

Variable Chamber Round Balers



## VB-VBP

2160 / 2190 and 2160 BalePack

[www.KuhnNorthAmerica.com](http://www.KuhnNorthAmerica.com)



Invest in Quality®

VARIABLE CHAMBER ROUND BALERS VB 2160 / VB 2190 / VBP 2160

# CONSISTENT BALES IN ALL CONDITIONS

## THE QUALITY YOU'RE LOOKING FOR

Field performance, bale quality and bale density are fundamental to the profitability of every operation. Every minute counts when weather conditions are uncertain. The unique innovations on Kuhn balers make a real difference in field performance.

## UNMATCHED RELIABILITY

Kuhn offers the most efficient and versatile range of balers available on the market. Kuhn balers are not only designed to produce top-quality bales, but are also built for unmatched reliability.

## STAYING AHEAD WITH NEW INNOVATIONS

Kuhn's Research & Development team is constantly improving their round balers to stay ahead of technology with innovations like: Progressive Density, Integral Rotor Technology and IntelliWrap.

## VARIABLE CHAMBER ROUND BALERS

VB/VBP  
in brief:

| Models    | Bale Diameter |               | Bale Size |
|-----------|---------------|---------------|-----------|
|           | Min.          | Max. (Inches) |           |
| VB 2160   | 31.5          | 63            | 4x5       |
| VBP 2160* | 31.5          | 63            | 4x5       |
| VB 2190   | 31.5          | 73            | 4x6       |

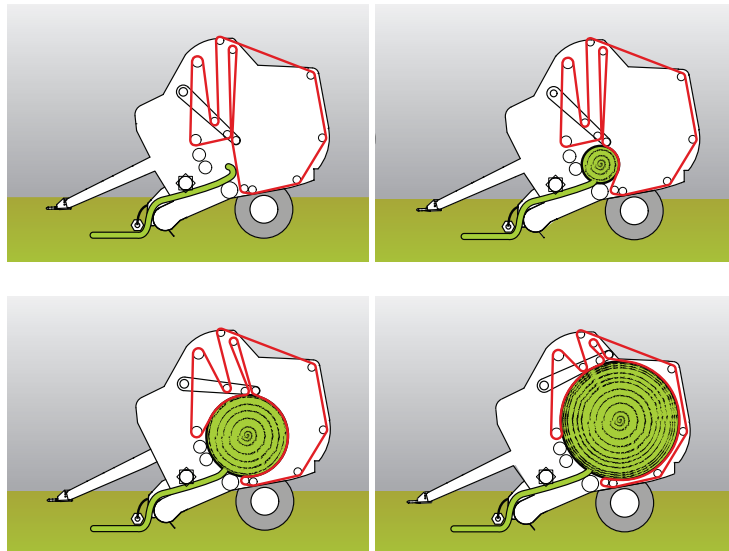
\*Small bale wrapping kit: 31.5 – 60 inches



# CONSISTENT, HIGH-QUALITY BALES

## INSTANT BALE STARTING

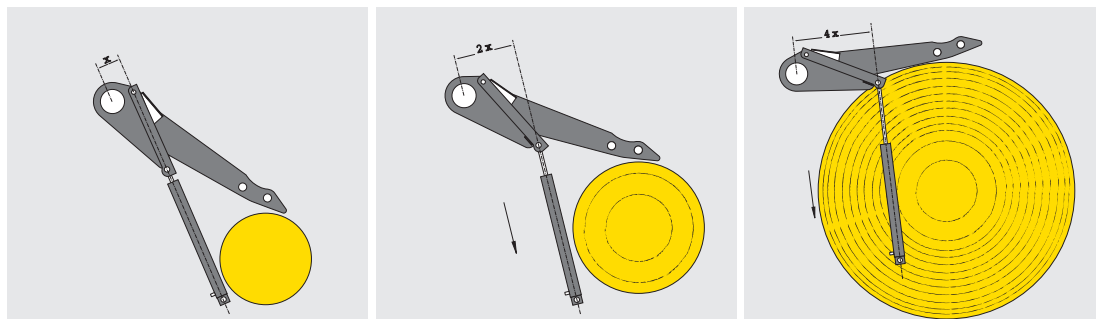
Bale formation starts in a well-designed pre-chamber, where belts and rollers provide fast, consistent core formation. In the pre-chamber, moderate or soft cores can be chosen to meet the needs of your operation. The five multi-grip, wide-section belts and three rollers reduce crop losses and improve bale rotation.



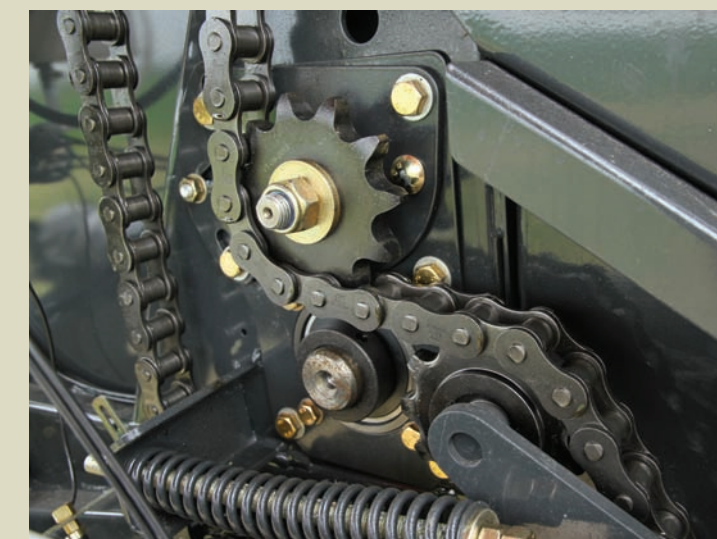
## PROGRESSIVE DENSITY – PROVIDES DENSITY WHERE IT COUNTS

As the bale grows within the bale chamber, the belt tensioning arm is subjected to steadily increasing resistance from two hydraulic cylinders and a spring tensioner. As the diameter grows, the bale's density does too. The result is a very firm bale with a moderate core – not too soft, not too hard.

With a tougher outer layer, straw bales will be more tolerant to weather conditions, while hay bales will maintain their shape for improved stacking and easier handling.



## HEAVY-DUTY, LONG-LIFE DRIVELINE



Only five chains are used on VB round balers with an integral rotor and six chains are used on VB round balers with an open throat intake.

By using only high-quality, oversized components, downtime is reduced and longevity is greatly increased. The chain layout is simple, clean and easy to service and maintain while minimizing the overall number of moving parts. Sprockets are hardened to minimize wear and add years to their life and dependability.

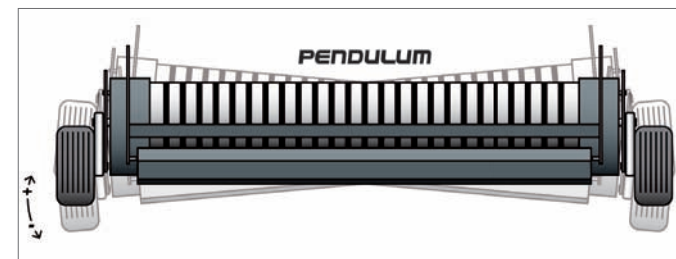
# VERSATILITY TO MEET YOUR OPERATION'S NEEDS

To better meet your operation's specific needs, there are four different intake options available on both the VB 2160 and the VB 2190 round balers. Select from an open throat intake design, an OptiFeed non-cutting rotor, or a 14- or 23-knife OptiCut integral rotor.



## PICKUP

The pickup gathers the densest of swaths, even at high speeds. The pendulum system and wide intake, with height adjustable guide wheels, accurately carries the pickup over every ground contour. The pickup roller helps even out the flow of material into the intake, regardless of crop conditions.



## NON-CUTTING INTAKE SYSTEMS



### OPEN THROAT

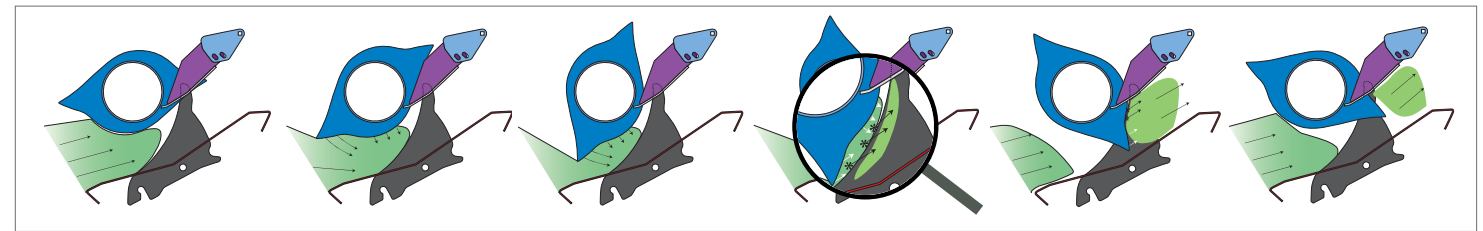
The wide pickup provides tremendous capacity for easy handling of the heaviest windrows. With the wide open throat design, there is also no restriction on the crop as it feeds directly into the baler. These features work together to help achieve high field performance, while using less fuel.



### OPTIFEED ROTOR

The OptiFeed rotor, with double-feeding tines and integrated augers, provides a consistent trouble-free flow of crop into the bale chamber. This rotor design helps even out windrows by moving the hay where needed for consistent bale formation. This force-fed, non-cutting intake is the perfect solution for handling tough crop conditions such as cornstalks, short straw and high-moisture crops.

## CUTTING INTAKE SYSTEMS

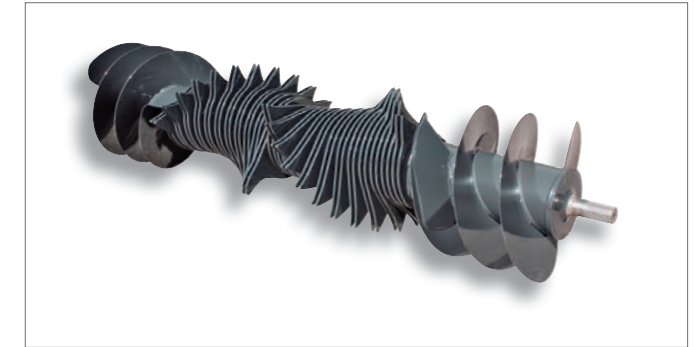


The hay is guided and drawn to the knives at an early stage. This action improves the flow and cutting performance while preventing unwanted plugging. The bi-lobe rotor has a patented tooth design that sheds uncut crop before it is pinched in the cleaners. This reduces the horsepower needed and increases the baler's performance.



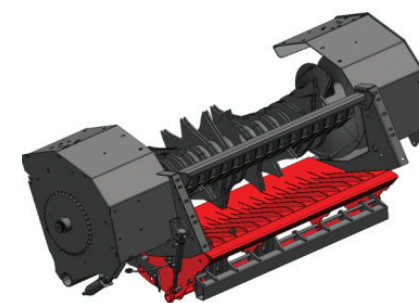
### OPTICUT 14

The integral rotor with the 14-knife OptiCut system is designed to even out the swath and force feed the crop into the baler for maximum throughput. The 14-knife OptiCut cutting system provides a 2 3/4" theoretical length of cut. Each single knife is spring protected.



### OPTICUT 23

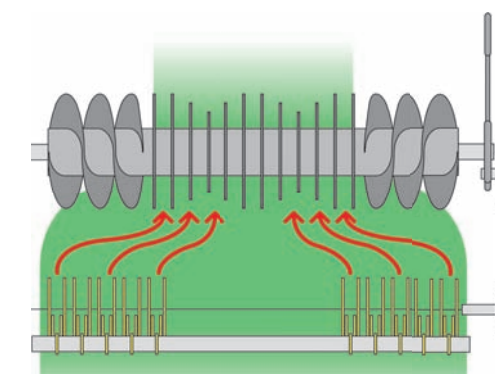
The integral rotor with the 23-knife OptiCut system has benefits of intensive cutting. The small cut provides better fermentation in silage and more absorbent straw for bedding. The 23-knife OptiCut system provides an 1 3/4" theoretical length of cut. Each knife is spring protected against damage from foreign objects. With group selection, the operator can choose to have 0, 7, 11, 12 or 23 knives in operation.



### DROP FLOOR

The intake unit, on OptiCut models, is protected by the PTO cam clutch. If the rotor plugs, the PTO cam clutch is automatically activated. By lowering the tractor's RPM, the operator can usually clear the throat without completing any additional steps. In addition, the entire cutting floor (shown in red), including the knives, can be lowered. After the plug is cleared, the cutting floor can be brought back into the working position. In extreme circumstances, a rotor disengagement hand clutch can be used to disengage the intake so that the bale in the chamber can be tied off and expelled.

*OptiCut models only*



### INTEGRAL ROTOR TECHNOLOGY

The large diameter rotor has heavy-duty auger flighting integrated directly onto the outer sections of the rotor. This system is called Integral Rotor Technology. This maintenance free, short-distance intake system ensures even feeding regardless of variations in the crop. With this system, even the heaviest of crops are force-fed through the short intake, resulting in higher speeds for faster bale output.

*OptiFeed and OptiCut models only*



**VARIABLE CHAMBER ROUND BALERS** VB 2160 / VB 2190 / VBP 2160

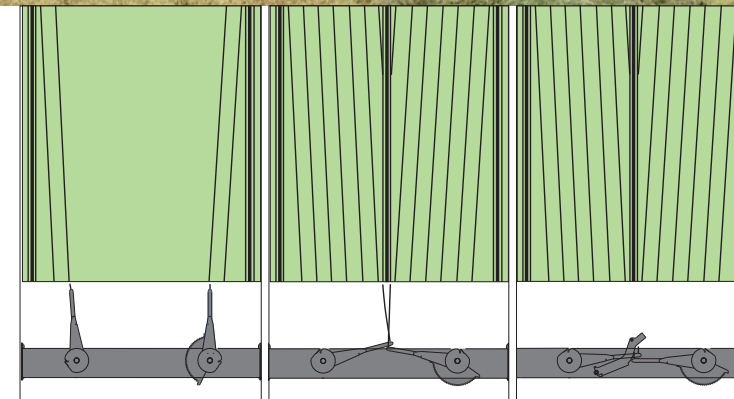
## OPTIMUM TYING PERFORMANCE RESULTS IN LESS WAITING

The net and twine tying process is crucial during baling. Less time needed to tie the bale, means a higher bale output. To optimize this process, the number of wraps can be preset and all main adjustments can be made with the monitor. The net wrap is stored at the front of the machine and the twine is stored on the righthand side. A low storage height for both make changing rolls simple and convenient.

### NET WRAP SYSTEM

The well-engineered net wrap system provides the bale with a perfect wrap from edge to edge. The net is fed a short distance into the front of the bale chamber to secure an even and direct start with the duck bill. The system's innovative design puts constant tension on the net during the wrapping process. The net wrap system runs at approximately 90% of the bale's rotational speed to stretch regardless of how much net is left on the roll, making the Kuhn design unique to competitors. After leaving the bale chamber, the bale is less likely to expand and maintains its density. This allows for extended storage and better overall bale quality. A second net roll storage guarantees enough net wrap for a long working day.

When needed, the VB and VBP also can be equipped with a combination of twine and net wrap.



Twin tubes feed twine simultaneously

Center twines overlapped

No loose ends at edge of bale

### TWINE SYSTEM

The twine system can be easily programmed with a preselected choice or you can customize your own settings with the baler monitor from the tractor seat. By using twin tubes, the time is reduced to a minimum.

During the tying process, both twines start at the bale center and overlap themselves, then move to the edges of the bale. Then, the twines gradually move back to the center. At the final stage, the twines overlap to ensure that they are tied and there are no loose ends.





VARIABLE CHAMBER ROUND BALERS VBP 2160

## BALING AND WRAPPING: A ONE-MAN OPERATION

Two technologies from Kuhn are combined into one machine to create the 2160 VBP Variable BalePack. This baler-wrapper combination begins with a standard VB 2160 variable chamber baler with an OptiCut integral rotor and merges it with an innovative wrapper system. This purpose-built machine is simple to use and capable of working in all crop conditions, even on hilly ground.

Fast and reliable bale transfer, combined with a high-speed, twin-satellite wrapping unit equipped with IntelliWrap, gives the Kuhn VBP BalePack the capacity to reach an output of up to 60 bales per hour.



### PATENTED, SIMPLE PRE-STRETCHER

The pre-stretcher holds a 30" roll of film and maintains a 70% stretch evenly throughout the roll. Conical ends maintain optimum film width and reduce tearing. Aluminum construction avoids buildup of tack from the film. The design and location makes it very easy to change film rolls compared to competitive models.

## RAPID, RELIABLE BALE TRANSFER

### RAPID AND RELIABLE

To minimize idle time and maximize output, rapid bale transfer is required. Since all bales are not made in perfect field conditions, the VBP is designed to ensure rapid bale transfer, even when working in sloping fields.

1. The first loading fork (in red) collects the bale as it leaves the bale chamber.  
The wrapping table is tilted forward; ready to receive the bale.  
**ADVANTAGE:** There is no possibility for the bale to roll over the end of the wrapping table when facing up a slope.
2. The second loading fork (in blue) transfers the bale onto the wrapping table.  
The tailgate shuts automatically, with the second loading fork still in the raised position.  
**ADVANTAGE:** This saves time and also prevents any chance for the bale to roll forward onto the tailgate when facing downhill.
3. The wrapping table returns to its horizontal position and the second loading fork is lowered.  
The bale sits low on the table supported by four wide belts and four lateral guide rollers.  
**ADVANTAGE:** Regardless of the bale shape, the table offers strong support and allows perfect wrapping.
4. The IntelliWrap wrapping system with close mounted pre-stretchers rapidly wraps the bale, either in conventional or (optional) 3D mode.  
**ADVANTAGE:** Vertically mounted pre-stretch units ensure that no hay gets between the layers of film during the wrapping process. This results in effective sealing between film layers and the highest possible haylage quality.
5. The low mounted table allows the wrapped bale to be gently discharged while driving, either automatically or manually.  
**ADVANTAGE:** When working on sloping ground, the wrapped bale can be discharged while the net or twine is being applied on the following bale, saving time and increasing output potential.



# WRAPPING

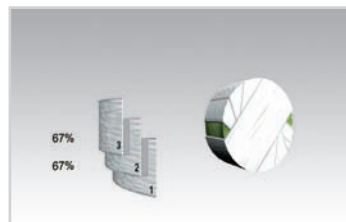
## IntelliWrap, The Intelligent Wrapping Technology

Kuhn has been a pioneer in wrapping and baling technology. The latest result of this visionary approach is a revolutionary wrapping technique called IntelliWrap. This technology uses computer-controlled electronics and hydraulics to monitor the wrapping process and continuously control the film overlap, allowing complete flexibility.

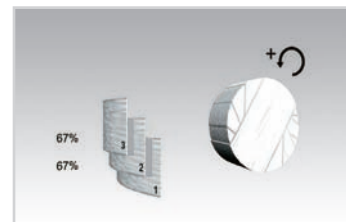
For the best conservation and fermentation of your valuable crop, wrapping the bale is crucial in this process. Depending on personal preferences, crop conditions and the storage period 5 layers of film may be enough, while in other circumstances 7 layers are preferred. Using IntelliWrap adjustments are simple—from your tractor seat you can easily adjust the number of film layers on the monitor. Just select 4,5,6,7,8 (no other wrapper manufacturers offer selection of 5 or 7 layers) or more layers of film and confirm. When selecting 5 layers, a minimum of 5 layers of film are applied to each and every portion of the bale.



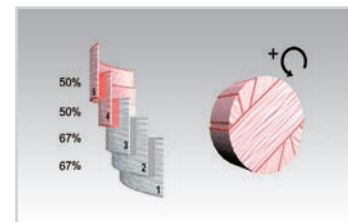
Selection of 5 film layers



The bale is covered with 3 layers and 67% overlap



Increasing of the bale rotation speed



Final 2 layers with 50% overlap



The scissor film cutters ensure a clean, consistent cut



## CUSTOMIZED TO FIT YOUR OPERATION

# ELECTRONICS

### ISOBUS

ISOBUS compatible tractors with a VT terminal will not require an additional monitor for the baler. Alternatively, the VT 50 or CCI 100 monitor can be used with tractors that are not ISOBUS compatible. Operator settings, such as bale diameter and knife activation, are accessed via the monitor. Operator warnings, left-right indicator, maximum bale size and operator information, including bale diameter and number of bales, are also provided.



### CCI 100 (ISOBUS Balers)

The ISOBUS compatible CCI 100 monitor has a large 8.5" color screen with outstanding clarity. Baling adjustments can be easily made via the touch screen or by using the large, soft-touch keys. The CCI 100 monitor can be used with many other ISOBUS compatible machines on the market.



### VT 50 (ISOBUS Balers)

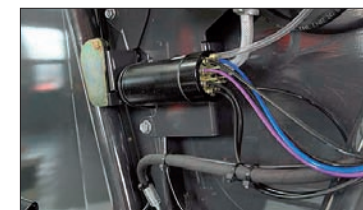
The Kuhn ISOBUS VT 50 monitor has a 5.7" color screen with outstanding clarity. Adjustments can easily be made by the touch screen and the large soft-touch keys on the sides. The VT 50 monitor can only be used specifically with the Kuhn ISOBUS machines.



### AUTOPLUS (Non ISOBUS compatible)

The Kuhn AutoPlus monitor provides clear, easy to read information and gives full command of the baling process. An audible and visual alarm signals when the bale is ready. A choice of automatic or manual start of the tying process can be preselected. Adjustments, like the number of net wraps, are easily controlled from the tractor seat. AutoPlus also provides a daily and total bale counter.

# OPTIONS



Automatic chain oiling system allows individual adjustment of the amount of oil on each chain



The second drive roller secures bale rotation even in difficult crops (standard on the VBP and optional on the VB)



Proportional valve gives in-cab control of diameter, core and pressure settings



Pivoting pickup wheels for extreme conditions to ease wheel and tire stress



3D wrapping distributes film more uniformly and efficiently across the entire surface of the bale (VBP only)



Small bale kit allows you to wrap bales with a diameter of 31.5" and up (VBP only)



Bale turner gently places the bale on a flat end during unloading (VBP only)



## Model Specifications

|                                    | VB 2160<br>OPEN THROAT                                 | VB 2160<br>OPTIFEED                                    | VB 2160<br>OPTICUT 14   23                             | VB 2160 BALEPACK<br>OPTICUT 14   23             | VB 2190<br>OPEN THROAT                                 | VB 2190<br>OPTIFEED                                    | VB 2190<br>OPTICUT 14   23                             |
|------------------------------------|--|--|--|---|--|--|--|
| <b>DIMENSIONS</b>                  |  |  |  |   |  |  |  |
| - Width                            | 97" / 246 cm   | 97" / 246 cm   | 97" / 246 cm   | 118" / 300 cm                                   | 97" / 246 cm   | 97" / 246 cm   | 97" / 246 cm   |
| - Height                           | 105" / 267 cm  | 105" / 267 cm  | 105" / 267 cm  | 115" / 292 cm                                   | 113" / 287 cm  | 113" / 287 cm  | 113" / 287 cm  |
| - Length                           | 158" / 401 cm  | 158" / 401 cm  | 158" / 401 cm  | 260" / 660 cm                                   | 162" / 411 cm  | 162" / 411 cm  | 162" / 411 cm  |
| - Weight Empty                     | 4,870 lbs / 2,209 kg                                   | 5,490 lbs / 2,490 kg                                   | 6,380 lbs / 2,894 kg   6,500 lbs / 2,948 kg            | 10,956 lbs / 4,980 kg   11,715 lbs / 5,325 kg   | 4,980 lbs / 2,259 kg                                   | 5,600 lbs / 2,540 kg                                   | 6,380 lbs / 2,894 kg   6,500 lbs / 2,948 kg            |
| <b>BALE DIMENSIONS</b>             |  |  |  |   |  |  |  |
| - Diameter Min.                    | 31.5" / 80 cm  | 31.5" / 80 cm  | 31.5" / 80 cm  | 31.5" / 80 cm                                   | 31.5" / 80 cm  | 31.5" / 80 cm  | 31.5" / 80 cm  |
| - Diameter Max.                    | 63" / 160 cm   | 63" / 160 cm   | 63" / 160 cm   | 63" / 160 cm**                                  | 73" / 185 cm   | 73" / 185 cm   | 73" / 185 cm   |
| - Width                            | 47" / 119 cm   | 47" / 119 cm   | 47" / 119 cm   | 47" / 119 cm                                    | 47" / 119 cm   | 47" / 119 cm   | 47" / 119 cm   |
| <b>PICKUP</b>                      |  |  |  |   |  |  |  |
| - Pickup Width                     | 83" / 211 cm   | 91" / 231 cm   | 91" / 231 cm   | 91" / 231 cm                                    | 83" / 211 cm   | 91" / 231 cm   | 91" / 231 cm   |
| - Number of Tine Bars              | 4  | 5  | 5  | 5   | 4  | 5  | 5  |
| - Tine Spacing                     | 2.4" / 6.1 cm  | 2.4" / 6.1 cm  | 2.4" / 6.1 cm  | 2.4" / 6.1 cm                                   | 2.4" / 6.1 cm  | 2.4" / 6.1 cm  | 2.4" / 6.1 cm  |
| - Windguard with Crop Roller       | Standard   | Standard   | Standard   | Standard  | Standard   | Standard   | Standard   |
| - Pneumatic Gauge Wheels           | Standard   | Standard   | Standard   | Standard  | Standard   | Standard   | Standard   |
| <b>INTAKE</b>                      |  |  |  |   |  |  |  |
| - Intake                           | Open Throat  | Optifeed   | Opticut 14   Opticut 23                                | Opticut 14   Opticut 23                         | Open Throat  | Optifeed   | Opticut 14   Opticut 23                                |
| - Knife Protection                 | N/A  | N/A  | Single / Spring  | Single / Spring                                 | N/A  | N/A  | Single / Spring  |
| <b>BALE CHAMBER</b>                |  |  |  |   |  |  |  |
| - Bale Formation                   | 5 Belts + 3 rollers                                    | 5 Belts + 3 rollers                                    | 5 Belts + 3 rollers                                    | 5 Belts + 3 rollers                             | 5 Belts + 3 rollers                                    | 5 Belts + 3 rollers                                    | 5 Belts + 3 rollers                                    |
| - Belt Width                       | 8.5" / 21.6 cm   | 8.5" / 21.6 cm   | 8.5" / 21.6 cm   | 8.5" / 21.6 cm                                  | 8.5" / 21.6 cm   | 8.5" / 21.6 cm   | 8.5" / 21.6 cm   |
| - Belts                            | Laced / Endless  | Laced / Endless  | Endless  | Endless   | Laced / Endless  | Laced / Endless  | Endless  |
| <b>BALE TYING SYSTEM</b>           |  |  |  |   |  |  |  |
| - Double Twine Wrap                | Choice of twine, net wrap or twine and net wrap system | Choice of twine, net wrap or twine and net wrap system | Choice of twine, net wrap or twine and net wrap system | N/A   | Choice of twine, net wrap or twine and net wrap system | Choice of twine, net wrap or twine and net wrap system | Choice of twine, net wrap or twine and net wrap system |
| - Net Wrap                         |  |  |  | Choice of net wrap or twine and net wrap system |  |  |  |
| - Twine and Net Wrap               |  |  |  |   |  |  |  |
| <b>OPERATION</b>                   |  |  |  |   |  |  |  |
| - Control System                   | AutoPlus / VT 50 / CCI 100                             | AutoPlus / VT 50 / CCI 100                             | VT 50 / CCI 100  | VT 50 / CCI 100                                 | AutoPlus / VT 50 / CCI 100                             | AutoPlus / VT 50 / CCI 100                             | VT 50 / CCI 100  |
| <b>WRAPPING UNIT</b>               |  |  |  |   |  |  |  |
| - 3D Wrapping                      | N/A  | N/A  | N/A  | Optional  | N/A  | N/A  | N/A  |
| - Film End / Break Sensor          | N/A  | N/A  | N/A  | Standard  | N/A  | N/A  | N/A  |
| <b>WHEELS AND AXLES</b>            |  |  |  |   |  |  |  |
| - Single Axle 11.5 / 80-15.3*      | Standard*  | Standard*  | N/A  | N/A   | Standard*  | Standard*  | N/A  |
| - Single Axle 15.0 / 55-17         | Optional* / Standard                                   | Optional* / Standard                                   | Standard   | N/A   | Optional* / Standard                                   | Optional* / Standard                                   | Standard   |
| - Single Axle 500 / 50-17          | Optional   | Optional   | Optional   | N/A   | Optional   | Optional   | Optional   |
| - Single Axle 500 / 45-22.5        | N/A  | Optional   | Optional   | N/A   | N/A  | Optional   | Optional   |
| - Tandem Axle 400 / 60-22.5        | N/A  | N/A  | N/A  | Standard  | N/A  | N/A  | N/A  |
| - Tandem Axle 500 / 45-22.5        | N/A  | N/A  | N/A  | Optional  | N/A  | N/A  | N/A  |
| - Hydraulic / Pneumatic Brakes     | Optional / Optional                                    | Optional / Optional                                    | Optional / Optional                                    | Standard / Optional                             | Optional / Optional                                    | Optional / Optional                                    | Optional / Optional                                    |
| <b>OTHERS</b>                      |  |  |  |   |  |  |  |
| - PTO                              | 540 rpm  | 540 rpm  | 540 rpm  | 540 rpm   | 540 rpm  | 540 rpm  | 540 rpm  |
| - Min Power Requirement***         | 55 hp / 41 kW  | 65 hp / 49 kW  | 70 hp / 53 kW   80 hp / 60 kW                          | 110 hp / 82 kW   125 hp / 94 kW                 | 55 hp / 41 kW  | 65 hp / 49 kW  | 70 hp / 53 kW   80 hp / 60 kW                          |
| - Recommended Power Requirement*** | 75 hp / 56 kW  | 85 hp / 63 kW  | 90 hp / 68 kW   100 hp / 75 kW                         | 130 hp / 97 kW   145 hp / 109 kW                | 75 hp / 56 kW  | 85 hp / 63 kW  | 90 hp / 68 kW   100 hp / 75 kW                         |

\* = AutoPlus \*\* = 73" / 185 cm with wrapper disconnected

\*\*\* = Power requirement may vary with different crops, conditions, and options used. Consult operators manual for proper tractor sizing.





VARIABLE CHAMBER ROUND BALERS VB 2160 / VB 2190 / VBP 2160

# COMPLEMENTARY PRODUCTS

## MORE PRODUCTS TO MEET YOUR NEEDS

With over 590 models of equipment, we have the most complete implement line in the industry. Whether you have a small or large operation, we have a broad range of models and options to help fit your diverse needs.



1. Mowers
2. Mower Conditioners
3. Tedders
4. Large Square Balers
5. Bale Processors
6. TMR Mixers

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Our machines comply with the North American safety regulations. In our leaflets, to better illustrate certain details of the machines some safety devices could have been removed. Conforming to the assembly and operator's manual, in no circumstances must machine be operated without these safety devices in place. All machines are equipped with safety devices which comply with the regulations of the countries in which they are delivered. In the interest of progress, we reserve the right to change without notice any specifications, design or materials listed. Patents filed in several countries.



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