

Commercial Hay Mergers | Twin and Triple



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# MERGE MAXX<sup>®</sup>

MM 701 / 890 / 1101 / 1301



**Invest in Quality<sup>®</sup>**

MERGE MAXX® MM 701 / 890 / 1101 / 1301

# MAXIMUM PRODUCTIVITY AND PERFORMANCE

## EXCEL IN MERGING ALL CROP TYPES

KUHN Merge Maxx® hay mergers are the widest and most efficient mergers on the market today, creating the fluffiest and easiest to harvest windrows. They are unique in the industry and unmatched in simplicity of operation, durability and merging capabilities. They excel with merging all different types of forages.

## QUICK AND EASY TO USE

KUHN hay mergers are designed so you can easily make adjustments without having to leave the comfort of the tractor cab. This helps with your crop harvesting and results in higher quality forage.

## INTELLIMERGE™ ISOBUS CONTROL SYSTEM

The IntelliMerge ISOBUS control system allows the operator to run the machine, make adjustments, receive performance feedback and carry out diagnostics. Operators can tailor their machine to field and crop conditions to maximize their efficiency.

## MERGE MAXX®

Twin and Triple Hay Mergers  
in brief

Models	Individual Pickup Width			Continuous Pickup Width	Transport Width	Horsepower Requirement
MM 701	12' (3.7 m)			24' (7.3 m)	10' (3 m)	100 hp (75 kW)
MM 890	15' (4.6 m)			30' (9.1 m)	10'3" (3.1 m)	120 hp (90 kW)
MM 1101	12' (3.7 m)			36' (10.97 m)	12'1" (3.7 m)	140 hp (104 kW)
MM 1301	Left: 15' (4.6 m)	Center: 12' (3.7 m)	Right: 15' (4.6 m)	42' (12.8 m)	12'1" (3.7 m)	140 hp (104 kW)

# IT ALL STARTS WITH THE PICKUP

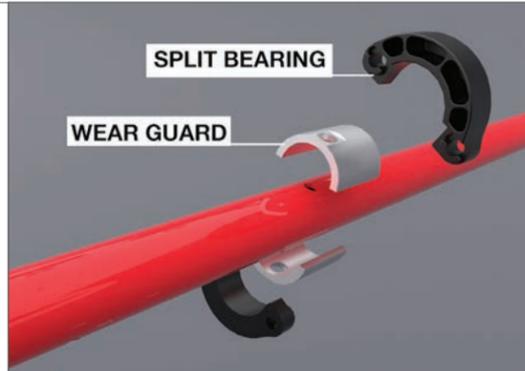
## Cutting-Edge Merge Maxx® Hay Mergers

When it comes to merging crop, a tough, durable pickup that operates in varying conditions is the first and most critical step. Merge Maxx pickups are designed to be the most dependable whether merging fine, delicate legumes, thick, heavy grass or anything in between. Outstanding flotation characteristics and an optimized design makes merging a simple and low-maintenance job.



### SPLIT BEARING DESIGN

The two-piece poly tine bar bearing greatly simplifies periodic maintenance. KUHN MM hay mergers now have a new tine bolt with fewer pieces. The specially designed bolt holds itself so only one wrench is needed to change pickup tines.



### BEARING WEAR GUARDS

Exclusive in the industry, standard bearing wear guards maximize tine bar life by providing an easily replaceable, split mounting surface. If you're merging in abrasive soils, you'll especially appreciate this feature as a wear guard set can be replaced, with the tine bar installed, in under one minute.



### ANTI-WRAPPING DISCS

To minimize wrapping in long crops, such as oats or long grasses, patented HDPE anti-wrapping discs are integrated in the ends of the pickups and rotate with the tine bars. This small improvement reduces the dead space, where long crop likes to wrap, as seen with all pickup style mergers.



### HIGH-CAPACITY PICKUPS WITH INTEGRATED FRAMES

Commercially designed pickups treat crop gently, yet are built and tested for extreme use. A high-strength, steel alloy greatly improves wearing characteristics. The dual-cam design, with large, heavy-duty, sealed cam followers, provides extra-long life even in the toughest conditions. KUHN high-capacity pickups are designed and built with integrated frames to improve the strength and durability. The integral frames eliminate areas crop can pinch underneath the head keeping the belts running at peak efficiency.



### CROP NETTING

Standard crop netting limits leaf loss during transition to the belt and ultimately improves leaf incorporation in the windrow. Users can adjust the netting from fully extended to halfway or fully retracted to match their needs.



### FLOATING WINDGUARD

The floating windguard eliminates the need to make routine adjustments when merging different crops or cuttings. The simple geometry of the floating linkage means the windguard is automatically optimized for differing volumes of crop. The long, curved fingers provide excellent crop guidance onto the belt for fluffy, even windrow creation, increasing harvest speed.



# VERSATILE & ADAPTABLE TO MEET YOUR NEEDS



### HEAVY-DUTY CONVEYORS

Commercial-grade belt conveyors allow the crop to effectively transition into the windrow, regardless of discharge side. The conveyor belt is self-cleaning and requires no tracking adjustments. Each conveyor has an easy-to-access splice for fast removal or replacement if necessary due to maintenance or normal wear.



### 2-POINT HITCH

The specially designed 2-point hitch makes hookup quick and easy. The swiveling headstock eliminates driveline chatter and allows up to 90-degree turns. The hitches on all KUHNN MM hay merger models are quick hitch compatible. An integrated stand on each merger provides a large footprint and swings and locks easily when attached to the tractor.



### CONSTANT FLOAT® SUSPENSION

A simple and effective mechanical suspension system is utilized for superior flotation. This unique design, inspired by the proven KUHNN trailed disc mowers, eliminates complicated hydraulic requirements and the need for tractor float valve engagement, unlike other mergers in the industry.



### MULTIPLE DELIVERY OPTIONS

The MM 701, 890, 1101 and 1301 can merge crop to the left, right, split or with either wing in the raised position. Having the ability to raise the wings independently is particularly useful for opening up fields, merging around obstacles or cleaning up point rows in irregularly shaped fields.



### BELT TENSION ADJUSTMENT

The quick-release belt tensioning system simplifies storage and routine adjustment. Easy adjustment from one side maintains uniform pressure over the width of the belt. It is recommended to take the tension off of the belts in between cuttings and during the off season.



### NO STEERING AXLE NEEDED

Merge Maxx® twin and triple mergers do not require a steering axle, even on steep hillsides. This is a result of the short wheelbase and is an advantage over competitive mergers. This simplification reduces routine maintenance and improves overall reliability. An added benefit of the short wheelbase is reduced tongue weight, so the tractor does not get "pushed around" by the merger.



### HYDRAULIC ON/OFF BELT CONTROL

When raising the pickups at the headlands, the belts and pickups automatically turn off to keep crop from being sent into the headland at the end rows. Operators can lower the pickups to the working position when coming back into the windrows to make the pickups automatically turn back on and deposit the remaining crop into the windrow. A single button allows for only the belt to be disengaged in the working position to gather any extra or missed crop and then place it in the windrow.



### NARROW AND SIMPLE TRANSPORT

The simple folding design allows quick transition from field to road. Transport is a narrow 10' (3 m) wide on the MM 701, 10'3" (3.1 m) wide on the MM 890 and 12'1" (3.7 m) on the MM 1101 and MM 1301. Balanced tongue weight during transport and in the field helps you maintain control at all times.





#### FLOATING SKID SHOES

Dual, wide skid shoes allow each head to rapidly adapt to undulating field conditions while maintaining a very low ground pressure. Floating skid shoes are a KUH N exclusive. The pivoting action allows the pickups to float over pivot tracks and rough terrain. Additionally, the special shape and pivoting of the shoe allows for self-cleaning when lifted into the headland position to eliminate crop buildup. The skid shoes are reversible on their mounts for even wear and longer life.



#### CENTRAL LUBRICATION SYSTEM

These mergers require very little maintenance for their size. A centralized greasing system routes the right amount of grease to key points from a single zerk (optional on MM 701). Following factory recommended intervals, the machine (not including the driveline) requires less than one tube of grease per year with the optional grease pump installed and set to grease every eight hours of operation.

MERGE MAXX® MM 701 / 890 / 1101 / 1301

## TAKING EFFICIENCY...TO THE MAXX

With 24', 30', 36' and 42' (7.3 m, 9.1 m, 10.97 m and 12.8 m) of pickup in a single pass, KUHN MM 701, MM 890, MM 1101 and MM 1301 Merge Maxx® hay mergers are the largest and most efficient machines on the market today. They are unique in the industry and unmatched in simplicity of operation, durability and merging capabilities.

These mergers move crop quickly and cleanly to make uniform windrows for easy pickup with either a forage harvester or baler. Various types of rakes can lead to increased incorporation of ash, dirt or stones in your windrow which can significantly impact your bottom line. You can depend on KUHN twin and triple hay mergers to provide a clean, consistent windrow along with improved leaf retention for nutrient rich hay and forage. By having a clean, uniform windrow, your baler or forage harvester will be more efficient, being able to maintain more consistent ground speeds with fewer stops.



#### HYDRAULIC DRIVE

Belts and pickups are driven using the onboard hydraulic pumps with hydraulic oil from a 43-gallon (163 L) reservoir on the MM 701 and 890 and 67-gallon (254 L) reservoir on the MM 1101 and 1301. For peak performance even in the most adverse conditions, an oil cooler is optional on the MM 701 and 890 and standard on the MM 1101 and 1301.



#### HYDRAULIC CONTROLS

The hydraulic drive pumps oil through the main hydraulic blocks to run all the functions on each head including pickup speed, belt direction and skid shoe height. All of these functions are electronically controlled via the tractor's ISOBUS terminal, or the optional CCI 50, CCI 800 or CCI 1200 ISOBUS terminals.



#### HYDRAULICALLY ADJUSTABLE PICKUP HEIGHT

The hydraulically adjustable pickup height allows an operator to easily make changes from the ISOBUS terminal to the skid shoes. Height change is synchronized and accomplished through a cylinder mounted on each head. Relative head height is visible via the gauge on the terminal.



**VT 30**

The VT 30 monitor controls the merging process all from the tractor cab. The 3.5" (8.9 cm) color touchscreen provides the same user interface as the other KUHN terminals, making it an easy to understand monitor for all drivers. The VT 30 is equipped with both touchscreen and soft keys for intuitive control under all circumstances.

**Only available on the MM 701 and 890.**



**CCI 50**

The MM 701, MM 890, MM 1101 and MM 1301 are fully ISOBUS compatible. This means the intuitive interface can be displayed on all UT compliant monitors. The CCI 50 is a full ISOBUS monitor with a 6" (15 cm) color touchscreen. It can be controlled using the touchscreen and/or the soft keys. A selection of CCI Apps can be used on the CCI 50 to utilize your monitor year round.



**CCI 800**

The CCI 800 is a full ISOBUS monitor with an 8" (20.3 cm) touchscreen terminal with automatic brightness adjustment for better visibility in the cab. The CCI 800 offers many of the same capabilities of the larger CCI 1200 in a more compact size.



**CCI 1200**

The CCI 1200 is KUHN's state-of-the-art ISOBUS monitor. The 12" (30 cm) color touchscreen has a programmable view. For example, you can see the map display and the machine interface on the same screen at the same time. It offers a variety of upgrades through CCI Apps and can be your portal to precision farming.

# THE DIFFERENCE IS CONTROL

One key to achieving the productivity you expect from your KUHN machine is the user friendly interfaces we offer. Users can tailor their machine to their field and crop conditions to maximize efficiency. We listened carefully to the users of our machines to develop our user interfaces and monitors. The objective is to have a clear view of what your machine is doing at any time and to have all the important settings at your fingertips. The IntelliMerge™ ISOBUS control system allows the operator to run the machine, make adjustments, receive performance feedback and carry out diagnostics from the comfort of the cab. When adding a KUHN CCI 50, CCI 800 or CCI 1200 monitor to a non-ISOBUS tractor the displays can be used with other ISOBUS compatible machines when not used with the merger.

## INTELLIMERGE™ ISOBUS CONTROL SYSTEM

The IntelliMerge™ ISOBUS control system provides operators with simple push button controls, as well as an intuitive layout of key machine performance factors. The system also includes an acre counter and has the ability to disable certain sensors so the operator can finish up a field with limited functionality if a sensor fails.



## OPTISENSE™ BELT STALL INDICATOR

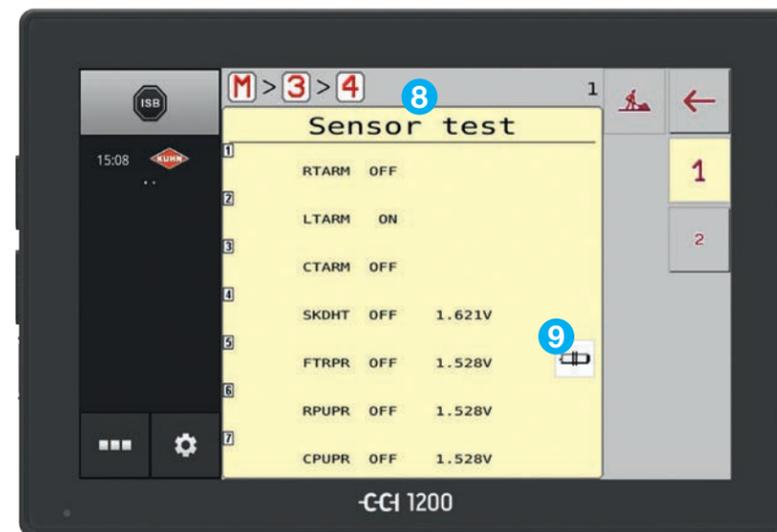
The OptiSense™ belt stall indicator alerts the operator when the belts start to slow down when approaching the maximum capacity of the machine. This gives the operator a chance to react before the machine plugs. If the belts stop, the system will shut down the machine to avoid damage to the belts and prevents further plugging of the machine. *Optional on the MM 701.*



# THE WORLD'S FIRST ISOBUS COMPATIBLE HAY MERGERS!

These user interfaces get you in and out of the field faster to save you valuable time and money. The intuitive layout not only makes operation a breeze, but also provides the operator with the feedback needed to push the machine to maximum productivity.

- 1. With the electronically controlled speed adjustment system**, an operator can quickly and easily adjust pickup speed inside the cab on-the-go to perfectly match crop conditions. With this feature you can maximize leaf retention, especially if merging drier legumes such as alfalfa. In heavy grass crops, the pickups can also be sped up to promote faster working speeds.
- 2. In automatic mode**, the merger will adjust pickup speed automatically as ground speed varies. This maximizes pickup efficiency, while minimizing damage to crop and wear of the pickup.
- 3. Acre and hour counters** can be used by reading the tractor's speed and machine width to aid in recording custom operations.
- 4. The electronic conveyor directional control** allows operators to rapidly change the direction from all left, all right or split directly from the operator's seat by simply touching the appropriate key. Operators merging in fields with varying volume throughout may find this particularly valuable.
- 5. Cleanout mode** can be activated in the instance of a plugged machine. This feature lets the operator unplug and cleanout the machine from the cab without ever having to leave the tractor.
- 6. Pickup efficiency** indicates relative capacity of the pickups giving a visual indication to the operator of machine efficiency.
- 7. The hydraulically adjustable pickup height** allows an operator to easily make changes from the ISOBUS terminal via the skid shoe adjustment. Relative height is visible via the gauge on the terminal.
- 8. Trouble shooting** is a breeze thanks to the sensor test screen. The user is able to see the current readings for most sensors on the machine, making it quick and easy to track down anything outside normal parameters.
- 9. In the event a sensor does fail, many are interchangeable**, allowing an operator to move the headland lift sensor to the belt stall location to keep the machine running. Or if the operator chooses, several sensors have the ability to deactivate to stop notifications if the operator needs to finish a field before repairing the machine.



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Customized to Fit Your Operation

# OPTIONAL EQUIPMENT

**MERGE MAXX** MM 701 / 890 / 1101 / 1301



## SWATHBOARD

The optional right-side swathboard mimics the windrow formation of a rotary rake. With this simple, bolt-on device, you can make a well-formed, boxy windrow, well suited for a baler. Additionally, forage harvester operators will find it improves windrow formation even further, increasing harvester efficiency. *MM 701, 890 and MM 1101 only.*



## 4' BELT EXTENSION

The 4' (1.2 m) belt extension on the right side optimizes merging capability behind a 15'-18' (4.6-5.5 m) mower conditioner. It includes a bolt-on frame and belt extension, giving you the ability to merge up to 90' (27.5 m) of crop together in a 10' (3 m) or less windrow to maximize harvester efficiency (Not intended for use in tedder crop.) *MM 701 and MM 890 only.*



## WIDE TIRES

The MM 701 comes standard with 16.5L x 16.1" implement tires. Wider 500/45-22.5 flotation tires can be utilized to keep field compaction low. Additionally, the bar tread design helps prevent rutting if merging in wet field conditions. The MM 890, 1101 and 1301 come standard with 550/45-22.5 flotation tires.



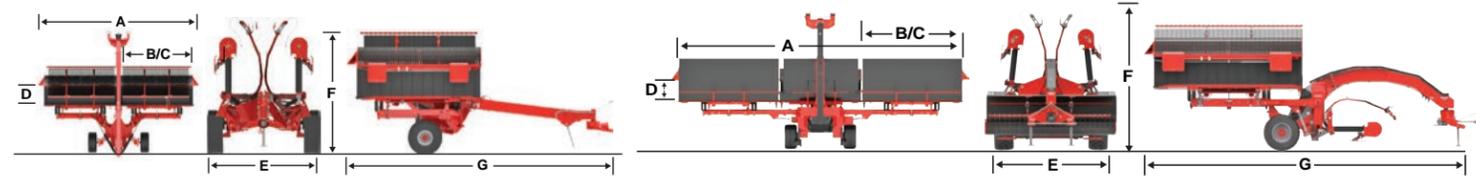
## AUTO-LUBE GREASE PUMP

Take the guess work out of maintenance. When the terminal is on and there is grease in the pump, the machine is getting lubricated. This system saves the operator time every day. *Available on the MM 890, MM 1101 and MM 1301. Available on the MM 701 when equipped with Central Lubrication System.*



MM 701 / MM 890

MM 1101 / MM 1301



## Model Specifications

	MM 701	MM 890	MM 1101	MM 1301
<b>DIMENSIONS</b>				
<b>A</b> – Working width	24' (7.3 m)	29' 4" (8.59 m)	36' (10.98 m)	23' 10" (7.27 m)
Number of pickups and conveyors	2		3	
<b>B</b> – Individual pickup width	12' (3.7 m)	15' (4.6 m)	12' (3.7 m)	Left pickup: 15' (4.6 m) Center pickup: 12' (3.7 m) Right pickup: 15' (4.6 m)
<b>C</b> – Conveyor length	11'10" (3.7 m)	14'10" (4.5 m)	11'10" (3.6 m)	Left: 14'10" (4.5 m) Center: 11'10" (3.6 m) Right: 14'10" (4.5 m)
<b>D</b> – Conveyor width	3' (1 m)			
Discharge capability	Right, left, or 50/50 split		Right, left, or split	
Pickup windguard	Standard			
Adjustable crop nets	Standard			
Number of tine bars	6			
Cam followers	Sealed roller bearings			
Pickup height	5/8" - 3 1/8" (16 - 80 mm)			
Adjustable skid shoes	Hydraulic			
Header flotation	Constant Float® suspension			
Header suspension travel	14" (+8", -6") 35.6 cm (+20.3 cm, -15.2 cm)			
Hitch	2-point swivel hitch, Cat. 2, 3N and 3, quick hitch compatible	2-point swivel, Cat. 2/3N/3/4N, quick hitch compatible	2-point swivel, Cat. 3/4N/4, quick hitch compatible	
Self-contained hydraulic drive	Standard			
Electronic variable pickup speed control from tractor cab	via ISOBUS terminal			
Conveyor direction control from tractor cab	via ISOBUS terminal			
ON/OFF conveyor control without disengaging the pickup	via ISOBUS terminal			
Pickup height gauge	via ISOBUS terminal			
<b>E</b> – Transport width	10' (3 m)	10'3" (3.1 m)	12'1" (3.7 m)	
<b>F</b> – Transport length	24'6" (7.5 m)	28'4" (8.7 m)	29' (8.8 m)	32' (9.8 m)
<b>G</b> – Transport height	12' (3.7 m)			
Tires	Standard 16.5"L X 16.1" 10 - ply imp. tires, mounted	500/45-22.5 flotation	Standard 550/45-22.5 flotation tires, mounted	
Central lube system	Optional	Standard		
PTO	1 3/8" - 21 spline			
PTO speed	1,000 rpm			
Minimum PTO power requirement	100 hp (75 kW)	120 hp (90 kW)	140 hp (104 kW)	
Road lights and signaling	Standard			
Required tractor electrical connections	1 SAE 7-pin light connection, 12V power ISOBUS plug			
Required tractor hydraulic connections	2 DA; no float valve required		3 DA; no float valve required	
Approximate machine weight	9,800 lbs (4,445 kg)	10,700 lbs (4,855 kg)	17,000 lbs (7,711 kg)	17,700 lbs (8,030 kg)

# COMPLEMENTARY PRODUCTS

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### KUHN NORTH AMERICA, INC.

Corporate Headquarters  
1501 West Seventh Avenue - Brodhead, WI 53520

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