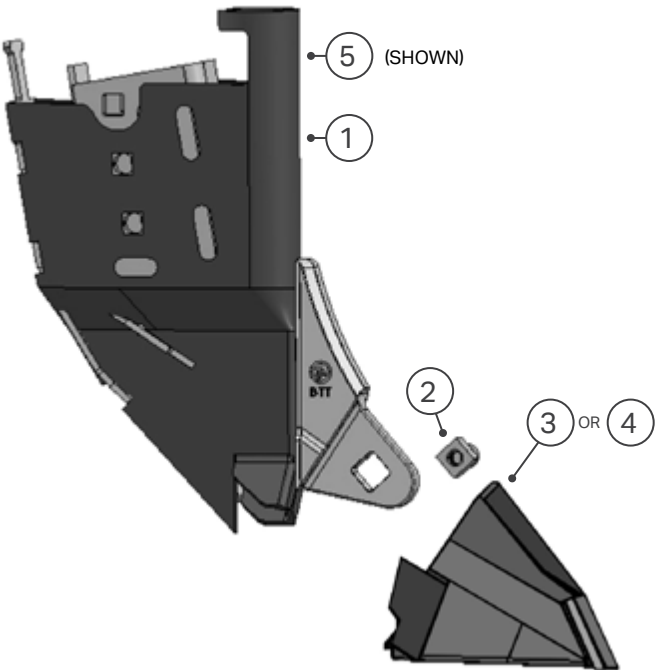
Side Band Seed Openers (Page 33 & 49)

680-ASY-0211/0212

TriMax™ Triple-Shoot System Seed Openers (Page 33)



682-ASY-2063 (LEFT)
682-ASY-2064P (RIGHT SHOWN)



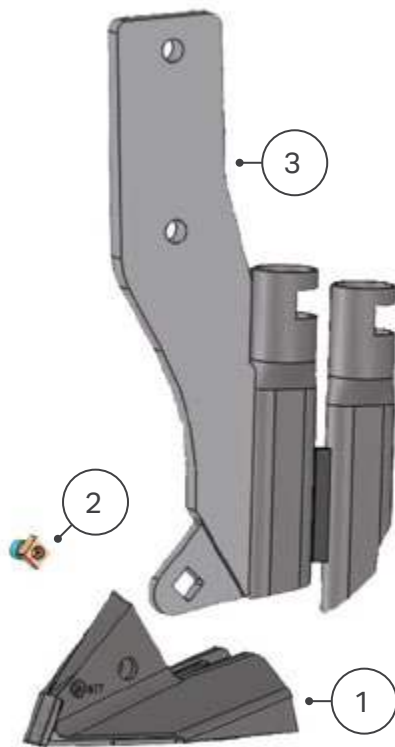
680-ASY-0211 (LEFT)
680-ASY-0212 (RIGHT SHOWN)

PART		682-ASY-2063	682-ASY-2064
1	682-KNF-2063	■	
2	682-KNF-2064		■
3	880-BSH-1130	■	■
4	682-DEF-1000	■	■
5	880-HCL-0003	■	■

PART		680-ASY-0211	680-ASY-0212
1	680-HLD-0712		■
2	200-BNC-3100		■
3	612-TIP-0211	■	
4	612-TIP-0212		■
5	680-HLD-0711	■	

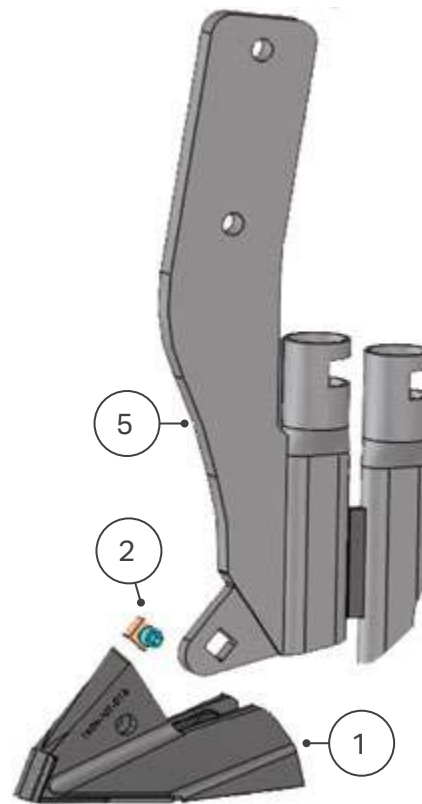
610-TIP-4041 Assemblies

Paired Row Seed Openers (Assemblies on these pages include the tip)



683-ASY-4020G

FITS: Morris Contour I
(page 50)



693-ASY-4020G

FITS: Morris Contour II &
Morris Quantum (page 50)

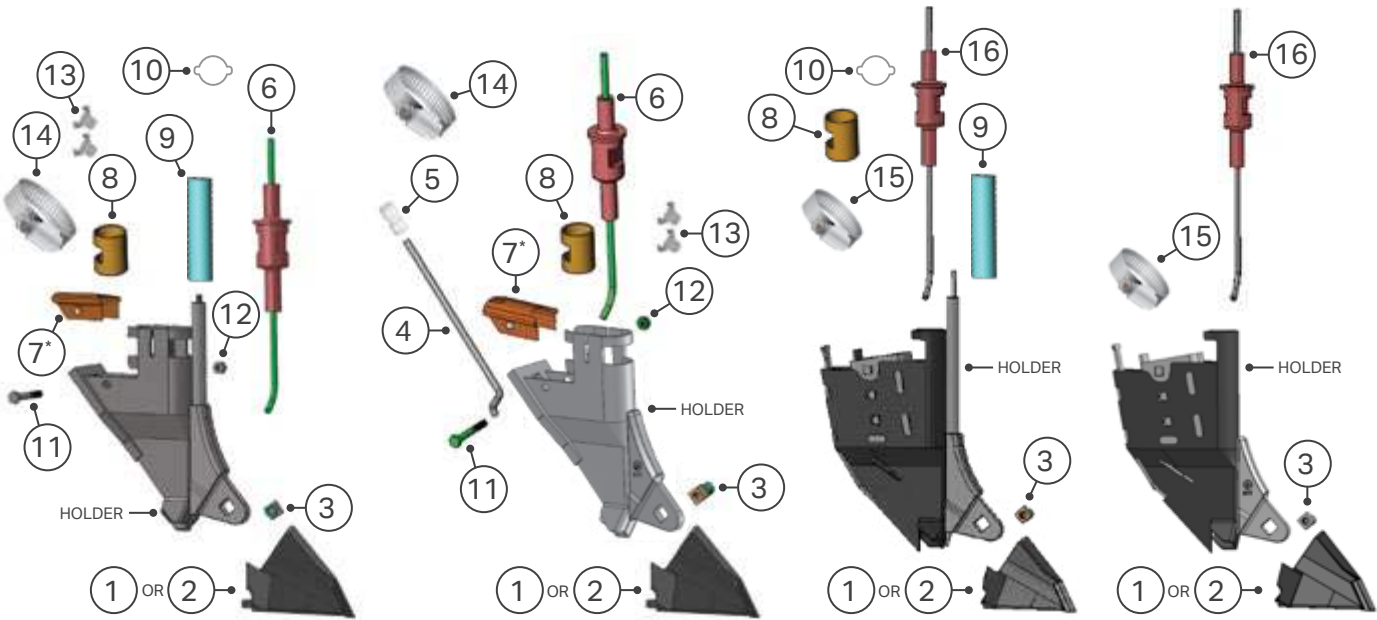
PART		683-ASY-4020G	693-ASY-4020G
1	610-TIP-4041	■	■
2	200-BNC-3100	■	■
3	683-HLD-2000	■	
5	693-HLD-2000		■

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 125.

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612-TIP-0711 & 0712 Assemblies

Side Band Seed Openers (Assemblies on these pages include the tip)



610-ASY-0711GP
610-ASY-0712GP
(SHOWN)

HOLDERS:
612-HLD-0711P
612-HLD-0712P (SHOWN)

FITS: C-shank (page 25)

612-ASY-0711
612-ASY-0712 (SHOWN)

HOLDERS:
612-HLD-0711
612-HLD-0712 (SHOWN)

FITS: C-shank (page 25)

680-ASY-0711LP
680-ASY-0712LP (SHOWN)

HOLDERS:
680-HLD-0711P
680-HLD-0712P (SHOWN)

FITS: Bourgault PHD (page 31)

680-ASY-0711L
680-ASY-0712L (SHOWN)

HOLDERS:
680-HLD-0711
680-HLD-0712 (SHOWN)

FITS: Bourgault PHD (page 31)

***BUILD TO ORDER**

***BUILD TO ORDER**

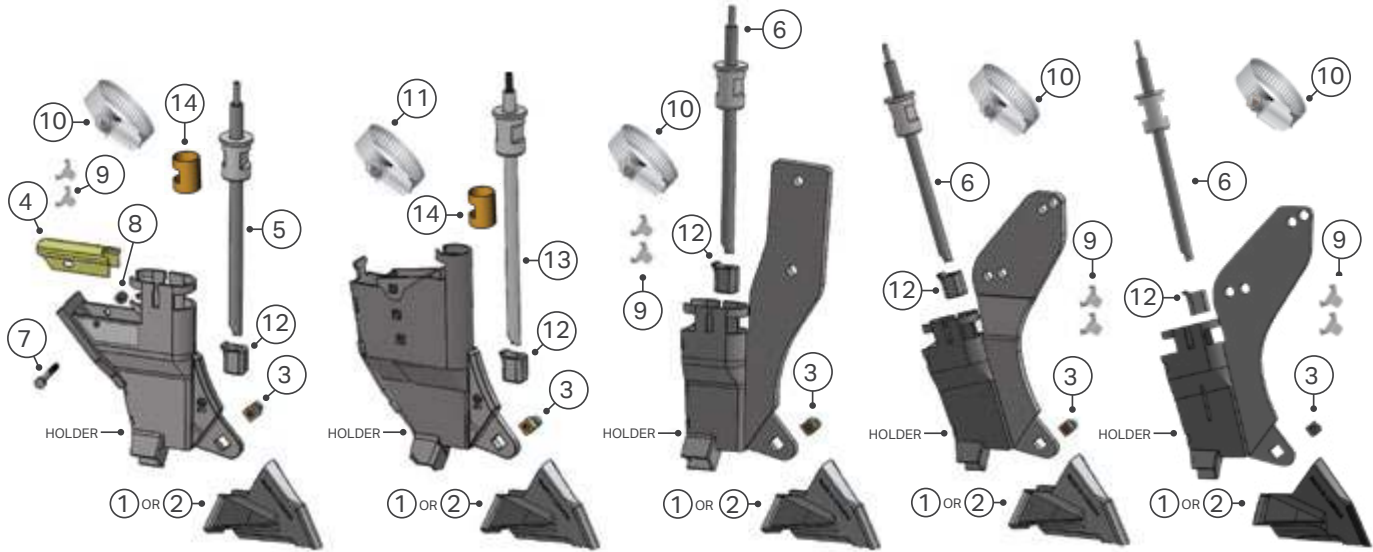
PART		G P	G P	G P	G P	L P	L P	G P	G P	L P	L P	G P	G P	L P	G P	L P	L P
1	612-TIP-0711																
2	612-TIP-0712 (SHOWN)																
3	200-BNC-3100																
4	047-TUB-2540																
5	880-CPL-2500																
6	612-TUB-6061																
7	612-CAP-1002																
8	880-BSH-1130																
9	680-HOS-1000*																
10	880-HCL-0004																
11	942-HRG-2004																
12	908-NNI-2504																
13	880-HCL-0001 (x2)																
14	880-HCL-1828																
15	880-HCL-9152																
16	682-TUB-6061																

NOTES: If your C-shank holder looks different than those pictured above, you have a pre-2014 style holder.

These holders require the galvanized steel cap 612-CAP-1001.

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 24)

680-ASY-2711 (LEFT)
680-ASY-2712 (RIGHT SHOWN)

HOLDERS:
680-HLD-2711
680-HLD-2712 (SHOWN)

FITS: Edge On,
Bourgault PHD (page 31)
Morris Maxim
(page 48)

683-ASY-2711 (LEFT)
683-ASY-2712 (RIGHT SHOWN)

HOLDERS:
683-HLD-2711
683-HLD-2712 (SHOWN)

***BUILD TO ORDER**

FITS: Morris Contour I
(page 48)

684-ASY-2711 (LEFT)
684-ASY-2712 (RIGHT SHOWN)

HOLDERS:
684-HLD-2711
684-HLD-2712 (SHOWN)

***BUILD TO ORDER**

FITS: Case IH 800/900,
NH P2070 & 2075,
Flexi-Coil PD5700
& 7200 (page 35)

684-ASY-3711 (LEFT)
684-ASY-3712 (RIGHT SHOWN)

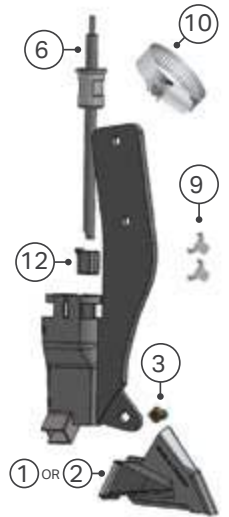
HOLDERS:
684-HLD-2711
684-HLD-2712 (SHOWN)

***BUILD TO ORDER**

FITS: Case IH 800/900,
NH P2070 & 2075,
Flexi-Coil PD5700
& 7200 (page 35)



PART		610-A	610-A	610-A	610-A	680-A	680-A	680-A	680-A	680-A	680-A	683-A	683-A	683-A	683-A	683-A	683-A	683-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	684-A	68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(RIGHT SHOWN)

HOLDERS:
693-HLD-2711
693-HLD-2712 (SHOWN)

FITS: Morris Contour II
(page 48)

NOTES: Two 880-HCL-0001 are included with the granular openers only. They are intended to provide additional security to installed hoses. See page 120 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 & P500

Fertilizer Knives (Page 42)



650-HLD-1000G



650-HLD-1001



650-HLD-1000L



650-HLD-1000N



650-HLD-1000GL

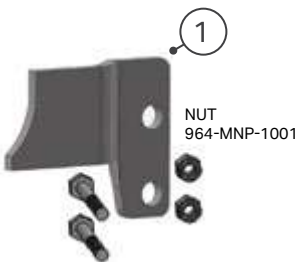


650-HLD-1000GN



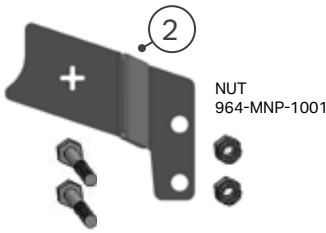
650-HLD-4040*

***BUILD TO ORDER**



BOLT
964-MHR-1030

650-ACC-1000



BOLT
964-MHR-1030

650-ACC-1010



ROLL PIN
650-ROL-0375

3/8 x 1 roll pin to hold fertilizer knives to shank

PART		G	L	N	G	G	N	N
		L	L	L	L	N	N	L
1	650-ACC-1000 ¹	■	■	■			■	
2	650-ACC-1010 ²				■	■		■
3	650-ROL-0375	■	■	■	■	■	■	■

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 42.

TIP OPTIONS:
200-TIP-0511 200-TIP-0803 200-TIP-0802
200-TIP-0801 200-TIP-0800 200-TIP-0811
Tips sold separately. See pages 13-14.

John Deere 1870 Conserva Pak & P500

Seed Openers (Page 43). Assemblies on this page include the tip.

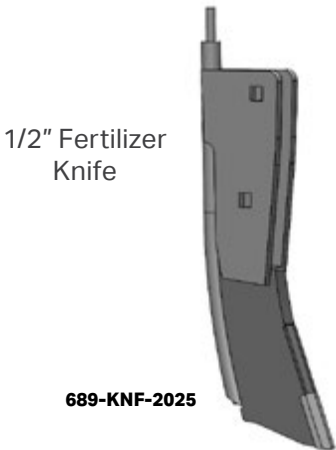
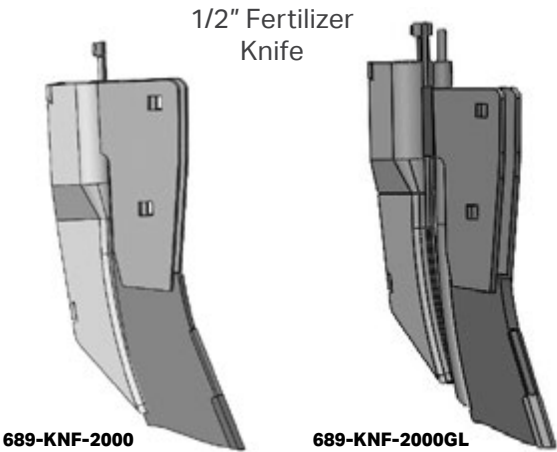
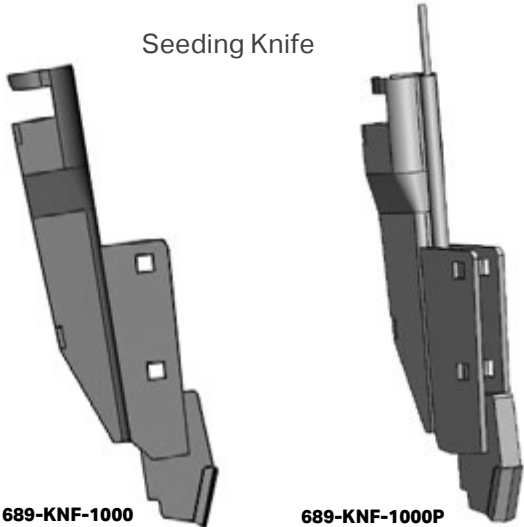
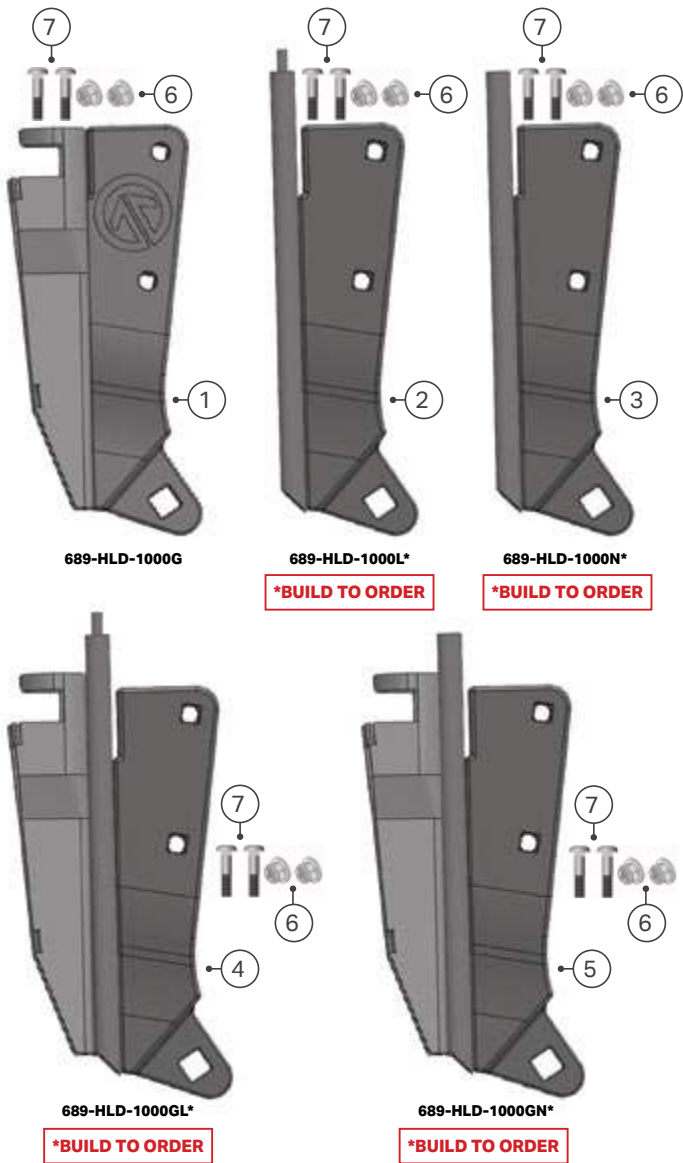


PART		G	G	P	P	G	P
		650-ASY-0711	650-ASY-0712	650-ASY-0711P	650-ASY-0712P	650-ASY-3011	650-ASY-3011P
1	650-HLD-0711	■					
2	650-HLD-0712		■				
3	650-HLD-0711P			■			
4	650-HLD-0712P				■		
5	650-HLD-3000					■	
6	650-HLD-3000P						■
7	612-TIP-0711 (SHOWN)	■		■			
8	612-TIP-0712		■		■		
9	200-TIP-3020					■	■
10	200-BNC-3100	■	■	■	■	■	■

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John Deere P670 & P680/Seed Master

Fertilizer Knives (Page 44 & 52)



PART		G	L	N	G	G	G	L
		689-HLD-1000G	689-HLD-1000L	689-HLD-1000N	689-HLD-1000GL	689-HLD-1000GN*	689-KNF-2000	689-KNF-2000GL
1	689-HLD-1000G	■						
2	689-HLD-1000L		■					
3	689-HLD-1000N			■				
4	689-HLD-1000GL				■			
5	689-HLD-1000GN*					■		
6	907-NPF-3755	■	■	■	■	■	■	■
7	960-CRG-1755	■	■	■	■	■	■	■

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

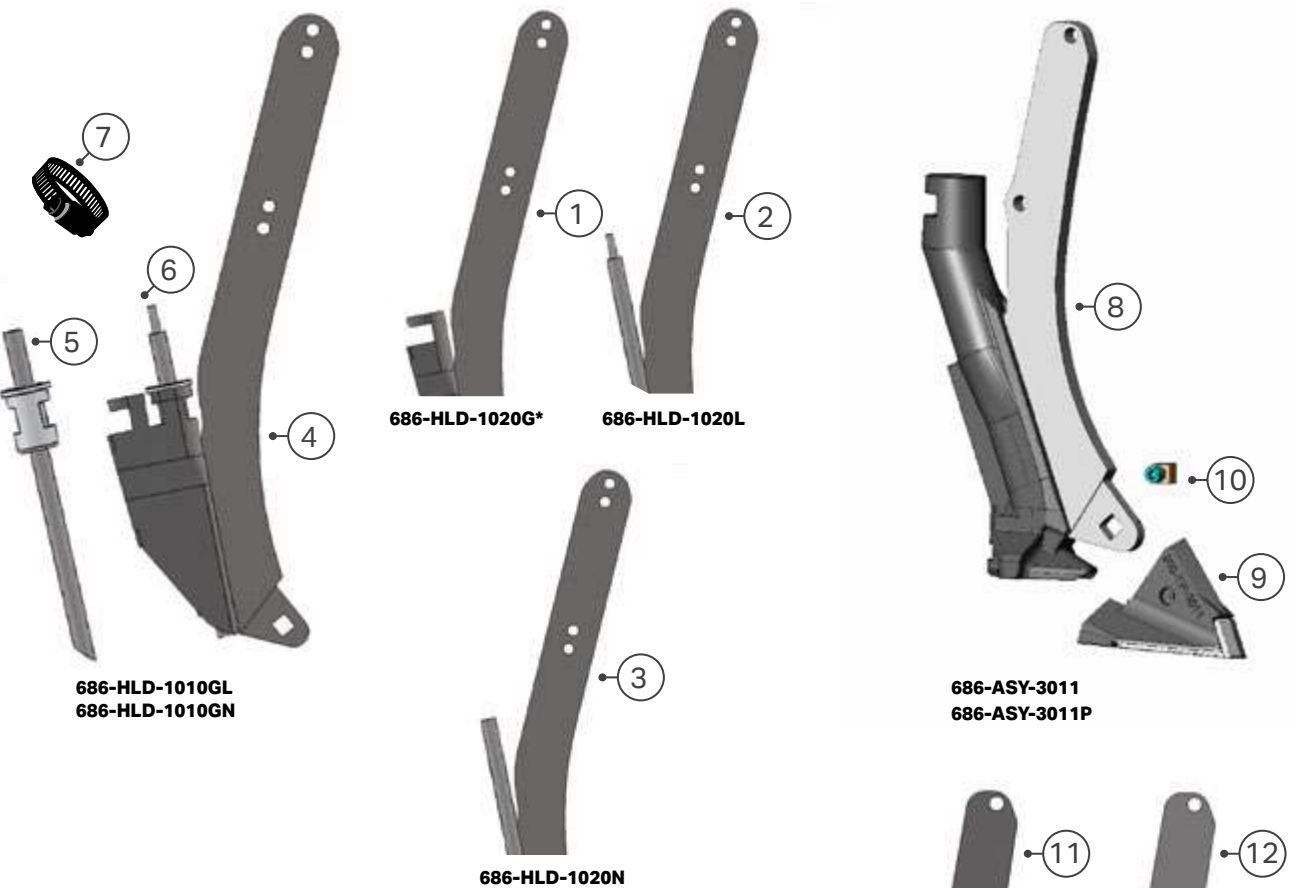
Tips sold separately.

See pages 13-14.

NOTES: If using shields, longer bolts are required, use 3/8" x 2" (960-CRG-2005).

Väderstad Seed Hawk

Fertilizer Knives (Page 54), Seed Openers (Page 55) and Seed Knives (Page 56)



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 13-14.

NOTES: These openers are available with liquid phos options, please call the factory for more details.

***BUILD TO ORDER**

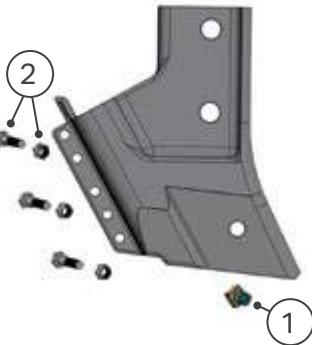
Titan Opener System

Pages 58-59

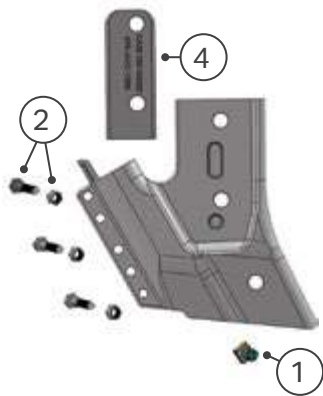
1 CHOOSE YOUR HOLDER



620-HLD-5000
FITS: 47° and 50 ° C-shank



688-HLD-5000
FITS: Horsch 84° Shank, ST and CO
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			■

2 CHOOSE YOUR SEEDSHOE



620-SSH-1000
2-3/4" Paired Row



620-SSH-4000
4" Paired Row



620-SSH-6000
6" Paired Row

Titan Opener System

Pages 58-59

3 CHOOSE YOUR TIP



620-TIP-1510



620-TIP-4060

NOTE: 880-CPL-2500 is required (included).

4 CHOOSE YOUR FERTILIZER

620-TUB-1021*

N

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



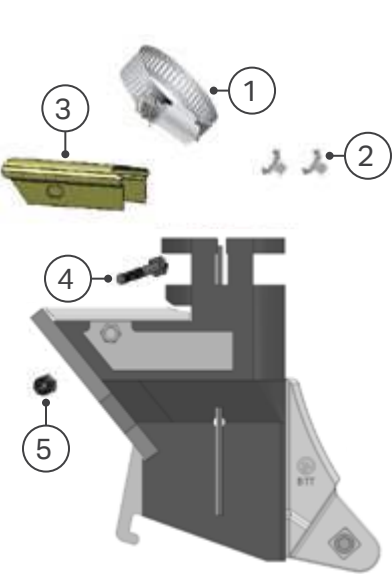
NOTES: The tube assemblies include the tube and any accessories shown.

*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.

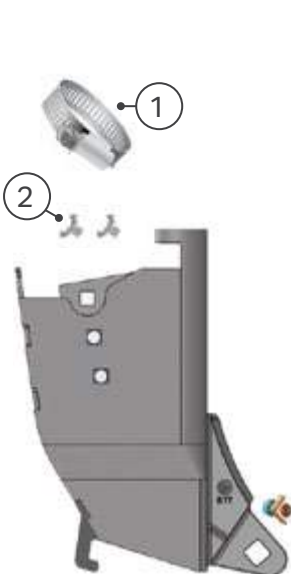
VOS

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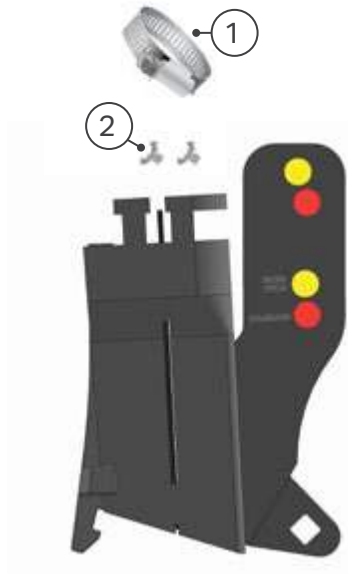
1 CHOOSE YOUR HOLDER



610-HLD-2080HD
FITS: 47° and 50° C-shank

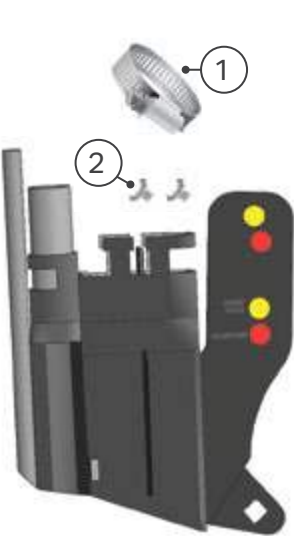


673-HLD-2080
FITS: Edge On, Bourgault PHD and Morris Maxim



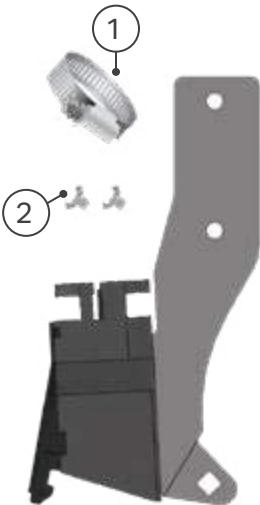
688-HLD-2080
FITS: Horsch 84° Shank, ST and CO
NOTE: When installing openers on Horsch 84° Shanks you have two options shown above.

- STANDARD INSTALLATION
- 4° MORE PITCH

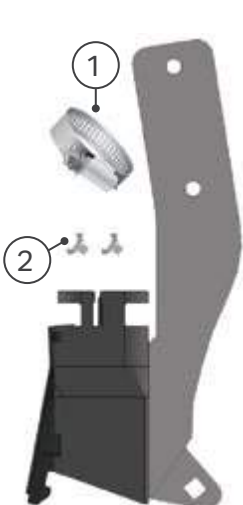


688-HLD-2094
FITS: Horsch 84° Shank, ST and CO
NOTE: When installing openers on Horsch 84° Shanks you have two options shown above.

- STANDARD INSTALLATION
- 4° MORE PITCH



683-HLD-2080
FITS: Morris Contour II and Morris Quantum



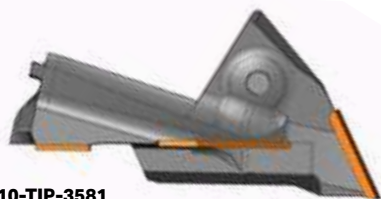
693-HLD-2080
FITS: Morris Contour II and Morris Quantum

PART		610-HLD-2080HD	673-HLD-2080	688-HLD-2080	693-HLD-2080	694-HLD-2080	688-HLD-2094
1	880-HCL-1828	■	■	■	■	■	■
2	880-HCL-0001 (x2)	■	■	■	■	■	■
3	610-CAP-1080	■					
4	942-HRG-2004	■					
5	908-NNI-2504	■					

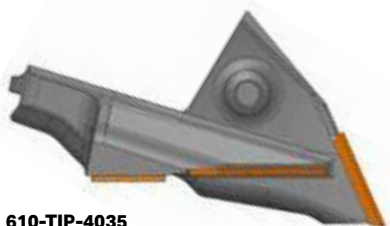
2 CHOOSE YOUR TIP

**610-TIP-0802**

Single Shoot Tip

**610-TIP-3581**

Paired Row Tip

**610-TIP-4035**

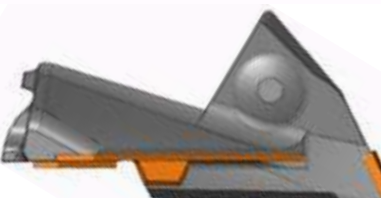
Paired Row Tip

**610-TIP-4081**

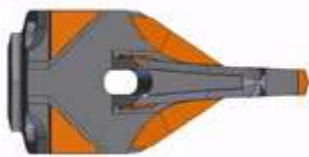
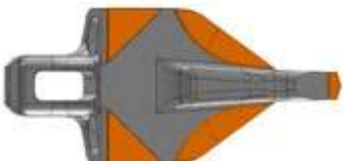
Paired Row Tip

**610-TIP-4082**

Paired Row Tip

**610-TIP-6082**

Paired Row Tip



3 CHOOSE YOUR FERTILIZER

688-TUB-1001

Fits new long version of 688-HLD-2080.

880-TUB-1003

Fits old short version 688-HLD-2080, 683-HLD-2080 and 693-HLD-2080.

880-TUB-1004

Fits 610-HLD-2080HD.

L**LIQUID** 1/4" (6mm) O.D. stainless tube

880-BSH-1000

880-TUB-1009

Fits old short version 688-HLD-2080, 683-HLD-2080 and 693-HLD-2080.

880-TUB-1010

Fits 610-HLD-2080HD.

N**L****LIQUID OR AQUA NH3** 0.40" (10mm) O.D. stainless tube

880-BSH-1000

688-TUB-1025

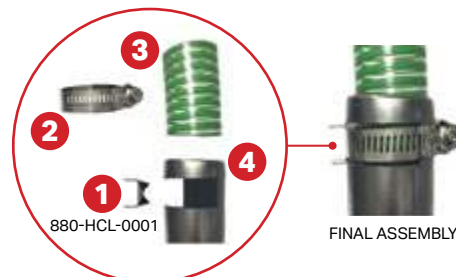
Fits new long version 688-HLD-2080.

N**NH3** 1/2" (12mm) O.D. tube

880-BSH-1000

NOTES: All tubes come with bushings as pictured above.

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