



## HIGHLINE Product Catalogue 2017





## OUR MISSION

Our mission is to design, manufacture and distribute the highest quality, most durable and reliable farm equipment in the world, which is affordable and meets or exceeds the expectations of our most demanding customers.

A handwritten signature in blue ink, appearing to read 'Gerry Bourgault'.

GERRY BOURGAULT, R. Eng.  
President of Highline Manufacturing Ltd.

A handwritten signature in blue ink, appearing to read 'Bob Cochran'.

BOB COCHRAN, R. Eng.  
General Manager of Highline Manufacturing Ltd.

## TABLE of CONTENTS

<b>NEW! CFR 960 BALE PRO*</b>	12-19
<b>CFR 650 BALE PRO*</b>	20-25
<b>CFR 651 BALE PRO*</b>	20-25
<b>CFR TOP GUN* 650 BALE PRO*</b>	26-31
<b>CFR 1251 BALE PRO*</b>	32-37
<b>COMPLETE FEED RATION (CFR)</b>	
<b>MODULAR SYSTEM</b>	38-49
<b>1 / THE BALE PRO*</b>	40-45
<b>2 / THE FEED CHOPPER™</b>	38-49
<b>3 / GRAIN TANK WITH MGI™</b>	48-49
<b>THE HAY (HIGH ANIMAL YIELD) APP.</b>	50-55
<b>BALE MOVER (BM) 605 / 607 / 1400</b>	56-59
<b>THE NT™ ROCK PICKER 44 / 60 / 78</b>	60-65
<b>THE RCH™ HYDRO MOWER 10 / 15</b>	66-73







## PRESIDENT'S MESSAGE

*by Gerry Bourgault, P. Eng.*



Thank you for your interest in Highline's line up of its latest products. We trust that you will identify some equipment that would help you make your operation more efficient and successful. More than ever before, today, maintaining the status quo is a recipe for phasing oneself out of business. Going forward, it will be those operators who find better and more efficient ways of doing things that will be the most productive and ultimately the most successful. Highline's efforts are directed at designing and developing equipment that will support the needs of those forward thinking farmers. If you have any questions or require additional information about any of this equipment, please visit [highlinemfg.com](http://highlinemfg.com), contact your nearest Highline dealer or call us directly at 1-800-665-2010. You can also see Highline products in action on [YouTube.com](http://YouTube.com).

A handwritten signature in white ink, appearing to read "G. Bourgault".

## GENERAL MANAGER'S MESSAGE

*by Bob Cochran, P. Eng.*

The past year has certainly brought its challenges to our farmer customers as prices for both grain and cattle have moderated from previous high levels. At these times it is imperative that any equipment purchases bring value to the operation. All Highline products are designed and built with that overall purpose in mind.

The lineup of CFR bale processors are regarded as the best in the industry. We continue to expand the line, with the recent addition of the CFR 960 model that is capable of processing both large square and round bales. In years where feed supply is uncertain and bales must be purchased, the CFR 960 gives you the option of buying squares, rounds, or both, based on which is most economical for your operation. We have added a joystick control option to the CFR 650 TOP GUN®, allowing for easy processing of more bales with less operator fatigue. Interest in the CFR 1251 model continues to increase as customers are recognizing the economic and nutritional benefits in being able to blend two bale types simultaneously, while adding grain to the ration through the MGI system. Highline continues to exhibit their leadership in the industry by becoming the first bale processing manufacturer to add a full time Nutritionist, John Maltman, to our team. John has been interacting directly with our customers and providing feedback to our design team to ensure that our machines are meeting the needs of the customer and their cattle herd.

Our other product lines, including the NT rock pickers, the BM bale movers and the RCH mowers, have all seen design improvements and feature enhancements for 2017. I encourage you to contact your nearest Highline Dealer or visit our website at [www.highlinemfg.com](http://www.highlinemfg.com) to learn more about this equipment and what it can do for you!



*Bob Cochran*



## **Designed with Purpose.**

When designing equipment, many things have to be considered. Is the equipment durable enough to withstand the environment it has to perform in? Is the equipment efficiently designed using the fewest moving parts necessary in order to minimize maintenance? Ultimately, are the needs of our customers being met resulting in them realizing maximized earning potential?

**livestock sector**

**JOHN MALTMAN, MSc**  
*Animal Nutritionist*



When designing any machine, a full understanding of your purpose is required. In order to gain a firm understanding of livestock nutritional requirements, Highline hired animal nutritionist—John Maltman.

John joined the Highline team in the spring of 2016 bringing with him over forty years of industry experience. John has spent most of his career with the Manitoba Government in a range of livestock specialist roles. In 2006, John traveled to the Ukraine where he spent a couple of years developing hog production in that country.

He returned to Manitoba in 2008 where he has been working as an independent consultant in the livestock industry.

Throughout his career, John's focus has been on understanding the needs of the livestock producer and working together with them to implement new technologies that ultimately improve their operations and increase their bottom line.

Moving forward, John's input will have a huge impact on how Highline designs their livestock based equipment.



BALE PRO®

# 5 Bale Pro® Models



**NEW!**

**CFR 960 Bale Pro®**

**PAGE 12**



**CFR 650 Bale Pro®**

**PAGE 20**



The Bale Pro® series, from Highline, allows you to efficiently and easily unroll and process round bales. With 5 options to choose from, there's one that is the best fit for your cattle operation. The CFR (Complete Feed Ration) modular system allows you to expand your Bale Pro® as your operation evolves.



**CFR 651 Bale Pro**  
PAGE 20



**CFR 650 TOP GUN**  
PAGE 26



**CFR 1251 Bale Pro**  
PAGE 32



BALE PRO  
PROCESSING DESIGN

## The **Dual Feed Roller Processing Chamber**

Available on the **CFR 650 Bale Pro**<sup>®</sup>, **CFR 650 TOP GUN Bale Pro**<sup>®</sup>, **CFR 960 Bale Pro**<sup>®</sup>

Highline Bale Pros are available in 2 different designs; choose from either a Dual Feed Roller Processing Chamber or the Slat and Chain Processing Chamber.

### DESIGN 1

#### The **Dual Feed Roller Processing Chamber**

The mechanically-driven flail drum is directly driven by the PTO shaft.

Large  
Diameter  
Flail  
Drum



#### ① Guard Rods

The bale sits partially on the guard rods. The flails protrude through the guard rods grabbing the bale and pulling it through. The guard rods are shaped to provide a very uniform process.

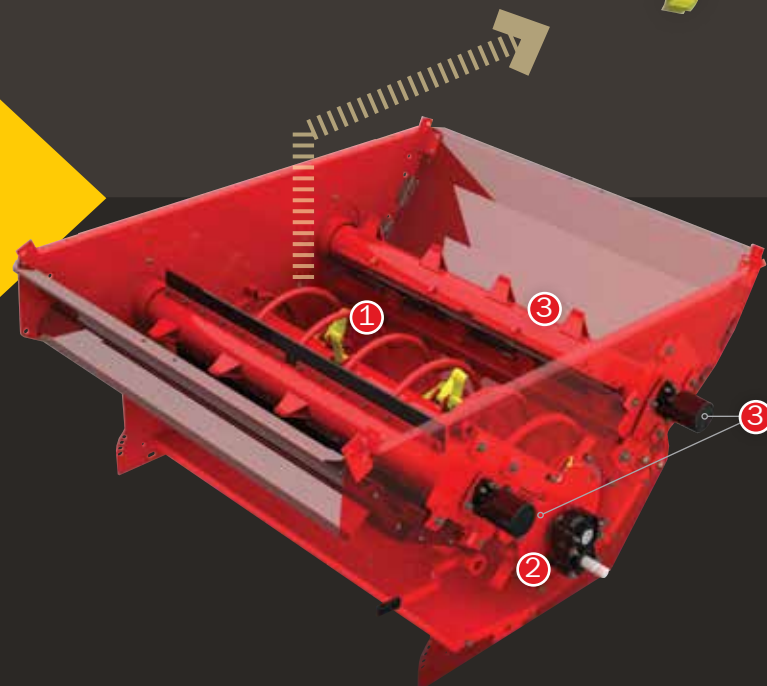
Additional guard rods can easily be added for processing of finer hay bales.

#### ② Adjust Aggression Levels

Bales can be processed more or less aggressively depending on your needs. Processing can be set in a range of 1-5, with 1 being the slowest and 5 being the fastest processing speed. Flails engage the bale from  $\frac{3}{4}$ " up to 2" for faster processing.

#### ③ Feed Rollers

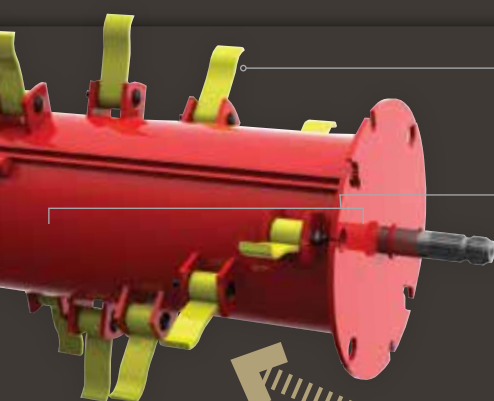
Highline feed rollers are designed with both wipers and teeth. This design cleans and pulls the feed through creating consistent processing while reducing wadding. The dual feed rollers allow the flail drum to be centrally located in the chamber providing greater material discharge distance.





# The Slat & Chain Processing Chamber

Available on the **CFR 651 Bale Pro®** & **CFR 1251 Bale Pro®**

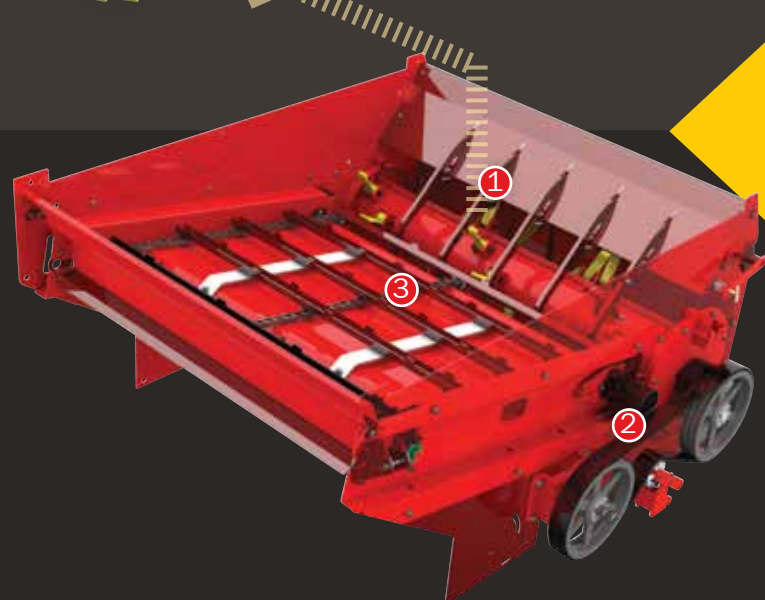


- The Highline flails efficiently lift and “bite” into the bale for uniform feed processing. The flails are optimally sized to grab the bale. (Many competitors' bale processors are designed with longer flails. The longer flail, when it encounters ice or other debris, will quite often crack when it rebounds onto the drum.)
- The flails are designed in a spiral formation. This spiral formation ensures that the bale is continuously pulled and processed resulting in consistent feed. Also, the flail drum is digitally balanced for smooth performance.

## DESIGN 2

### The Slat & Chain Processing Chamber

A belt-driven flail processor.



#### ① Guard Rods

Guard rods are designed for uniform processing from beginning to end.

#### ② Adjust Aggression Levels

Bales can be processed more or less aggressively depending on your needs. Processing can be set in a range of 1-5, with 1 being the slowest and 5 being the fastest processing speed. Flails engage the bale from  $\frac{3}{4}$ " up to 2" for faster processing.

#### ③ Slat & Chain Feeder

Highline Slat & Chain Feeder is designed with aggressive teeth utilizing durable 2080 chain with no central bearing on the feeder chain.





**REAL FLEXIBILITY**  
PROCESS SQUARE OR ROUND BALES.  
(simply, with the turn of a dial)



**uickshift™**  
ROUND/SQUARE TRANSITION SYSTEM

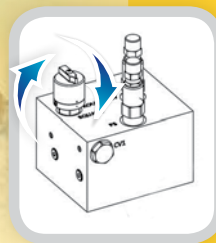




## EFFICIENTLY PROCESS

### Round or Square Bales.

Ideal for feeding and bedding - the CFR 960 Bale Pro® offers all of the proven design features found on the Highline Bale Pro® series but with the added flexibility to quickly shift between round or square bales as desired...as well as other beneficial design features that improve feed quality and consistency.



The unique engineering of the CFR 960 Bale Pro® allows you to efficiently process square or round bales - the choice is up to you! This is useful when you have multiple feed suppliers using different bale types.



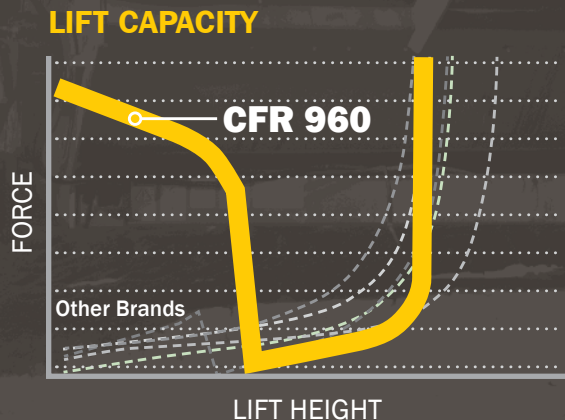
## MAXIMIZE YOUR LOADING EFFICIENCY.

When it comes to loading efficiency, bale orientation matters.

**Loading Efficiency (for Square Bales):** Lining up a bale for loading can be a challenging task. It stands to reason that the larger the visible target area, the easier it is to align and load. This is why the CFR 960 Bale Pro® was designed to align with the bale length as opposed to its width making loading faster and easier.

Efficiency is further enhanced with the CleanCut™ Twine Release system that quickly cuts through bale twine prior to processing. The loose bale uniformly and efficiently processes.

LARGE SQUARE BALE LOADED LENGTHWISE



## EXTREME LIFTING POWER.

While some may call the power behind the Highline Vertical Bale Lift design excessive, we call it extremely smart. With by far the highest breakout force in the industry, the Highline Vertical Lift design allows you to release even the most stubbornly frozen bales from the ground with ease. Also, because the bale is lifted straight up off of the ground, the scrubbing action against the bale stack is minimized, reducing bale damage and waste.

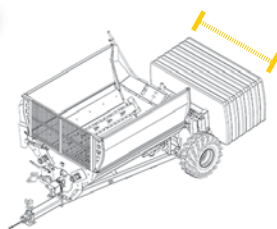


## EFFICIENT PROCESSING OF SQUARE BALES.



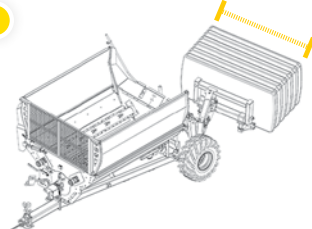
One of the challenges of processing square bales is maintaining both a high loading AND high processing efficiency (the competition fails to deliver on either one OR the other). This is because whenever the orientation of the bale isn't optimally placed for either loading (large face aligned with tractor) or processing (length aligned with flail drum), efficiency is compromised. For optimal processing, the Highline Design Team addressed this issue by developing a system that turns the square bale so that it rests lengthwise in the tub (in alignment with the flail drum).

1



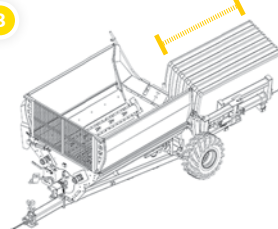
The bale is orientated so that the length (the larger visible area) is the target for alignment when loading making loading easier than aligning with the width.

2



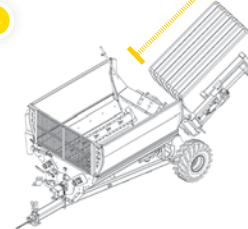
The bale is turned in mid-air to align with the flail drum.

3



The bale is aligned with the flail drum for efficient processing.

4



The bale is lifted, the twine is sliced and the bale is dropped loosely into the tub (the loose consistency helps with uniform processing).

Competitors' bale processors, where the bale is orientated widthwise on the flail drum, can take upwards of 3 minutes to process. In comparison, the CFR 960 Bale Pro® consistently processes a 4' x 4' x 8'6" bale in around 1 minute! The CleanCut™ twine release on the CFR 960 helps with this efficiency.\*

*\*Bale processing times are contingent on bale type, aggression setting and horse power.*





Although difficult to see, the hooked fork has slid between the bale and the twine.





The CleanCut™ blade slices through the twine allowing the bale to fall loosely into the tub allowing for uniform processing.

## EASILY SLICE THROUGH TWINE WITH THE CLEANCUT™ TWINE RELEASE SYSTEM (for square bales)

Unique to the CFR 960 Bale Pro® is the CleanCut™ Twine Release System. The CleanCut™ Twine Release System uses the weight of the square bale to effectively slice the twine prior to processing.

**HOW IT WORKS:** The hooked fork design stabs into the square bale slipping between the twine and the bale. As the bale is released into the tub, the sharp edge of the CleanCut™ Twine Release System slices through the twine releasing the bale. The unleashed bale is now loose in the tub. This loose consistency is well suited for uniform processing. While the bale processes, the twine wraps around the flail in long continuous pieces helping to eliminate small twine pieces mixing with the feed.



The CFR 960 Bale Pro® has a dual feed roller processing chamber with a centrally driven flail drum processor. Expand your 960 to a CFR by adding a Feed Chopper™ and Grain Tank with MGI™ system.

#### **Curved Tip Design**

Highline forks are curved to help “grab” the bale.

#### **Axle Twine Guard**

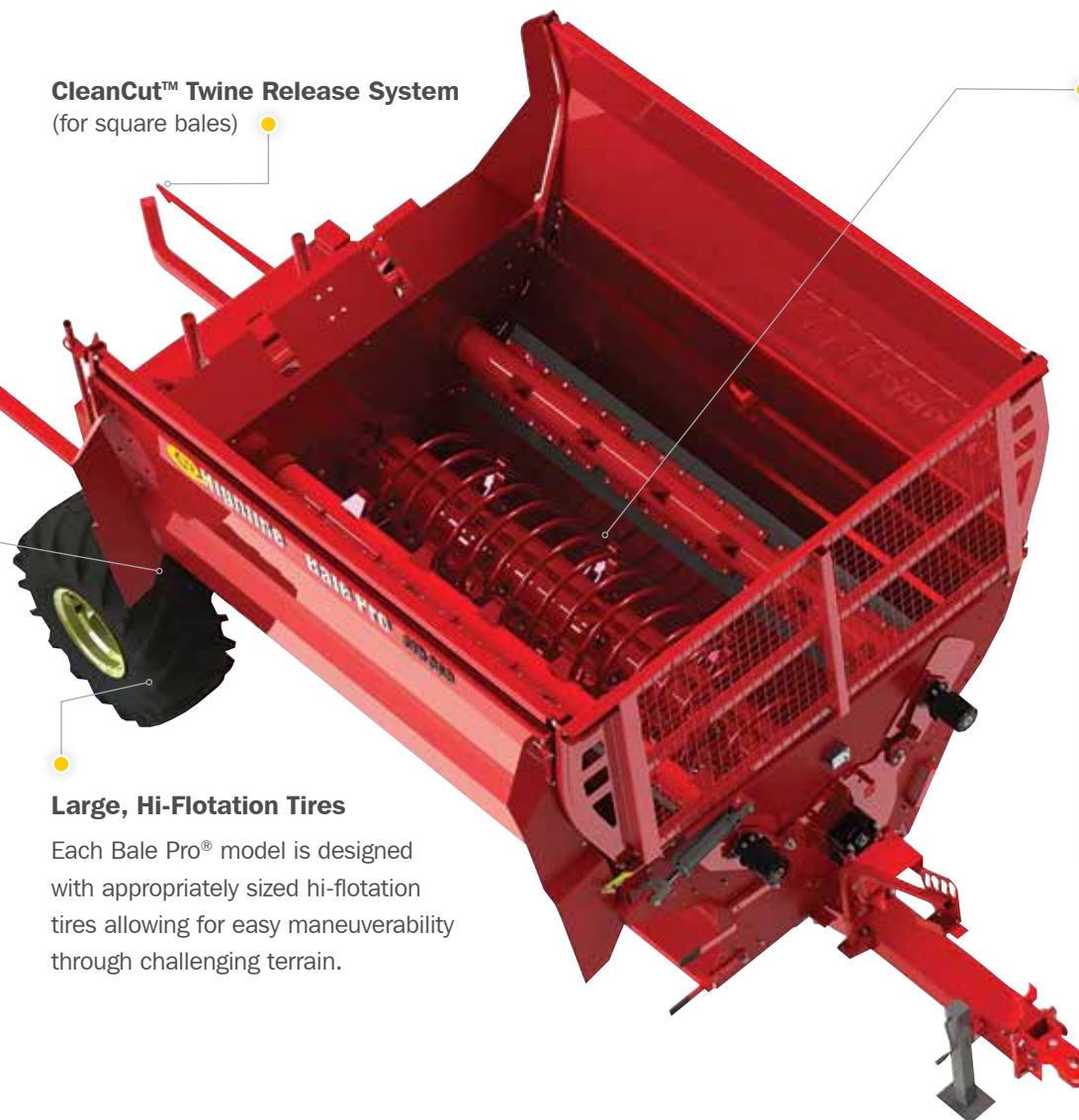
the Axle Twine Guard eliminates the nuisance of twine getting tightly wrapped around the wheel axle.



#### **Low Profile Fork Design**

The low profile fork design allows you to easily get under square bales for loading

#### **CleanCut™ Twine Release System** (for square bales)



#### **Large, Hi-Flotation Tires**

Each Bale Pro® model is designed with appropriately sized hi-flotation tires allowing for easy maneuverability through challenging terrain.

#### **Central Flail Drum**

The tempered spring steel flails are balanced for smooth, long lasting operation, and are evenly spaced to provide even material output.



#### **Adjustable Forks** (Standard)

Accommodate a range of bale sizes and shapes with the Highline adjustable forks.

# Bale Pro® **CFR 960**

## SPECIFICATIONS

	<b>CFR 960</b>	<b>CFR 960 with Feed Chopper™</b>	<b>CFR 960 with MGI™</b>	<b>CFR 960 with Feed Chopper™ &amp; MGI™</b>
PTO Minimum Recommended	100 HP / 75 kW	125 HP / 94 kW	100 HP / 75 kW	125 HP / 94 kW
PTO Recommended	115 HP / 86 kW	140 HP / 105 kW	125 HP / 94 kW	140 HP / 105 kW
Transport Width	107 3/4" / 2736.9 mm	108" / 2743.2 mm	131 1/4" / 3333.8 mm	131 1/4" / 3333.8 mm
Transport Height	136" / 3454.4 mm	136" / 3454.4 mm	136" / 3454.4 mm	136" / 3454.4 mm
Working Transport Height	164" / 4165.6 mm	164" / 4165.6 mm	164" / 4165.6 mm	164" / 4165.6 mm
Length to End of Tires	204" / 5181.6 mm	204" / 5181.6 mm	204" / 5181.6 mm	204" / 5181.6 mm
Length to End of Forks Down	263 1/2" / 6692.9 mm	263 1/2" / 6692.9 mm	263 1/2" / 6692.9 mm	263 1/2" / 6692.9 mm
Discharge	Right Hand	Right Hand	Right Hand	Right Hand
Hydraulics	3 Remote	3 Remote	3 Remote	3 Remote
Driveline	Cat 4 1000 PTO - 1 3/8" 21 Spline	Cat 6 1000 PTO - 1 3/8" 21 Spline	Cat 4 1000 PTO - 1 3/8" 21 Spline	Cat 6 1000 PTO - 1 3/8" 21 Spline
Weight	6200 lb / 2790 kg	7450 lb / 3352.5 kg	7620 lb / 3429 kg	8870 lb / 3991.5 kg
Tongue Weight (Unloaded)	1610 lb / 724.5 kg	1930 lb / 868.5 kg	1930 lb / 868.5 kg	2190 lb / 985.5 kg
Tires	16.5L x 16.1	16.5L x 16.1	16.5L x 16.1	16.5L x 16.1
Maximum Size of Bale	Round	6' / 1.8 m	6' / 1.8 m	6' / 1.8 m
	Square	4' x 4' x 9' / 1.2 x 1.2 x 2.7 m	4' x 4' x 9' / 1.2 x 1.2 x 2.7 m	4' x 4' x 9' / 1.2 x 1.2 x 2.7 m
Safety Chain	Standard	Standard	Standard	Standard
Top Deflector & Rear Deflector	Standard	Standard	Standard	Standard
Metered Grain Tank Capacity	-	-	30 bu / 1058.1 L	30 bu / 1058.1 L
2 Hydraulic Remote	Option	Option	Option	Option

While every effort has been made to ensure that the information is accurate/current at the time of production, all specifications are subject to change. For the latest product information, please visit: [www.highlinemfg.com](http://www.highlinemfg.com).







# CFR 650/651

Bale Pro



## TWO GREAT PROCESSING OPTIONS

Process Your Way.

### CFR 650 Bale Pro®

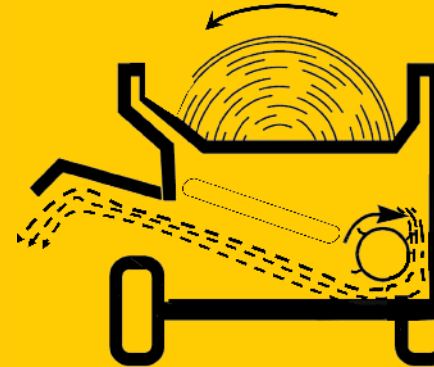
The 650 Bale Pro® is a great option for cattle operations looking for a durable, well-engineered bale processor. The 650 Bale Pro® has a dual feed roller processing chamber with a centrally driven flail drum processor. Expand your 650 to a CFR by adding a Feed Chopper™ and Grain Tank with MGI™ (See page 38 for additional information on the CFR modular system).



The dual feed roller allows for full operator control of bale feeding. See page 10 for further information on the dual feed roller processing chamber.

### CFR 651 Bale Pro®

The 651 Bale Pro® is also a great option for cattle operations looking for a durable, well-engineered bale processor. Unlike the 650 Bale Pro®, the 651 Bale Pro® has a slat and chain processing chamber with an offset flail drum. Expand your 651 to a CFR by adding a Feed Chopper™ and Grain Tank with MGI™ (See page 38 for additional information on the CFR modular system).



The chain & slat also allows for full operator control of bale feeding. See page 11 for further information on the chain & slat feed processing chamber.



# CFR 651

TESTIMONIAL

Name:	Benson Keil and Ken Keil - K & K Farms
Location:	Concordia, KS
Herd Size:	400 cows and 600 head back grounding lot
Type of Operation:	Cow calf and back grounding/finishing lot
Crop Processed	Alfalfa, grass hay and straw bedding
Reason for Purchasing Highline	We needed a machine that would shred big bales for bedding and feeding cows and would process bales fine enough to run through a mixer wagon for a TMR for the feedlot cattle.

The CFR 651 allows us to process our alfalfa bales so we do not need a tub grinder to use in our mixer wagon. This enables us to keep a fresh supply of hay weekly instead of having a custom hay grinder grind a large supply of hay that would spoil.

We still have the ability to shred straw for bedding when needed, getting more use out of the machine. Our machine is equipped with a scale so we can get the exact amount of hay to our cows. Shredding the hay for our cows enables all cows to access the hay equally while blowing mold out. The Highline CFR 651 is much more user-friendly to remove net wrap from the rotor than other brands of shredders we have used.

We have owned another brand of shredder, but their feed chopper was not fine enough for our mixer wagon. We tried another brand of shredder with a final cut attachment, but it did not feed in properly and tended to break shear pins. We have the hydraulic adjustable slug bars which allow us to use the shredder on a smaller tractor (115 pto horsepower).

**Name:** Matthew Simpson  
**Location:** Fort Scott, Kansas  
**Herd Size:** 225 Head Cow/Calf Pairs

**Type of Operation**

5<sup>th</sup> generation family farm consisting of row crops, hay, and cattle. We bale 5500-6000 round bales annually, the majority on a custom basis, selling 1500-2000 bales annually. Row crops consist of 1250 acres of corn, soybeans, wheat, oats, and annual forages. We do custom care for cattle owners on a contract basis across 1650 owned and leased acres. Currently the operation is caring for 225 head of cows but looking for additional cows to arrive late spring to early summer.

The processor is used to ration hay and grain to all the cattle and calves. We always have hay, sometimes some of the hay quality is a little lacking and therefore unmarketable to our hay buyers. The processor allows us to maintain great quality marketable hay by processing some of the lower quality hay into a very palatable ration. We also use it as a manure management tool by being able to feed across the entire pasture over the course of the feeding season, instead of hauling it out to the pasture in the spring. An additional use is incorporating straw or fodder into the gumbo spots in some of our row crop fields that we feed on during fallow times which aids in soil fertility. We process all manner of hay types including fescue, brome, bluestem, alfalfa, wheat straw, oat straw, corn stalks, sorghum sudangrass and silage bales. We looked at several models but the major selling point of the Highline was the Grain Insertion System™ with the Feed Chopper™ option. Being able to incorporate the grain into the windrowed ration saves time and wear on the equipment as well as the operator. The Highline product is very well built and made to last. Dealer service was also a major reason for the purchase. I have saved both time and money. By using the Highline I have been able to save a great deal of hay by processing it into a ration that the cows will eat, not trample into the ground. We save labor by being able to feed hay and grain in one pass and by using commodities we produce here on the farm we don't have to spend money on extra feedstuffs. **This is my first bale processor but it will not be my last Highline!**

# CFR 650

## TESTIMONIAL





Bale Pro®

# CFR 650

## SPECIFICATIONS

### CFR 650

### PTO Minimum

### PTO Recommended

### Transport Width

### Weight

### Max Height (Bale Forks Raised)

Base 650 Bale Pro®	85 (63 kw)	100 (75 kw)	101 $\frac{5}{8}$ " (2581 mm)	4380 lb (1987 kg)	154 $\frac{1}{2}$ " (3924 mm)
650 BP with Feed Chopper™	125 (93 kw)	140 (104 kw)	107 $\frac{7}{8}$ " (2740 mm)	5180 lb (2350 kg)	154 $\frac{1}{2}$ " (3924 mm)
650 BP with MGI™*	100 (75 kw)	125 (93 kw)	124 $\frac{1}{8}$ " (3153 mm)	5090 lb (2309 kg)	154 $\frac{1}{2}$ " (3924 mm)
650 BP with Feed Chopper™ & MGI™*	125 (93 kw)	140 (104 kw)	131 $\frac{1}{4}$ " (3334 mm)	5890 lb (2672 kg)	154 $\frac{1}{2}$ " (3924 mm)

\* Grain Tank capacity - 30 bushels (1057 L)

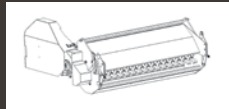
<b>Hydraulics</b>	3 Remotes
<b>Driveline</b>	1000 PTO – 1 $\frac{3}{8}$ " 21 Spline with Shear Bolt Protection
<b>Tires</b>	16.5L X 16.1
<b>Size of Bales</b>	Up to 6 foot (1.8 m) diameter
<b>Transport Lights</b>	Standard
<b>Safety Chain</b>	Standard

### CFR 650 Bale Pro® Options



#### ELECTRIC OVER HYDRAULIC KIT

Kit to convert a 650 processor with 3 pairs of hydraulics to 2 pairs of hydraulics and an in-cab electric control (FIOCFR650EH).



#### FEED CHOPPER

650 bale processor feed chopper kit (FIOCFR650FC).



#### GRAIN TANK WITH MGI™

650 bale processor grain tank with metered grain insertion system kit (FIOCFR650GT).



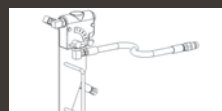
#### HYDRAULIC AGGRESSION CONTROL KIT

650 bale processor in-cab flail drum aggression adjustment (FIOCFR650HAC).



#### 12 GUARD ROD KIT

6 extra guard rods to help ensure consistent feed of material into the flail drum when using short hay (FIOCFR650AGRK).



#### FLOW CONTROL VALVE

Chain speed control mounted on bale processor with two pairs of hydraulics (for tractor remotes w/o flow control) (FIOCFR650-2RH).



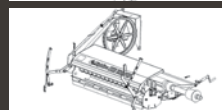
#### FLOW CONTROL VALVE

Chain speed control mounted on bale processor with three pairs of hydraulics (for tractor remotes w/o flow control) (FIOCFR650-3RH).



#### ELECTRIC OVER HYDRAULIC KIT

Kit to convert a 651 processor with 3 pairs of hydraulics to 2 pairs of hydraulics and an in-cab electric control (FIOCFR651EH).



#### FEED CHOPPER™

651 bale processor feed chopper kit (FIOCFR651FC).

### CFR 651 Bale Pro® Options



Bale Pro®

# CFR 651



## SPECIFICATIONS

CFR 651	PTO Minimum	PTO Recommended	Transport Width	Weight	Max Height (Bale Forks Raised)	<div> <b>Hydraulics</b> 3 Remotes </div> <div> <b>Driveline</b> 1000 PTO – 1 3/8" 21 Spline with Shear Bolt Protection </div> <div> <b>Tires</b> 16.5L X 16.1 (Standard) </div> <div> <b>Size of Bales</b> Up to 6 foot (1.8 m) diameter </div> <div> <b>Transport Lights</b> Standard </div> <div> <b>Safety Chain</b> Standard </div>
Base 651 Bale Pro®	85 (63 kw)	100 (75 kw)	101 5/8" (2581 mm)	5380 lb (2440 kg)	154 1/2" (3924 mm)	
651 BP with Feed Chopper™	125 (93 kw)	140 (104 kw)	112 1/2" (2857 mm)	6025 lb (2733 kg)	154 1/2" (3924 mm)	
651 BP with MGI™**	100 (75 kw)	125 (93 kw)	137 5/8" (3495 mm)	6065 lb (2751 kg)	154 1/2" (3924 mm)	
651 BP with Feed Chopper™ & MGI™**	125 (93 kw)	140 (104 kw)	137 5/8" (3495 mm)	6710 lb (3044 kg)	154 1/2" (3924 mm)	

\* Grain Tank capacity - 30 bushels (1057 L)



### GRAIN TANK WITH MGI™

651 bale processor grain tank with metered grain insertion system kit (FIOCFR651GT).



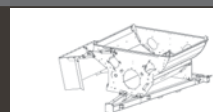
### HYDRAULIC AGGRESSION CONTROL KIT

651 bale processor in-cab flail drum aggression adjustment (FIOCFR651HAC).

## CFR 650 & CFR 651 Bale Pro® Options (options common to both models)

### END CURTAIN

Rubber belting added to ends of deflector door to help contain material flow (FIOBPEC). Standard on Feed Chopper™ & MGI™ models



### REAR FACING WORK LIGHTS

Additional lighting for night operation, with added illumination of processing chamber and behind unit (FIOCFRRFL).



### WEIGH SCALE KIT

3 point (1 hitch tongue, 2 axles) weigh system with in-cab display (FIOCFRWSK).









## DELIVERING

effective coverage solutions.

The Highline TOP GUN® is a rugged, highly effective implement for industrial and agricultural covering, as well as feeding and bedding applications. It provides uniform coverage as it throws material up to 100 feet\*, or feeds by gently dropping a windrow from its side discharge.

*\* contingent on material and wind velocity*

### TESTIMONIAL



**The Operator:** James Bielfeldt

**Type of Operation:** Feedlot

**Farm Location:** Arion, Iowa

**Crop Processed:** Brome Hay, Alfalfa, Corn Stalks

**History with Highline:** Owned 2 TOP GUN's

**The Pros:** I like the quality of cut and that I can throw where I want to; I'm able to blow 60 to 100 feet. Also, it is a one man operation; I can operate the TOP GUN® by myself, using way less hay than other operations with fewer cattle. I also like the service from my dealer, Phil Stracke (with Thomson-Stracke Implement).





## DESIGN that out performs.

The unique, simple design and durable construction gives you what you have come to expect in a Highline product - dependable, easy operation with minimal maintenance and a long life.

# Bale Pro® **CFR 650 TOP GUN®**

## ① Central Flail Drum

Built on the 650 Bale Pro® design, the TOP GUN® also incorporates the central flail drum. The tempered spring steel flails are balanced for smooth, long lasting operation, and are evenly spaced to provide even material output (See page 10 for further details).

## ● Joy Stick Control (optional)

The joystick control option is an easy to use single remote control for all functions including bale load, bale rotation and discharge spout control both horizontally and vertically. This option results in less operator fatigue with very little effort to perform all hydraulic functions of the machine.



## ② The Far Reach Advantage



Easily and accurately position the discharge spout from the tractor cab for accurate placement of feed or bedding. With a wide range of motion (spout rotates 106 degrees left and 125 degrees right, as well as 25 degrees up and down), the discharge spout (84" long, 11' high nozzle) can be directed to throw material up to 100'\*.

*NOTE: Right/Left hand is determined by sitting in the tractor seat looking forward.*

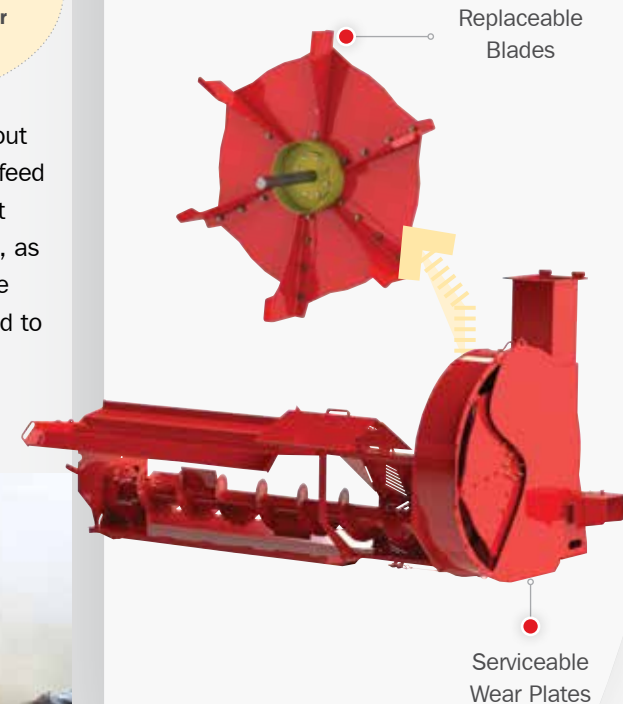


Gently drop a windrow from its side discharge. (The discharge door is now optional.)

\* contingent on material and wind velocity

## ③ Massive, Durable Fan

Massive and durable 51" diameter fan provides consistent material throw. (Replaceable blades and serviceable wear plates are available.)





## Feed and Bed the Smart Way Never Open a Gate Again.

How many times has an open gate ended with chasing cattle back into the pen? Frustration, lost time and potentially dangerous situations are all something that producers want to avoid, and now can with the Highline TOP GUN®. With the 11' high nozzle, the TOP GUN® can easily reach over the top of bunks and fences to blow straw into pens to bed cattle or use the optional hydraulic discharge door to feed into bunks.

The TOP GUN® makes feeding and bedding a quick and comfortable process for both the cattle and yourself.

## Other Commercial and Industrial Applications



The TOP GUN® is a valuable tool for a variety of applications such as: odor control for manure storage areas and landfills, temporary erosion control for sloped areas

like newly seeded highway ditches, as well as soil remediation after forest fires and land reclamation in the oil and gas and mining industries. With the ability to shred and blow straw from large round bales, the TOP GUN® has far greater capacity than many of the commercial straw blowers on the market today.

*(The CFR 650 and CFR 651 can also be used for industrial applications.)*





# Bale Pro® **CFR 650 TOP GUN®**

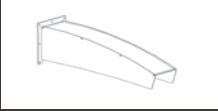

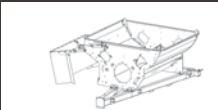





## SPECIFICATIONS

PTO Minimum	125 (93 kw)
PTO Recommended HP	160 (104 kw)
Discharge	Left / Center / Right
Transport Width	104½" (2654 mm)
Weight	7130 lb (3234 kg)
Transport Height	131¼" (3334 mm)

Hydraulics	3 Remotes
Driveline	Cat 6 1000 PTO - 1 ⅜" 21 Spline
Tires	16.5L x 16.1
Size of Bales	Up to 6' (1.8 m)
Safety Chain	Standard

NOTE: Right/Left hand is determined by sitting in the tractor seat looking forward.

## CFR 650 TOP GUN® Bale Pro® Options

	<b>TOP GUN CURVED DISCHARGE CHUTE</b>	Alternate discharge chute for 650 TOP GUN® Bale Pro®. Chute is shorter and open bottom for use inside buildings (FIOCFR650TGDC).	<b>REAR FACING WORK LIGHTS</b>	Additional lighting for night operation, with added illumination of processing chamber and behind unit (FIOCFRRFL).	
	<b>END CURTAIN</b>	Rubber belting added to ends of deflector door to help contain material flow (FIOBPEC).	<b>WEIGH SCALE KIT</b>	3 point (1 hitch tongue, 2 axles) weigh system with in-cab display (FIOCFRWSK).	
	<b>GRAIN TANK WITH MGI™</b>	650 bale processor grain tank with metered grain insertion system kit (FIOCFR650GT).	<b>JOYSTICK</b>	In-cab joystick control of all hydraulic functions. Note: Factory installed option only for 2017 model year.	
	<b>HYDRAULIC DEFLECTOR DOOR</b>	Hydraulically actuated side deflector for windrow feeding, for joystick equipped units (FIOCFR650TGDD1R).	<p>While every effort has been made to ensure that the information is accurate/current at the time of production, all specifications are subject to change.</p> <p>For the latest product information, please visit: <a href="http://www.highlinemfg.com">www.highlinemfg.com</a>.</p>		
	<b>HYDRAULIC DEFLECTOR DOOR</b>	Hydraulically actuated side deflector for windrow feeding, for 3 remote equipped units (FIOCFR650TGDD3R).			







# CFR 1251

Bale Pro



## Effectively Mix Feed Grades

with the CFR 1251 Bale Pro®.

Highline is pleased to introduce the CFR 1251 Bale Pro®. When good bales are scarce or efficiency is critical, the CFR 1251 provides the flexibility to blend two bales into a healthy ration.

When mixing bales, the ability to meter in grain, chop hay and bed down cattle with a single machine is still part of the fundamentals of a Highline Bale Pro®.

The CFR 1251 Bale Pro®, a convenient operation - one operator, one machine and one tractor while eliminating the need for pre-processing.





## THE CFR 1251 BALE PRO The TMR that is not a TMR.

The 1251 is a dual-chamber bale processor which offers many of the same benefits as a TMR Mixer. The 1251 provides the flexibility to process two bales at once, blending different types of forage into a healthy ration. With winter feed costs accounting for as much as 50% of total production costs, managing this variable can make or break the profitability of a cow calf operation. The ability to utilize lower quality forage, along with high quality forage maximizes the efficiency of a winter feeding program and is critical

in extending feed supplies on years when good hay is in short supply. When equipped with the optional Grain Tank with MGI™ and Feed Chopper™, the CFR 1251 really is an all-purpose machine that rivals a TMR in producing a mixed forage / grain ration. And, it does this with less operational costs and lower capital investment. The 1251 is also an excellent machine for bedding and that's something a TMR can't do. In many cattle operations, the CFR 1251 may be a wiser investment than a TMR mixer.

### CFR 1251 Complete Feed Ration

The CFR 1251 maximizes your blended input ability; mixing the perfect balance of bales of varying quality with metered whole grain product; the result is optimized feed at a lower purchase point. Below are examples of how the CFR 1251 can positively affect your bottom line.

# Head	Hay 100%	Hay 50%	Straw 50%	Hay/Straw Blended Cost	Annual Savings
200	\$30,000.00	\$15,000.00	\$6,750.00	\$21,750.00	<b>\$8,250.00</b>
300	\$45,000.00	\$22,500.00	\$10,125.00	\$32,625.00	<b>\$12,375.00</b>
400	\$60,000.00	\$30,000.00	\$13,500.00	\$43,500.00	<b>\$16,500.00</b>
500	\$75,000.00	\$37,500.00	\$16,875.00	\$54,375.00	<b>\$20,625.00</b>

#### Assumptions:

Feed	Hay	Straw
Weight (lb)	1800	1200
Cost (c / lb)	\$0.028	\$0.013
Cost (\$ / bale)	50	15
Feed lb/day	30	
Feeding Days	180	



Retractable front bale loading conveyor allows the bale to gently shift to the front.



Serviceable  
Wear Plates

Hydraulically Controlled  
Discharge Door



# CFR 1251

BALE PRO®

## CFR Capability

Expand your 1251 Bale Pro® into a CFR by adding the Grain Tank with MGI™  
(See pages 38-55 for more details on the CFR system.)

Safety Chain - Standard

Cameras - Standard

## Adjustable Forks

easily adjust your fork width based on your requirements up to 6' (1.8 m)

Transport Lights  
- Standard

Large, Hi-Flotation Tires  
(21.5L X 16.1)

Independent Aggression Controls allow for blending of 2 forages at different rates.

The Slat & Chain Processing Chamber  
(See page 11 for more details.)





Bale Pro®

# CFR 1251

## SPECIFICATIONS

CFR 1251 Bale Pro®	PTO Minimum	PTO Recommended	Transport Width	Transport Height	Weight
Base 1251 Bale Pro®	120 (90 kw)	135 (100 kw)	123" (3124 mm)	116" (2946 mm)	10343 lb (4691 kg)*
1251 BP with Feed Chopper™	160 (119 kw)	175 (130 kw)	123" (3124 mm)	116" (2946 mm)	10911 lb (4949 kg)*
1251 BP with MGI™**	120 (90 kw)	135 (100 kw)	140" (3556 mm)	116" (2946 mm)	11032 lb (5004 kg)*
1251 BP with Feed Chopper™ & MGI™**	160 (119 kw)	175 (130 kw)	140" (3556 mm)	116" (2946 mm)	11600 lb (5262 kg)*

\* Calculated Weight

\*\* Grain Tank capacity - 30 bushels (1057 L)

Hydraulics	2 or 3 Remotes	Discharge	Right Hand
Driveline	Cat 6 1000 PTO – 1 3/8" 21 Spline with Shear Bolt Protection	Discharge	Standard
Tires	21.5L X 16.1	End Curtains	
Size of Bales	Up to 6' (1.8 m) diameter	Rear View Cameras	Standard
		Safety Chain	Standard

NOTE: Right/Left hand is determined by sitting in the tractor seat looking forward.

## CFR 1251 Bale Pro® Options



### REAR FACING WORK LIGHTS

Additional lighting for night operation, with added illumination of processing chamber and behind unit (FIOCRRFL).

While every effort has been made to ensure that the information is accurate/current at the time of production, all specifications are subject to change.

For the latest product information, please visit: [www.highlinemfg.com](http://www.highlinemfg.com).

Highline's dedicated Research and Development Team is continually seeking equipment design solutions that increase your Operation's functionality and result in maximized profitability. The Highline modular CFR system is a Highline Ag-Innovation. The CFR modular system allows you to add components to your Bale Pro® as your Operation requirements shift.

#### THE CFR MODULAR SYSTEM:

1

### THE Bale Pro®

Highline Bale Pros® aggressively spin and loosen the bale (in either direction) for uniform feeding into the flail shredder, blowing away dust, mold and mildew making feed more palatable.  
(The CFR 650, 651, 960 and TOP GUN® are effective for industrial solutions.)

2

### Feed Chopper™

The Highline Feed Chopper™ is a secondary processing option that allows you to produce a shorter cut length; the shorter cut length increases the surface area of the feed for more efficient digestion.

3

### Grain Tank with MGI™

The Grain Tank, with Metered Grain Insertion™ capability, produces controlled, ground-driven metering ensuring ration-based feeding; the grain is inserted, rather than dropped into the hay resulting in an even feed mix.

= **CFR**

Complete Feed Ration



1

## THE Bale Pro®



The Highline Bale Pro® series makes round bale handling easier and more profitable.

Choose the Bale Pro® that is the best fit for your cattle operation. Our Bale Pro's unroll and shred round bales with flails producing uniformly processed hay or straw, reducing both feeding and bedding costs.

Features  
& Benefits

# Bale Pro<sup>®</sup>

CFR 650 / CFR 651 / CFR 650 TOP GUN<sup>®</sup> / CFR 960 / CFR 1251

Highline's Bale Pro's chop and mix round bales, blowing away mold, dust and mildew, making feed more palatable and reducing stress on cattle. Even if your hay appears clean, molds and mildews still develop and make the hay less palatable unless you process it with a Bale Pro<sup>®</sup>.

Following are some of the top Bale Pro<sup>®</sup> advantages:



## Hydraulically Actuated Discharge Door Lifts into Transport Position

In order to create a narrow profile for passing through gates and barn doors the hydraulically actuated discharge door conveniently clips up into a compact position.



## Extremely Durable Construction

The durable, 4 x 6 A-Frame design and continuous tube structure of all Bale Pro's handles heavy loads. The continuous frame member eliminates weld stress points when operating in harsh environments.



## Twine Cutting

Bale twine or netwrap is easily removed with the patented Twine Cutter. It takes less than 1 minute to remove the twine from 25 bales!

# 1

## THE Bale Pro®

(Cont'd)

### Curved Tip Design

Highline forks are curved to help “grab” the bale.

### Tires

Each Bale Pro® model is designed with appropriately sized hi-flotation tires allowing for easy maneuverability through challenging terrain.

### Adjustable Axles

Adjust to a wide stance in uneven terrain for additional support, or adjust to a narrow stance for passing through gates and narrow barn doors. (Feature not available on CFR 1251 Bale Pro®)

### Transport Lights - Standard



### Axle Twine Guard



the Axle Twine Guard eliminates the nuisance of twine getting tightly wrapped around the wheel axle.

### Standard Adjustable Forks

Lift bales from the smallest silage up to 6' (1.8 m). Lift from the row and load them into the Bale Pro®.

Optional Discharge Curtain  
Available (Front and Rear)  
(Standard on Feed Chopper™)



Features  
& Benefits

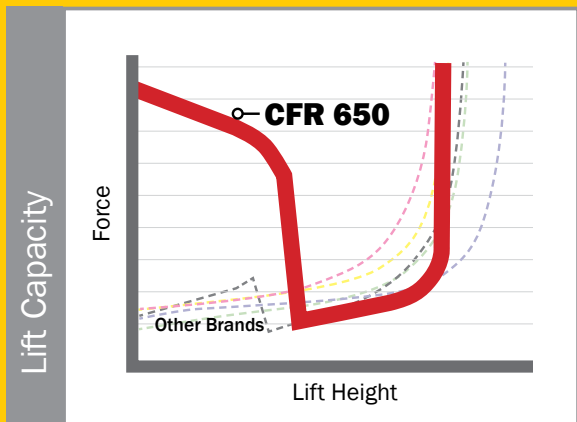
# Bale Pro®

CFR 650 / CFR 651 / CFR 650 TOP GUN® / CFR 960 / CFR 1251

## Vertical Bale Lift

The Bale Pro® vertical bale lift has the highest breakout force of any bale processor on the market today. This force allows you to easily remove bales that are frozen to the ground. Vertical lift reduces the bale being lifted from “scrubbing” on the bales in the bale stack, as well as eliminates the need to clutch the tractor between bales.

The vertical bale lift is a 2 stage lift system where the first stage of the process lifts the bale straight off of the ground. Little space is required to accommodate this design. The competitor's lack the 2 stage system. On competitors' systems, the bale rotation into the tub is started immediately resulting in limited force, as well as the need to pull ahead when loading a bale from a stack.



STAGE 1



STAGE 2





Processing removes unwanted dust, mold and mildew from the hay creating a healthy feed.

## Feeding in the Field.

Feeding cattle in a bunk or a windrow in the field reduces corral cleaning costs in spring; as well, the nutrients from the manure benefit the field biology.



The image on the left shows what happens when feed is scattered about. Instead of standing and eating, the cattle wander around trampling and wasting valuable feed, as well as consuming additional energy.



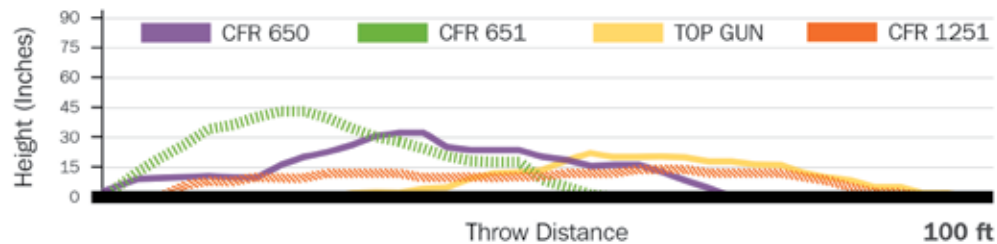
CFR 1251 Bale Pro®

## Hydraulic Discharge Door.

The hydraulically operated discharge door “contains” the outputted material into a high, uniform mound. This high mound reduces the amount of sorting the cattle will do, as well as deters excess walking and wasting of valuable energy.



## Bedding Profiles of Highline Bale Pro®s



The graph on the left represents the bedding profiles of each of the different Highline Bale Pro®s in ideal conditions (*reaching maximum height and distance*). The results were taken while each Bale Pro® was stationary with each Bale Pro® processing one complete round bale. (While feed and weather conditions can alter these measurements, the general pattern of each Bale Pro® remains consistent.)



Features  
& Benefits

# Bale Pro®

CFR 650 / CFR 651 / CFR 650 TOP GUN® / CFR 960 / CFR 1251



CFR 1251 Bale Pro®

## ● Efficient Processing

The Bale Pro® allows you to do double-duty; process one bale while carrying another on the forks. This saves time by allowing for continued operation before having to load again.

Loading bales is a simple one person operation from the comfort of the tractor cab.

## ● Even Bedding.

Create an even and lofty spread using a Highline Bale Pro®. Quality bedding is produced while using up to 50% less straw saving on input costs.



I needed a processor that would chop product finer and process and mix whole corn into a complete ration...I feel I save 10-25% of each bale processed as opposed to feeding bales in a hay ring. I feed most of my hay to my cows on the ground in the pasture resulting in all cows being able to eat equally and distributing the manure over a larger area saving the time of cleaning up manure piles in the spring. This also helps to keep baby calves healthier in a cleaner environment.

— **DUANE CODER OF EFFINGHAM, KS** COMMERCIAL ANGUS COW/CALF OPERATION  
/ OWNER OF CFR 650 EQUIPPED WITH FEED CHOPPER™ & GRAIN TANK WITH MGI™



2

## The Feed Chopper™



The Feed Chopper™ is digitally balanced for optimum performance.

### **a** Feed Chopper™ Blades

The Feed Chopper™ is designed with 128 blades spinning at 3,000 rpm to provide a uniform blend of shorter cut lengths of roughage. The blades are sharpened on both sides; once a blade is worn out or damaged simply flip the blade over for a sharpened edge.

### **b** Adjust Your Throw Profile

If your needs change, your throw profile can easily be adjusted by simply removing the 2 hair pins on either side of the Feed Chopper™ and adjusting the angle of the deflector pan.

### ● Additional Benefits

- › Finished feeding and need to bed? The Feed Chopper™ can be easily disengaged for bedding purposes.
- › The Feed Chopper™ can be retroactively added to the CFR 650, CFR 651 and CFR 960 Bale Pro's.

Complete  
Feed Ration

# CFR

## The Feed Chopper™

The Feed Chopper™, exclusively from Highline, is a secondary processing option to create shorter cut lengths. Rather than stationary knives that pulverize or drag leaves off of stems, the Highline Feed Chopper™ truly slices through the hay creating an optimal consistency for efficient metabolization. The Feed Chopper™ is a great solution for pre-processing for TMR mixers.



## Nutri**notes** |

### › Improves Average Daily Gain (ADG).

Shorter forage cut lengths increase digestibility and rumen efficiency. The result is improved Average Daily Gain (ADG), reduced feeding days resulting in an increased bottom line.

### › Reduces Waste While Increasing Palatability

Cattle have preferences in what they eat. For example, longer coarse feed and poor quality hay may have adequate nutritional value, but are not eaten, creating feed waste. By chopping poor quality hay, the palatability is improved, increasing the intake of feed, cleaning up the windrow or feed bunks.

### › On Demand Cracking Grains with Feed Chopper™

When feeding grain, the Feed Chopper™ acts like an on board hammer mill which converts raw kernels into highly digestible feed. The 128 knives spinning at 3,000 rpm crack or scarify up to 90% of the kernels passing through the chopper.

### › Minimizes Sorting

Consistent shorter cut length hay from the Feed Chopper™ ensures cattle do not sort different length material or grain. Now full feed utilization can occur while the cattle are eating the intended rations.

### › Flexibility of Feed Types

The Highline Feed Chopper™ excels at cutting a wide range of bales including wet silage, corn or old straw bales. Combining the ability to utilize “hard to process” bales like silage with the Highline Complete Feed Ration™ system provides similar results to a vertical mixer in many applications, but at half the capital cost and at lower operating fuel expenses. Feed sources can include: Corn Stover, Canola Straw, Green Feed, Alfalfa and Silage Bales, processed to an appropriate blend of cut lengths mixed with a precisely metered amount of grain.

3



## The Grain Tank with MGI™



The Grain Tank with MGI™ is a meter based, gravity fed system that allows for even and consistent flow.

### *Nutri*note

The complete CFR system ensures that the grain is scarified for increased digestibility. Take a look at your cow's manure - if undigested grain is present, the cow has not fully broken down the grain, wasting potential nutrients.





Complete  
Feed Ration

# CFR

## Grain Tank with Metered Grain Insertion™

Unique to bale processing, the Highline metering system ensures uniform mixes each and every time...regardless of feed conditions! Even distribution of grain within the hay is critical to ensure a good combined feed mix. Because cattle prefer grain to hay, they will sort out the grain and leave the hay if possible. The MGI™ system inserts the grain directly into the hay stream (as opposed to placing it on top) ensuring an optimal mix. Feeding grain is critically important to cattle in cold weather, backgrounding and during the final stages of gestation. Proper nutrition is required if the cattle body condition is to be maintained which relates directly to healthy calving and desired weight gains.

### Controlling Rations

It is vital to ensure that the amount of grain inserted into a ration is controlled. The amount of grain components in the ration needs to match up with the Rumen's ability to utilize the grains. Increasing the grain components too quickly can result

in Acidosis and the animals going off feed. The Highline ground-driven meter precisely distributes the grain into the hay or straw windrow.



#### a Gauge Windows

Easily view current grain levels through the 3 gauge windows located on the grain tank.



#### b Metering Chart

Metering chart detail on page 50.



#### c Quick Change Sprockets

Mechanically driven metering increases reliability in all conditions.



#### d Distance Meter

Metering is ground driven. Ration is accurately determined based on 5' increments per animal (i.e. 40 head = 200').



#### e Tank Lid & Ladder

Easy tank top access for filling. A retractable ladder offers safe and easy access to the top of the tank.



# Sprocket

METERING CHART

Achieve accurate feed rations using the following metering chart. This chart indicates two different methods to calibrate your system in order to produce your desired grain ration per cow.

## Sprocket Selection Chart Based on feed spacing of 5' per cow.

### METHOD 1 Quick Reference Chart

- STEP 1: Find the chart column with the commodity being used.  
 STEP 2: Look down the column to find the closest match to the intended feed rate. →  
 STEP 3: Look across the row to find the size of the Driving and Auger sprockets.

#### EXAMPLE:

Grain Type: Barley	Closest Match 5.7 lb per head
Intended Rate: 6 lb per head	Sprockets: 36 Driving, 56 Auger

#### lb/head 5 feet per cow

Barley	Oats	Peas	Wheat	Corn	Driving Sprocket	Auger Sprocket	Calibration Ratio
2.5	2.3	3.2	3.3	3.4	16	56	.53
4.0	3.7	5.0	5.1	5.4	16	36	.83
4.5	4.1	5.6	5.8	6.0	16	32	.93
5.1	4.7	6.4	6.6	6.9	32	56	1.06
5.7	5.2	7.1	7.4	7.7	36	56	1.19
7.9	7.3	9.9	10.2	10.7	32	36	1.65
10.0	9.2	12.5	13.0	13.6	36	32	2.09
13.9	12.7	17.3	17.9	18.8	56	36	2.89
15.6	14.3	19.5	20.2	21.1	56	32	3.25
17.8	16.3	22.3	23.0	24.1	32	16	3.71
20.1	18.4	25.1	25.9	27.2	36	16	4.18
31.2	28.6	39.0	40.3	42.3	56	16	6.50

### METHOD 2 Commodity Calibration

- STEP 1: Ensure grain tank has commodity in it and the auger is primed with that commodity.
- STEP 2: Remove the auger sprocket and install the hand crank.
- STEP 3: Open the calibration hole in the auger.
- STEP 4: Weigh and record the weight of the empty collection bucket.
- STEP 5: Place the calibration bucket under the calibration hole.
- STEP 6: Turn crank counter-clockwise 4 times.
- STEP 7: Weigh the collected sample and subtract the empty bucket weight.
- STEP 8: Divide the sample weight by 4 to get the weight per revolution of the auger.
- STEP 9: Replace the cover over the calibration hole.
- STEP 10: Calculate the target calibration ratio by dividing the intended weight per head by the weight per revolution of auger.
- STEP 11: On the chart, find the nearest calibration ratio.
- STEP 12: Look across the row to find the appropriate driving and auger sprockets.

#### Travel Distance in Feet (5 ft/cow)

# of Cows = 20 / Travel Distance = 100'

# The Highline **HAY** App. High Animal Yield

Profitable cattle farming requires that close attention is paid to how animals are responding to their feeding program. The Highline Bale Pro® equipped with the optional Feed Chopper™ and Grain Tank with MGI™ is an implement that provides the capability to deliver blended feed, for example, a blend of both grain and hay. Highline HAY software provides basic feed and nutrient demand information that can help you to be more efficient in choosing feed sources and grain supplements that meet the required demand. Together, the combination of the CFR system and HAY software provide the most efficient way to choose the lowest cost feed combination that meets the nutrient demands of the animals and delivers it accurately.

Following are useful definitions of terms commonly associated with animal nutrition:

<b>NEm</b>	net energy required for maintenance
<b>NEg</b>	net energy required for gain
<b>ME</b>	metabolizable energy
<b>P (%DM)</b>	percentage of dry matter in the feed stuff that is non-protein nitrogen
<b>CA (%DM)</b>	percentage of dry matter of the feed stuff that is sugar
<b>CP (%DM)</b>	percentage of crude protein of the feed stuff

*The Highline HAY app. is available on the Highline website at: [www.highlinemfg.com](http://www.highlinemfg.com)*

*While the HAY app. calculations are an aid for cattle feeding, they are not intended to replace the advice of a cattle Nutritionist. Consultation with a cattle nutritionist is highly recommended.*





# HAY app

NUTRITION

## What are your herd’s nutritional requirements?

Following is an example taken from the Highline HAY app:

STEP 1: CHOOSE THE TYPE OF ANIMAL YOU ARE FEEDING (Select from the drop down tables)

Finishing			Replacement Heifer			Beef Cow		
Mature Wt	Current Wt	Target ADG	Mature Wt (lb)	Mnths Pregnant	Target ADG	Mature Wt	Mnths Pregnant	Milk lb/day
1000 lb (454 kg)	700 lb (318 kg)	.64	1400 lb (635 kg)	9	1.02	1000 lb (454 kg)	1	25

STEP 2: CHOOSE THE TYPE OF FEED YOU ARE PROVIDING (Select from the drop down tables)

Values are taken from NRC 2000 Feed Tables. Ensure that you compare Feed Sample Results with the data below to pick the feed source that is closest in Nutrient value to what you are actually feeding.

BALE TYPE		DM %AF	TDN %DM	ME Mcal/kg	NEm Mcal/kg	NEg Mcal/kg	CP %DM	Ca %DM	P %DM
Front Bale	Alfalfa Hay, Early Vegetative-S	91%	66%	2.39	1.51	0.91	30.0%	1.5%	0.3%
Back Bale	Barley, Straw	91%	40%	1.45	0.6	0.08	4.4%	0.3%	0.1%
(If Using a Dual Bale Processor)									
Grain /Supplement	Barley Grain, Light	88%	77%	2.78	1.85	1.22	14.0%	0.1%	0.4%

Weights	(lb)	(kg)
Front Bale	1500	682
Back Bale	1000	455
(If Using a Dual Bale Processor)		

Ratio of Bales
1:2 Two Back Bales for every Front Bale

Higher quality feed is often achieved with bales that have higher TDN and CP values.

**STEP 3:** ADJUST FOR ENVIRONMENTAL CONDITIONS *(Select from the drop down tables)*

Wind	Hide	Mud	Temperature
Windy	Thin (Holstein)	Muddy Hide	-25

**STEP 4:** DETERMINE IF RATION IS BALANCED AND IF MINERAL SUPPLEMENTS ARE REQUIRED

**Nutrients Group** If ALL the numbers are green, your Feed Ration is balanced.

If any of the numbers are red, better feed sources are required to maintain the animals. The feed you have selected will not provide adequate nutrition.

**Minerals Group** If ALL the number are green, your Feed Ration is balanced.

If any of the numbers are red, then the mineral values are outside of the acceptable range prescribed by NRC requirements. Supplementation with mineral blocks or cow licks are required.

**Finishing**

	Nutrients In the Feed Selected Per Animal					Minerals	
	DM (lb) %AF	TDN %DM	NEm Mcal/kg	NEg Mcal/kg	CP %DM	Ca %DM	P %DM
Available in Feed Selected	18.2	62%	2.42	1.38	26.2%	0.86%	0.48%
Finishing Demand	18.2	50%	2.37	1.05	6.8%	0.19%	0.12%

# HAY app

## NUTRITION

(Cont'd from page 53)

### Replacement Heifer

	Nutrients In the Feed Selected Per Animal					Minerals	
	DM (lb)	TDN	ME	NEm	CP	Ca	P
	%AF	%DM	Mcal/kg	Mcal/kg	%DM	%DM	%DM
Available in Feed Selected	27.4	61%	2.21	2.15	24%	1%	0.43%
Finishing Demand	27.4	59%	1.3	2.03	9.3%	0.30%	0.22%

### Beef Cow

	Nutrients In the Feed Selected Per Animal					Minerals	
	DM (lb)	TDN	ME	NEm	CP	Ca	P
	%AF	%DM	Mcal/kg	Mcal/kg	%DM	%DM	%DM
Available in Feed Selected	26.4	67%	2.41	3.75	36.3%	0.90%	0.76%
Finishing Demand	26.4	63%	2.3	3.63	12.1%	0.35%	0.22%

### STEP 5: ENTER HERD SIZE TO DETERMINE FEEDING REQUIREMENTS

	Pen/Herd Size	Grain/Supplement (lb/head)	# of Animals fed/load	Travel Distance Per Load	Travel Distance Per Pen	Loads per Pen/Herd
Finishing	100	9	310	1549	500	0.3
Replacement Heifer	100	12	189	946	500	0.5
Beef Cow	100	(Higher Quality Feed Required)	301	1503	500	0.3

The aggression and tractor travel speed will need to be adjusted so that the bales are processed at a rate to have them completed in the travel distance listed. This will require trial and adjustments of aggression and tractor speed.

Once the traveled distance has been reached, stop processing and shut off the grain tank meter. Any remaining bale or grain can be used for the next feeding.



High Animal Yield

# HAY

## Nutrinote

The CFR 1251 has the ability to utilize low quality forage by mixing it with high quality forage to maximize the efficiency of a winter feeding program. When equipped with the optional Grain Tank™ and Feed Chopper™, the CFR 1251 really is an all-purpose machine that rivals a TMR in producing a mixed forage/grain ration.

### STEP 6: OBSERVE AND ADJUST YOUR FEEDING PROGRAM

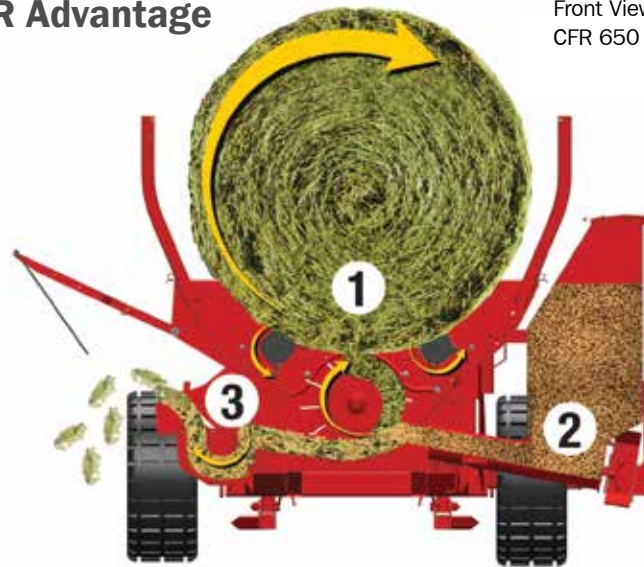
Feeding Cattle requires close attention to how the animals are responding to the feeding program. The Highline Bale Processor is an implement that provides the capability to blend feed. The Highline HAY calculator provides basic feed and nutrient demand information that can help you be more efficient in choosing feed sources and grain supplements. The combination of CFR and HAY calculator are an important aid in feeding cattle efficiently.

Understanding cattle body condition scores and using them are important criteria that should be taken into consideration to help ensure your feeding program is as efficient as possible. Both under fed and over fed animals pose problems.

*Consultation with a cattle Nutritionist is highly recommended to get maximum value from your Highline feeding implement.*

### The CFR Advantage

Front View  
CFR 650 Shown



- 1 The bale is processed.
- 2 Metered grain is inserted into the feed stream.
- 3 The Feed Chopper™ slices processed hay, cracks grain and blends the mix into a ration.

### How Does the CFR System Impact the Bottom Line - Analyze The Numbers

The CFR System:

- A. Reduces the labor requirements to provide proper nutrition. This provides the greatest benefits at calving season — no chop pails or rolled grain wagons, no necessity for 2 operators and 2 tractors, no need to roll grain or make chop!
- B. Eliminates the cost to own or rent a tub grinder
- C. Eliminates waste from spoilage of batch processing
- D. Ability to run bedding through the Feed Chopper™ increases absorption in various indoor applications.



# BM 605/607/1400

Bale Mover



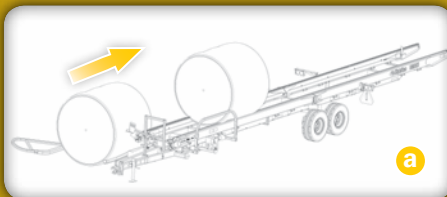
## Bale Moving

made easy.

Highline makes picking bales a breeze. Unloading can be done without ever leaving the cab and with Highline's ingenuity built into every bale mover, you can expect faster bale hauling with only one tractor and operator!

### NEW Auto Shuttle Feature on BM 605 and BM 607

Auto Shuttle is a design feature that allows the operator to automatically shift the last loaded bale back exactly one position so you can load the next bale without shuttling the load manually. As you lower the loading the arm, the flow of hydraulics are moving the chains back to allow room to load the next bale. This is conveniently done in one easy step.





# BM

Features and Benefits

Highline offers non-stop picking and transporting with only one tractor and operator!



**All Bale Mover Models** have a standard  $\frac{1}{4}$  turn bale fork to automatically turn bales for non-stop loading from virtually any angle.



**Chain Rails** Polished chain rails are easily adjusted to match different bale sizes. Chain rails are sloped and factory ground to conform to the slope of round bales, eliminating the needs for cleats and reducing broken strings.

A hydraulic motor controls the chains and eliminates gearboxes, bearings and shafts. (Either row of chains can be operated independently on the Bale Mover 1400 allowing you to fill one side before filling the other or fill randomly and out of sequence on either side.)



- › In-cab electric over hydraulic controls give full hydraulic control with only two hydraulic outlets on your tractor
- › Undercarriage that walks both side to side and front to back
- › As the quarter turn lift arm begins to lift the bale, the forward motion slides the bale precisely into position for accurate placement on main bed.
- › Load soft or wet bales with ease.
- › Bale rows are designed to give the operator good visibility behind the bale mover. Transport lights and a transport safety chain are standard.
- › From the cab of the tractor, the deck is lifted hydraulically. The bale chains transfer the bales onto the ground without ripping twine or damaging the bales. The tail of the bale mover is designed to skid over the ground during the unloading process without damage.
- › Fiber wound bushings on chrome shafts.

ADDITIONAL FEATURES

## Unload and Reload\* Without Ever Leaving The Tractor

Back up the Highline Bale Mover where you want the bales, tilt the bed, engage the conveyor chains and drive slowly forward. Bales are stored in a long, straight row to minimize weathering damage.

\* Reload feature only available on BM 605 & BM 607

# Bale Mover

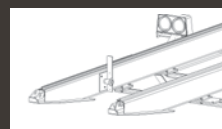
**BM** <sup>605</sup>  
<sup>607</sup>  
1400

## SPECIFICATIONS

MODEL	BM 605	BM 607	BM 1400
Configuration	Single Row	Single Row	Double Row
Horsepower Required	80 HP (60 kw)	90 HP (67 kw)	100 HP (75 kw)
Hydraulic Outlets Required	2	2	2
Bale Capacity (Long Bales)	(6) 4', (5) 5'	(8) 4', (7) 5'	(16) 4', (14) 5'
Tongue Weight (Unloaded)	1380 lb (626 kg)	1366 lb (620 kg)	1740 lb (789 kg)
Tongue Weight (Loaded)	2263 lb (1026 kg)*	2299 lb (1043 kg)*	3423 lb (1553 kg)*
Tires	Four 280-70R15 12ply	Four 280-70R15 12 Ply	Eight 11L-15 12 ply
GVW	15840 lb (7200 kg)	15840 lb (7200 kg)	38000 lb (17236 kg)
Bed Length	26' 8 3/4" (8.14 m)	37' 4 1/2" (11.39 m)	37' (11.3 m)
Overall Length	33' 5 1/4" (10.19 m)	44' 1" (13.43 m)	43' 9 1/4" (13.34 m)
Transport Width	8' 4 1/4" (2.54 m)	8' 4 1/4" (2.54 m)	15' 1 1/2" (4.61 m)
Width Unloaded	8' 4 1/4" (2.54 m)	8' 4 1/4" (2.54 m)	15' 1 1/2" (4.61 m)
Transport Height (Max)	13' 1 3/4" (4.0 m)	13' 1 3/4" (4.0 m)	12' 3 1/4" (3.74 m)
Frame Rails	8" x 3" .250 w	8" x 3" .250 w	8" x 3" .250 w
Load Arm	6" x 6" (152 mm x 152 mm)	6" x 6" (152 mm x 152 mm)	6" x 6" (152 mm x 152 mm)
Cylinders Bale Lift	5" x 14" (127 mm x 356 mm)	5" x 14" (127 mm x 356 mm)	3 1/2" x 13" (89 mm x 330 mm)
Cylinders Bed Lift	3" x 10" (76 mm x 254 mm)	3" x 10" (76 mm x 254 mm)	3 1/2" x 16" (89 mm x 406 mm)
Bale Chain	2062 HD	2062 HD	2062 HD
Lights & Safety Chain	Standard	Standard	Standard
Shipping Weight	5085 lb (2385 kg)	5853 lb (2655 kg)	9660 lb (4382 kg)

Each model uses convenient in cab 12 v 15 amp control.

### Bale Mover Option



**FIOBMBI** An indicator at front of unit showing bale mover is full.  
(Optional on BM 1400, standard on BM 605 & BM 607)

\* If there are no bales behind the rear axle of the bale mover, the partially loaded hitch weight can exceed the fully loaded hitch weight even though the overall total is less than fully loaded.

While every effort has been made to ensure that the information is accurate/ current at the time of production, all specifications are subject to change.  
For the latest product information, please visit: [www.highlinemfg.com](http://www.highlinemfg.com).





**Highline**  
MANUFACTURING LTD.



**Highline**







# NT 44/60/78

Rock Picker

## Just HOOK UP & GO

with the NT Rock Picker.

For over 20 years, the Highline Rock Picker has proven itself as a machine that delivers year in, year out. Designed with few moving parts, as well as extremely durable components, the Highline Rock Picker remains rock solid. Highline offers the all new NT Rock Picker (available in 44", 60" and 78" sizes), an upgraded unit with a fresh focus on safety and design features that will make your life even easier when taking care of cleaning up your fields.

## Why the Highline Rock Picker is Better?

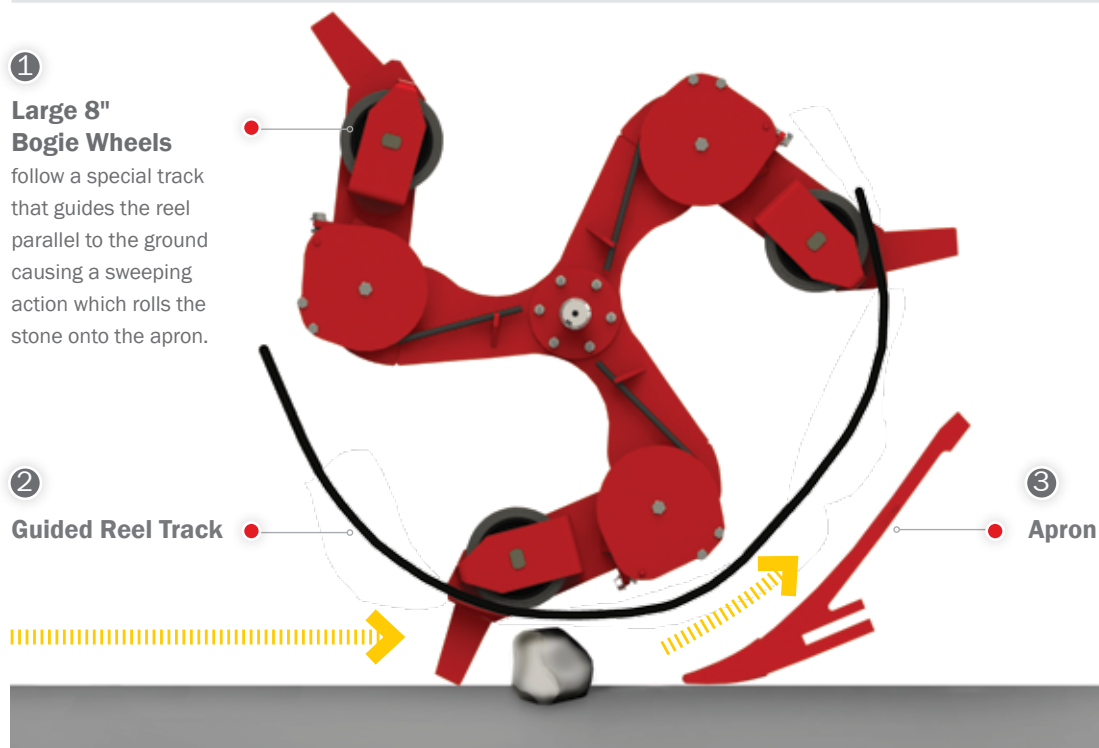
The Secret is in the Guided Reel:

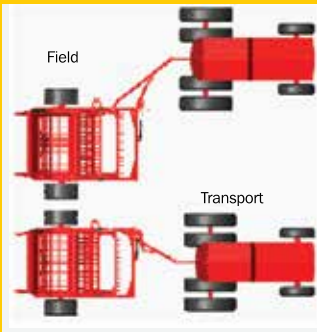
It is as simple as 1, 2, 3!

- 1 The bogie wheels follow a special track to guide the reel for improved picking action. The guided reel travels parallel to the ground surface pulling the rocks toward the apron.
- 2 The guided reel lifts the stones onto the apron and because the reel is guided it follows the same contour as the apron.
- 3 The guided reel delivers the rocks to the center of the bucket.

### Conventional Picker

Conventional round reels have only a few inches of positive picking action. When the round reel contacts a rock on the downward cycle, rather than sweep the rock towards the apron, it pushes down on the rock. 8" and smaller rocks are often missed because the round reel buries the rock.





### Hitch Redesign

The Highline hitch moves the rock picker fully into view of the operator and out of the way of the tractor (even a tractor with duals). The hitch also advances the rock picker to a new level of transport convenience with a self-locking

hitch. The self-locking design doesn't require any pins or wedges, when you get to the field, the transport lock is opened, when going back to transport the lock is flipped into place.



### Durable Box Frame Construction

Highline is the only rock picker with a box frame construction. The front frame is built high to let rocks in, yet ensure the structure is strong enough to withstand the most difficult rocks that are removed from the field.

### Hi-Lift Design

The Hi-Lift design feature provides options for operators to get rocks out of the way or off the field. The Hi-Lift minimizes wasted space from low flat rock piles by allowing taller more compact piles to be made, or, rocks can be transferred directly to a truck for removal. For fast and convenient rock removal, Highline rock pickers (NT 44, NT 60 and NT 78) have a standard dumping height of 84".

## Rock Picker

**NT** 44  
60  
78





# NT<sup>TM</sup> Rock Picker

## Features and Benefits

**Spring Adjustment/Replacement** Exclusive to the industry, the Highline coil spring provides uniform loading over the reel operating range combined with the most compact mounting. This ensures that the spring mechanism is protected from rock damage resulting in years of service. Replacing the springs just got easier with a simple threaded bolt to apply or remove tension to the spring.

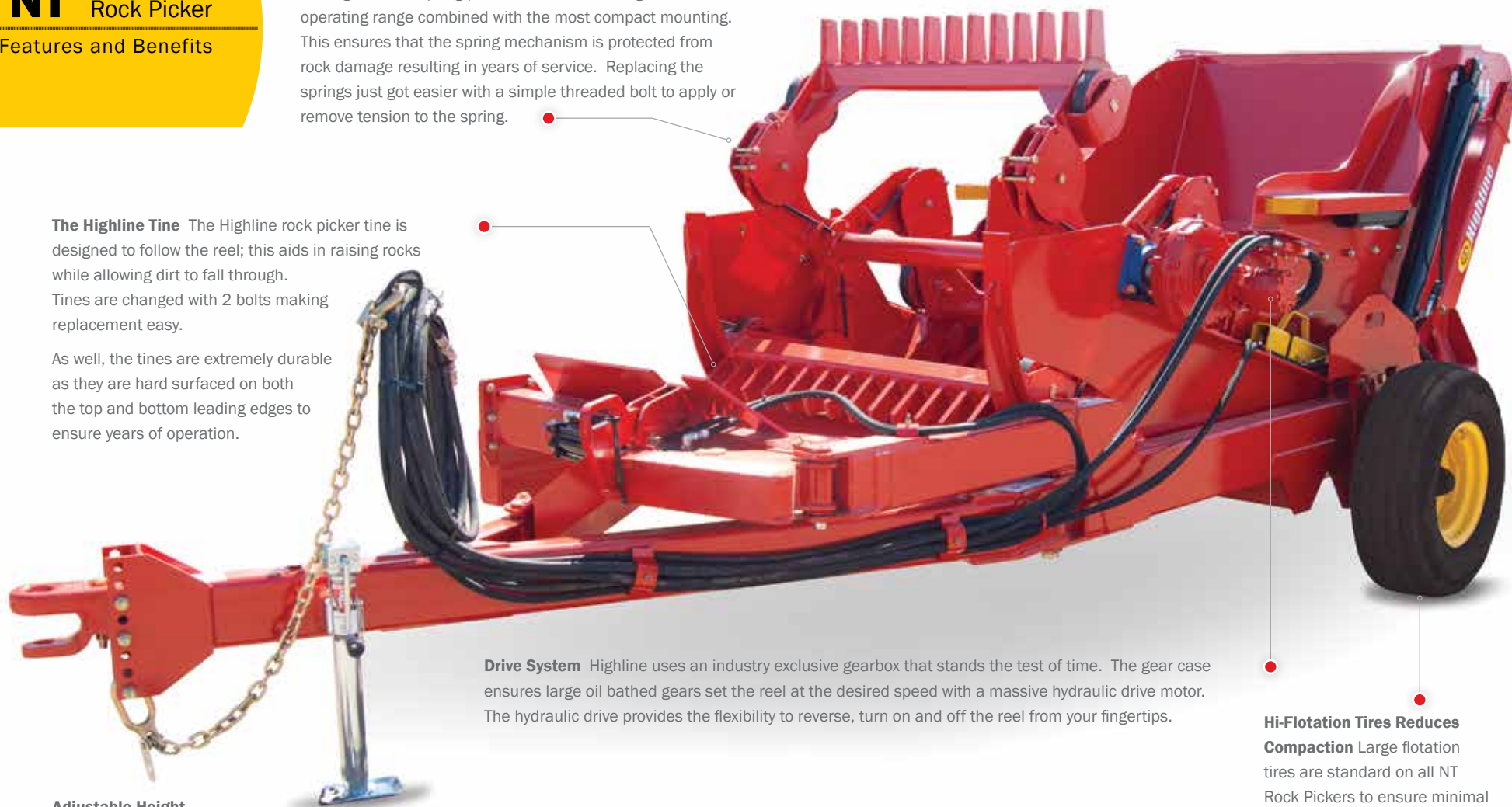
**The Highline Tine** The Highline rock picker tine is designed to follow the reel; this aids in raising rocks while allowing dirt to fall through. Tines are changed with 2 bolts making replacement easy.

As well, the tines are extremely durable as they are hard surfaced on both the top and bottom leading edges to ensure years of operation.

**Drive System** Highline uses an industry exclusive gearbox that stands the test of time. The gear case ensures large oil bathed gears set the reel at the desired speed with a massive hydraulic drive motor. The hydraulic drive provides the flexibility to reverse, turn on and off the reel from your fingertips.

**Adjustable Height Hitch Tongue.**

**Hi-Flotation Tires Reduces Compaction** Large flotation tires are standard on all NT Rock Pickers to ensure minimal compaction to the seed bed occurs.



# Rock Picker

**NT** **44**  
**60**  
**78**

## SPECIFICATIONS

MODEL	NT 44	NT 60	NT 78	MODEL	NT 44	NT 60	NT 78
Width (Picking)	44" (1.11 m)	60" (1.52 m)	78" (1.98 m)	Picking Style	Reel	Reel	Reel
Transport Width (with tires - machine centered with tractor)	91¾" (2.33 m)	125½" (3.19 m)	149½" (3.80 m)	Number of Bats	3	3	3
Working Width (to center of tractor - machine is offset to right of tractor)	140⅛" (3.56 m)	165¾" (4.21 m)	186½" (4.74 m)	Minimum Rock Diameter	2" (50 mm)	2" (50 mm)	2" (50 mm)
Transport Length	228½" (5.80 m)	224" (5.68 m)	222¼" (5.64 m)	Maximum Rock Diameter	24" (610 mm)	24" (610 mm)	24" (610 mm)
Operating Length	206" (5.23 m)	206" (5.23 m)	206" (5.23 m)	Lift Cylinder	3.5" x 34" (89 mm x 864 mm)	3.5" x 34" (89 mm x 864 mm)	3.5" x 34" (89 mm x 864 mm)
Height	71¼" (1.80 m)	71¼" (1.80 m)	71¼" (1.80 m)	Recommended	@2 mph-23 rpm	@2 mph-23 rpm	@2 mph-23 rpm
Dumping Height	84" (2.10 m)	84" (2.10 m)	84" (2.10 m)	Reel Speed	@4 mph-47 rpm	@4 mph-47 rpm	@4 mph-47 rpm
Weight	6100 lb (2767 kg)	7050 lb (3198 kg)	8000 lb (3629 kg)	Hydraulic Outlets Required	3	3	3
Tongue Weight	750 lb (340 kg)	750 lb (340 kg)	750 lb (340 kg)	Hydraulic Pressure	2500 psi (17236 kPa)	2500 psi (17236 kPa)	2500 psi (17236 kPa)
Bucket Capacity	1.89 yd³ (1.45 m³)	2.57 yd³ (1.96 m³)	3.35 yd³ (2.56 m³)	Flow Required	18 gpm (68 l/min)	18 gpm (68 l/min)	18 gpm (68 l/min)
Tire Size	11L-15F1	16.5L-16.1	21.5L-16.1F1	Frame	6" x 4" x ¼" (152 mm x 102 mm x 6 mm) Rectangular Tubing		
Tire Pressure	90 psi (620 kPa)	24 psi (165 kPa)	27 psi (186 kPa)	Replaceable Tines	Main Apron Tines are replaceable to allow for high acre usage		
Required Horsepower	50 HP (37 kw)	70 HP (52 kw)	90 HP (67 kw)	Hard Surfacing	Reel Arm Teeth and Apron Tines (Standard)		
Recommended HP	119 HP (89 kw)	135 HP (101 kw)	150 HP (112 kw)	Hopper Bottom is Grated	Yes		
Hydraulic Hitch	Yes	Yes	Yes	Hopper Back is Grated	Yes		
Hydraulic Drive	Yes	Yes	Yes				

While every effort has been made to ensure that the information is accurate/current at the time of production, all specifications are subject to change.

For the latest product information, please visit: [www.highlinemfg.com](http://www.highlinemfg.com).



“The Highline is user-friendly; you don't need to do much for maintenance in the morning and once you start, you're good for the day. The hydraulics are nice and quick.” – **ERIC GARRANT**, *Mower Operator*

NORTHERN SUNRISE COUNTY, PEACE RIVER, AB

“Quieter, less PTO shaft, safer. With simpler and less maintenance the Highline gets more miles done at the end of the day at a lower cost.” – **SEBASTIAN DUTRISAC**, *Agricultural Fieldman*

NORTHERN SUNRISE COUNTY, PEACE RIVER, AB



**MOW**  
**more**



## THE RCH<sup>TM</sup> HYDRO MOWER

is within ReaCH.

The RCH<sup>TM</sup> Hydro mower reduces maintenance requirements resulting in less downtime. Proven hydraulic motors eliminate clutches from seizing up and placing huge shock loads onto PTOs, blade pans and decks.

Also, due to the hydraulic circuit, rocks or debris cannot transfer impact onto the drive train; the hydraulic drive softens every hit the blades see. Checking oil in the gearboxes is eliminated and greasing of a single PTO shaft is all it takes to be up and running drastically reducing service time.

# RCH™ Hydro Mower

## Features and Benefits

The RCH™ Hydro Mower is a practical design with many convenience features.



## THE HYDRAULIC DRIVE ADVANTAGE

The hydraulic drive advantage translates into less time doing maintenance and more time operating! This is because the hydraulic drive system eliminates a number of moving parts including slip clutches; slip clutches can wear over time reducing overall performance. Also, when a mower blade hits an obstacle, it can result in complete failure of the slip clutch.

The hydraulic drive system reduces the number of PTO assemblies which means less time greasing.

Also, when an obstacle is encountered, the hydraulic drive does not back feed power into the gearbox, PTO and tractor.

### Maneuverability

No need to steer the tractor around stop signs or obstacles — just use the hydraulic controls to rotate the deck and maneuver the mower. Large front tires assist in ground contouring and provide excellent flotation.



Hydro Mower

**RCH™**



## THE OPTIONAL JOYSTICK IS SIMPLY MORE INTUITIVE!

With all hydraulic functions on one control, the Operator can easily operate the RCH™ Hydro Mower with minimum effort. Operators are raving about the ease of use the joystick provides.

Following are some of their comments:

"Your low-effort joysticks provide instant control response with minimum movement."

"Should not even be an option, I would never run without a joystick ever again!"

The joystick controls the decklift, independent wing lift, hitch swing, gradient steering all the while reducing operator fatigue.



## LARGE, SMOOTH UNDER DECK SHREDS MULCH.

A depth of 12" from the underside of the deck to the blade allows for a larger volume of material to be mulched, resulting in a better cut.

The deck protection rings help protect the underdecks from damage due to the rotary blade, flying rocks, or debris.



"Our having hydraulically driven power heads vs a mechanical driveline has reduced our downtime by at least 30%, resulting in an increased amount of mowing per day by that same percentage or even higher due to the fact that we do not have to spend as much time greasing the mechanical moving parts, we also noticed a savings in consumable parts (blades) as there is more forgiveness in the hydraulic system when objects are struck with the blades, overall, I think the smoothness of the hydraulically driven system will keep proving itself in [reduced] maintenance and [increased] productivity."

— CRAIGE MADDEN

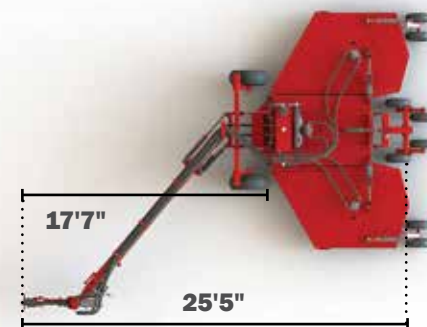
RIVERDALE MUNICIPAL PUBLIC WORKS FOREMAN



## **RCH™** Hydro Mower

Features and Benefits

The heart of a Highline mower is the Radial Contouring Hitch (RCH™). The RCH™ is designed to keep the tractor on the road and the Operator safe while achieving a quality cut.



### **Versatility - Mow on Both Sides of the Road Without Switching Configurations**

Mow at any angle, to the left or the right, or behind on flat areas. The mower can ReaCH either side without requiring a configuration change. The mower can be easily manipulated for backing up and turning around in tight spaces.



### **Independent Wing Lift**

Mow in areas that are restricted for space by lifting each wing independently. Exclusive to a hydraulic mower is the ability to lift the wings and turn off the deck motors independently.



### **Save Time and Increase Productivity.**

Greasing and maintenance have always been time consuming and cumbersome tasks. Traditional mechanically-driven ditch mowers typically have 16 grease points. Care and greasing on these units can take from 30 minutes up to an hour of preparation time every day! With the RCH™ Hydro Mower greasing and maintenance takes approximately 5 minutes. In a mowing season of 100 days this translates into an extra 100 miles of mowing!



Hydro Mower

**RCH™**

Drive your tractor on a safe footing while ReaCHing into more difficult places with the mower. The RCH™ design allows the tractor to remain on the road on a safe level footing. There is no need to run dual tires to increase stability. No more tractors stuck in soft ditches. Gone are the days of putting your foot on the tractor window to keep yourself in the seat, reducing driver fatigue.

90°

**Wing Lift** is 90°  
for compact road  
transport.



# RCH™ Hydro Mower

## Features and Benefits

With conventional mowers, greasing is a tedious, laborious task. With the RCH™ Hydro, greasing of a single driveline is all that it takes to be up and running! As well, with the hydraulic system, checking the oil in gearboxes is eliminated.

### High Capacity Cooling Unit

The high capacity, 20 hp cooling unit efficiently cools the oil.

Reversible electric cooling fan keeps the radiator clean by blowing out debris.

Easily view oil levels with oil gauge.

### The Hitch's Low Pull Point

has less downward force eliminating any upending in muddy conditions.

### Hose Cradle

The simple design of the hose cradle allows for flexibility when moving hoses around. Also, since the hoses are not tightly secured, the hoses can move when turning. The hose cradle keeps the hoses neatly in place.

### 2:1 Speed Increaser

The RCH™ mower is equipped with a 2:1 Speed Increaser. This is valuable as it allows for higher speeds with a more compact pump. Competitors' hydraulic pump designs are much larger and attach directly to the tractor making initial setup awkward.

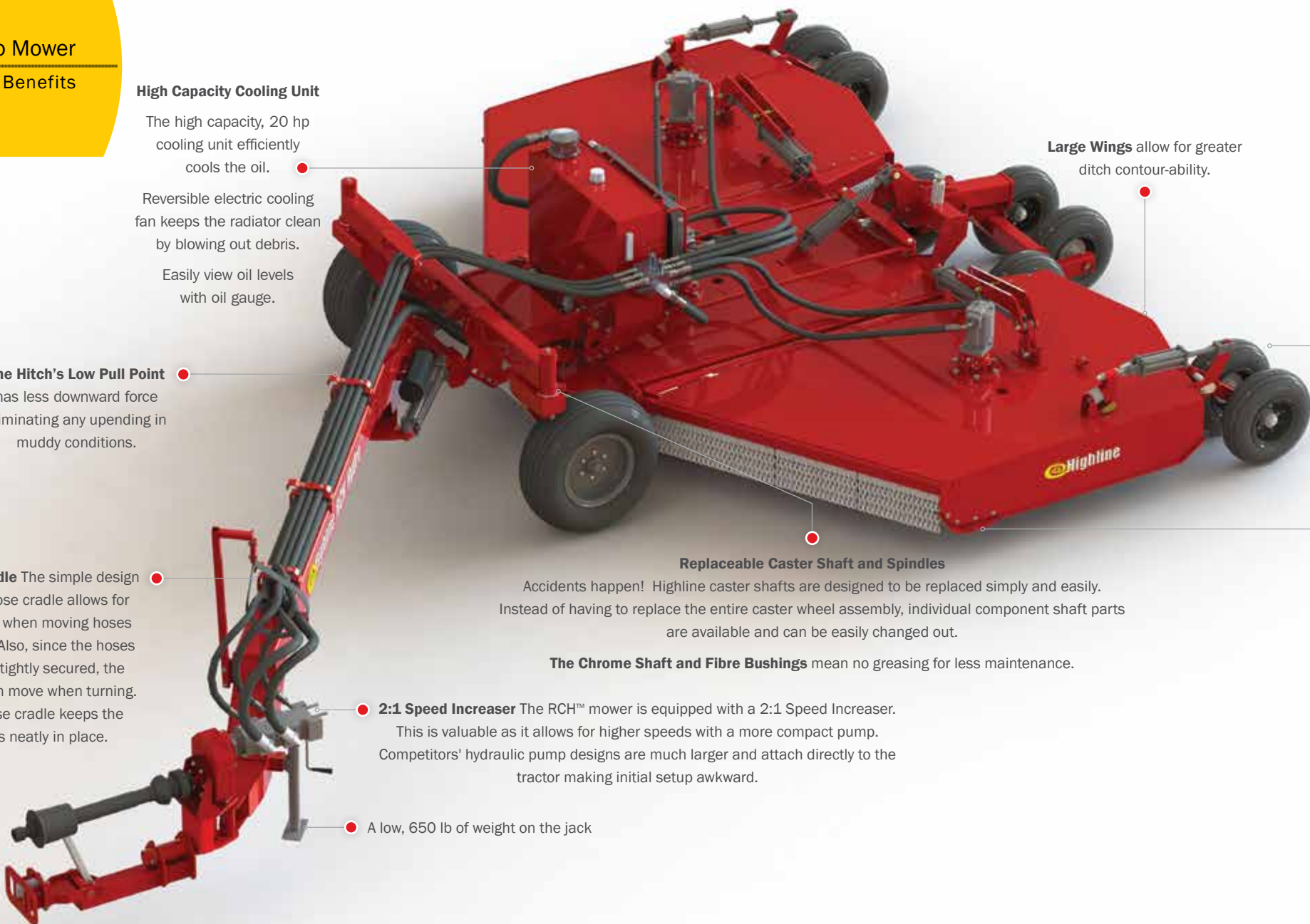
A low, 650 lb of weight on the jack

**Large Wings** allow for greater ditch contour-ability.

### Replaceable Caster Shaft and Spindles

Accidents happen! Highline caster shafts are designed to be replaced simply and easily. Instead of having to replace the entire caster wheel assembly, individual component shaft parts are available and can be easily changed out.

**The Chrome Shaft and Fibre Bushings** mean no greasing for less maintenance.







## Hydro Mower

# RCH™

### The Large Tool Kit

conveniently stores extra blades and tools for easy access when maintenance is required.

## SPECIFICATIONS

### MODEL RCH™ Hydro 10 RCH™ Hydro 15

Cutting Swath	120" (3048 mm)	180" (4978 mm)
Cutting Capacity	3½" (89 mm)	3½" (89 mm)
Cutting Height	2" to 15" (51 mm to 381 mm)	2" to 15" (51 mm to 381 mm)
Overall Width (to outside of wings lowered)	150" (3810 mm)	196" (4572 mm)
Blade Size	½" x 4" (13 mm x 102 mm)	½" x 4" (13 mm x 102 mm)
Wing Working Range	25° Down, 55° Up	25° Down, 55° Up
Double Safety Chains All Round	Standard	Standard
Overall Length	402" (10.21 m)	402" (10.21 m)
Transport Width	112" (2845 mm)	120" (3048 mm)
Weight	7600 lb (3447 kg)	8600 lb (3901 kg)
Minimum Recommended HP	115 (86 kw)	140 (104 kw)

Deck Thickness ¾" High Impact Resistant

Blade Tip Speed 16568 fps (5050 mpm)

Standard Front Tires 32 x 11.5 x 15 22 Ply

Rear Tires (Wing) 6 x 9 x 20 Laminate (Standard)

Rear Tires (Center) 6 x 9 x 20 Laminate (Standard)

Hydraulic Fluid Hydrex MV36

Oil Capacity 42 Imp Gal (190 L)

Deck to Blade 9" (22.9 cm)

Clearance

Tongue Weight 650 lb (295 kg)

### RCH™ Hydro Mower Options



**GRADIENT  
STEERING OVERRIDE  
(Joystick)**

To adjust front caster position, reducing side draft on tractor. Kit is for joystick equipped mower (FIOMWRCH3GOS1).



**GRADIENT  
STEERING OVERRIDE  
(for 3 tractor remotes)**

To adjust front caster position, reducing side draft on tractor. Kit is for mowers using three tractor remotes (FIOMWRCH3GOS3).



**GRADIENT  
STEERING OVERRIDE  
(for 4 tractor remotes)**

To adjust front caster position, reducing side draft on tractor. Kit is for mowers using four tractor remotes (FIOMWRCH3GOS4).



**SKID WHEEL**

Wheel mounted on front of mower wing decks to improve contourability on uneven terrain (FIOMWRCH3SPW).



**DUAL  
LAMINATE TIRES**

Dual tire for fixed axle on rear of mower wing decks, improves flotation in soft ground (FIOMWRCH3W2LT).

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For the latest product information, please visit:  
[www.highlinemfg.com](http://www.highlinemfg.com).





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