DISCBINE® PLUS

Center-Pivot Disc Mower-Conditioners

Discbine® 310 PLUS
Discbine® 312 PLUS
Discbine® 313 PLUS
Discbine® 316 PLUS


NEW HOLLAND

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Discbine® PLUS: redefining the disc mower-conditioner.

As a modern hay producer, you need equipment that improves your productivity to help you make hay when conditions are right and preserve valuable nutrients. You need a mower that cuts fast, close and clean and provides uniform conditioning. You also need innovative and durable solutions that protect your investment and give you more uptime. That's exactly what a Discbine® PLUS center-pivot disc mower-conditioner offers. It's built on a legacy of durability and innovation to deliver the dependability and productivity that only a genuine Discbine can provide. More than just bold styling, it'll be an added PLUS for your haymaking operation, with features including cutterbar upgrades for the cleanest cut yet and improved swath control for even faster dry down.
A disc mower-conditioner isn't a genuine Discbine unless it's built and backed by the best in the business: New Holland.

A+PLUS for...

+PRODUCTIVITY

+ Center-pivot design reduces headland turns and adds greater mowing flexibility
+ Standard QuickMax™ knife-change system saves you time
+ Three WideDry™ conditioning systems match your needs

+PROTECTION

+ ShockPRO™ hubs absorb impacts to prevent potential cutterbar damage
+ Lower conditioning roll shaft scrapers are standard for trouble-free mowing

+PERFORMANCE

+ MowMax™ II PLUS modular cutterbar with large discs provides knife overlap and a slim overall profile
+ Windrow forming shields and swath gate provide ideal adjustability and crop control

+POLISHED

+ Connective Flow decals
+ Yellow accents signify commercial-grade performance, just like Durabine™ PLUS disc headers used on Speedrower® PLUS self-propelled windrowers

Proudly built in New Holland, Pennsylvania

From the hitch to the swath doors, all four Discbine PLUS models are designed and built with pride in New Holland, Pennsylvania. Our 341-acre campus serves as our North American headquarters and global Center of Excellence for Hay and Forage. Here, the expertise of our engineering, research and development, marketing, and manufacturing teams come together to build Discbines alongside other products, like Roll-Belt™ round balers and Hayliner® small square balers – all with haymakers like you in mind.

Pivot to the size and productivity you need.

Whether you need a nimble mower to enter tight places or big cutting capacity for wide-open spaces, there's a Discbine® PLUS center-pivot disc mower-conditioner to suit your needs.

Models	Discbine® 310 PLUS	Discbine® 312 PLUS	Discbine® 313 PLUS	Discbine® 316 PLUS
Cutting width *[ft. in. (m)]*	10' 1" (3.0)	11' 7" (3.5)	13' 1" (4.0)	16' 5" (5.0)
Transport width *[ft. in. (m)]*	10' 4" (3.2)	11' 10" (3.6)	13' 5" (4.03)	16' 8" (5.07)
Minimum PTO *[HP (kW)]* requirement	80 (60)	85 (63)	90 (67)	100 (75)
Acres per hour*	5.9	6.7	7.6	9.6

*Acres per hour calculated at 6 mph and 80% field efficiency

Discbine® 310 PLUS

If you need center-pivot productivity in a nimble, low-PTO-horsepower package, look no further than the Discbine 310 PLUS. Requiring just 80 PTO horsepower for operation, the Discbine 310 PLUS can be equipped with either a 540- or 1000-rpm PTO, which makes it a perfect partner for utility tractors. Its six-disc cutterbar provides a 10' 1" (3.0 m) cut, while a 10' 4" (3.2 m) transport width and center-pivot design mean you can easily maneuver through tight gates, narrow cattle guards, and crowded roadways

Discbine® 312 PLUS

For maximum mowing capacity under 12’ (3.7 m), choose the Discbine 312 PLUS. Its seven-disc cutterbar provides an 11’ 7”- (3.5 m-) wide cut, while its overall transport width is a maneuverable 11’ 10” (3.6 m).

Discbine® 313 PLUS

Get over 10% greater capacity with the Discbine 313 PLUS compared to the Discbine 312 PLUS. Your productivity will increase with an additional 1’ 4”- (0.4 m-) wider cut, which translates to more acres cut per hour. You’ll also benefit from a wider cutting-to-conditioning ratio with the 125”- (318 cm-) wide conditioner.

Discbine® 316 PLUS

If big, wide-open fields are part of your haymaking routine, maximise your productivity with the Discbine 316 PLUS. It offers the widest cutting width in the series at 16’ 5” (5.0 m) to make quick work of big stands of hay.

A cut above the rest.

Haymaking season is no time for delays. That's why we pioneered our true modular disc cutterbar decades ago. From this original design through today, the legendary New Holland disc cutterbar has been known for strength, reliability, and easy service. The latest design, the ultra-reliable MowMax™ II PLUS disc cutterbar, is no exception. Its commercial-grade durability and high-capacity, clean-cutting design will save you time and money.

Lawn-like cut, commercial-grade durability

The MowMax II PLUS true modular cutterbar delivers our cleanest cut yet. It's similar to the cutterbar featured on Durabine™ PLUS disc headers for Speedrower® PLUS self-propelled windrowers, which means you get commercial-grade durability and performance. Plus, you'll find a variety of enhancements over our previous generation, including:

- Longer knives extend each module's cutting diameter by nearly an inch (2.5 cm) and turn at a faster tip speed compared to previous models.
- Reshaped rock guards provide better crop-to-knife engagement.
- To improve cutting in light or late-season crops, the profile of the cutterbar was lowered by bringing the discs closer to the cutterbar with low profile ShockPRO™ hubs.
- In combination with the longer knives, this design is more productive in down and tangled crops as the cutting height was lowered over 30%, leaving less uncut crop behind.

Save time with the QuickMax™ knife-change system

Time is precious when you're making hay. To save you time and keep you cutting clean, the patented QuickMax™ knife-change system is standard on all Discbine® PLUS models. The system lets you quickly change knives with discs at a 45-degree angle to the cutterbar. In just seconds, you can change knives in just one-half cutterbar rotation, saving you time compared to traditional bolted knives and other competitive quick-change systems. Knife-lock technology assures that each knife is retained in the most difficult conditions. Best of all, the system does not require the use of special knives—it works with all approved New Holland knives.

12- and 7-degree twisted smooth knives

The Discbine PLUS Series can be equipped with knives that best fit your operation. Both knives work with the QuickMax knife-change system and feature two cutting edges so they can be flipped for double the life. University studies have shown that less knife twist can also help reduce ash content.

- 12-degree twisted smooth knives come standard for normal cutting conditions.
- Optional 7-degree twisted smooth knives offer clean cutting and reduced blowdown in light or short crops. New Holland recommends 7-degree smooth twisted knives in rocky or stony field conditions.

The ShockPRO™ advantage

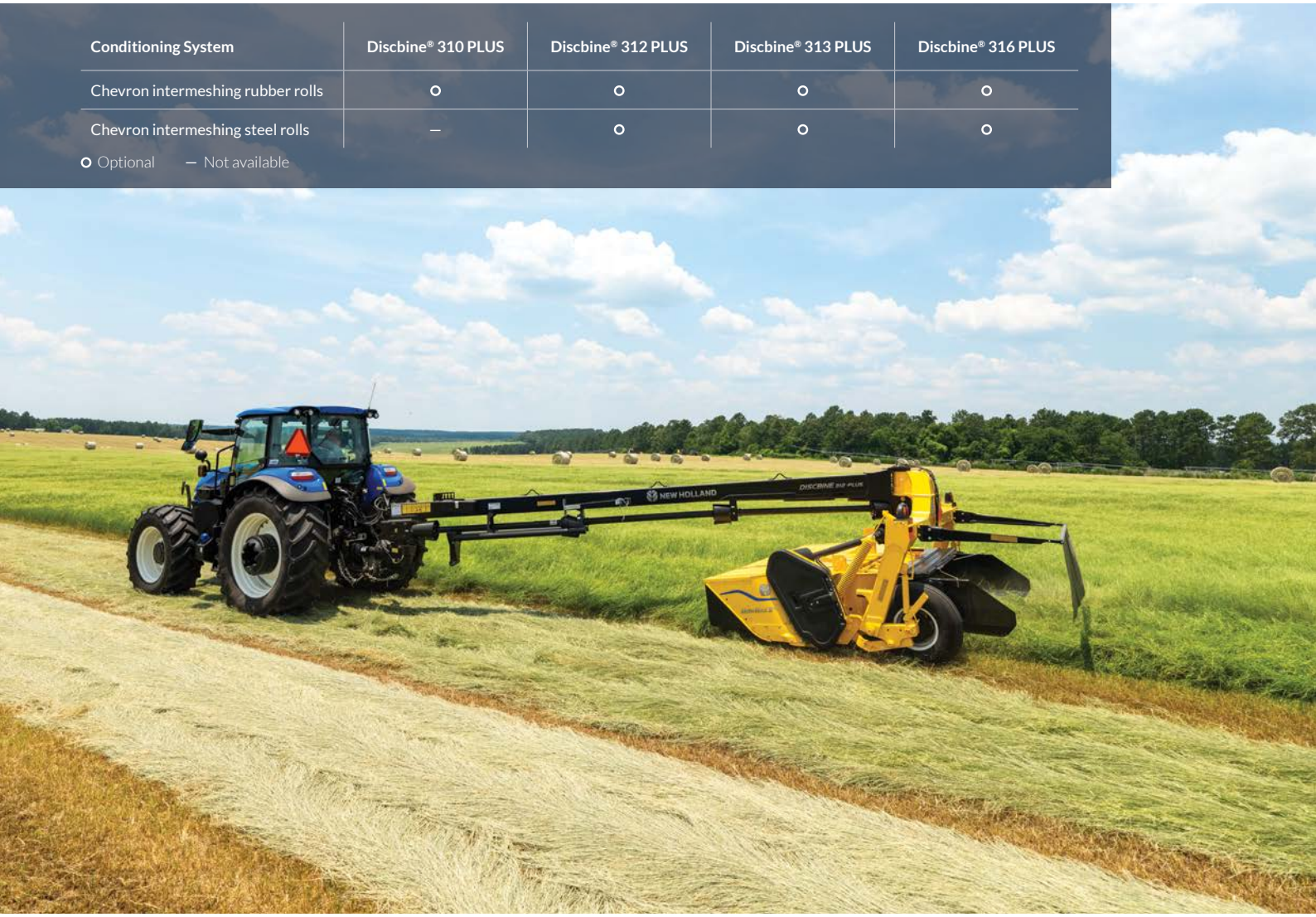
ShockPRO™ hubs save you hassle, time and repair costs by fending off potential damage to gears and module drive shafts. They absorb impacts to protect drive components and are quick to replace in the field, so you can keep mowing when conditions are right.

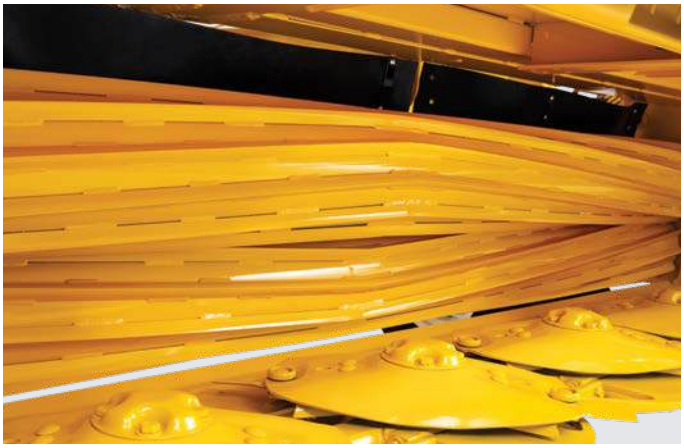
WideDry™ conditioning systems dry hay fast.

To adapt to crop types, changing conditions, and seasonality, you need an adaptable conditioning system that's sized appropriately to the cutterbar. WideDry™ conditioning systems deliver. Unlike competitive machines with narrow conditioning systems and multiple pairs of co-rotating discs, WideDry means you get smooth crop flow from the cutterbar to the appropriately sized conditioning system of your choice. No matter what conditioning system you choose, you'll find infinite adjustments and impressive uniformity that result in faster dry down.

Conditioning System	Discbine® 310 PLUS	Discbine® 312 PLUS	Discbine® 313 PLUS	Discbine® 316 PLUS
Chevron intermeshing rubber rolls	O	O	O	O
Chevron intermeshing steel rolls	–	O	O	O

O Optional – Not available





Chevron intermeshing steel rolls

Durable chevron steel intermeshing rolls are designed for use with all crops but show a real advantage in cane-type crops, grain forage crops and extra-tall grass crops. Rugged, all-steel roll construction resists wear, providing long life even in highly abrasive conditions.

Chevron intermeshing rubber rolls

For maximum versatility, choose gentle chevron rubber intermeshing rolls. They provide full-stem crimping and cracking of high-value legume crops, like alfalfa and clover. The rubber compound and wide chevron lug profile gently handle delicate leaves for maximum forage quality.

Non-stop, plug-free mowing

Both roll conditioning systems feature torsion-bar roll-pressure for consistent, thorough conditioning. For non-stop mowing, the unique linkage allows crop slugs and foreign objects to pass through without plugging. The hand crank makes it easy to tailor roll pressure to the crop you're mowing without having to crawl under the machine with wrenches.

Close the gap

Setting and maintaining roll gap is critical for proper conditioning and fast dry down. When set too wide, crop is missed. When set too narrow, field losses may increase or crop may be difficult to feed through the rolls. External adjustment allows easy access.

Slow your roll

Roll conditioning systems generate air movement that can blow lighter crop away from the cutterbar and adversely affect cut quality. To help prevent this, you can slow roll speed from 750 rpm to 640 rpm by switching the sheaves on the roll drive. The decreased roll speed minimises air bursts, while maintaining cutterbar speed to provide excellent cut quality in light crops.

Trouble-free in difficult conditions

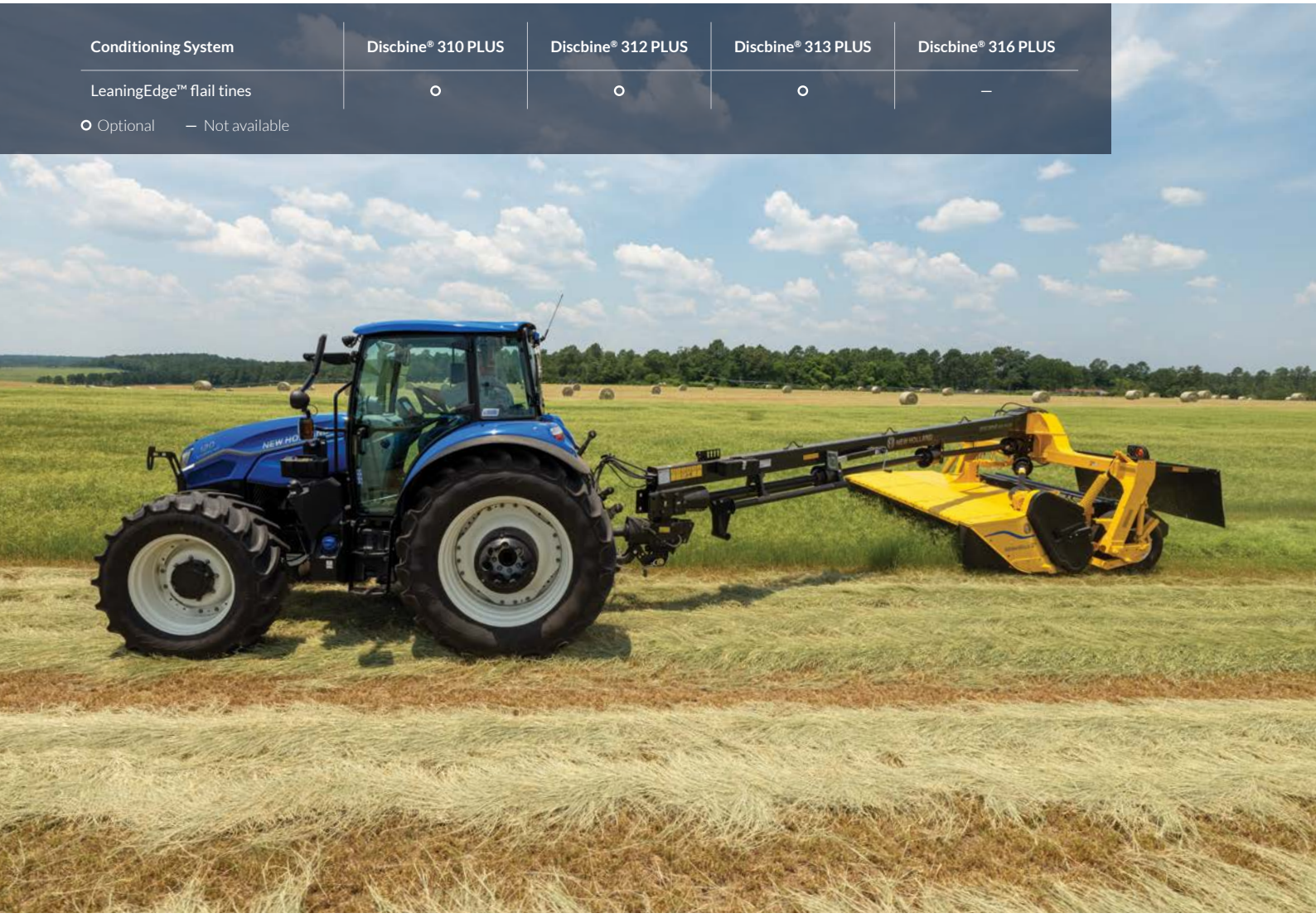
To prevent crop buildup and protect roll bearings, both roll conditioning systems are fitted with greaseable upper roll bearings and lower roll shaft scrapers.

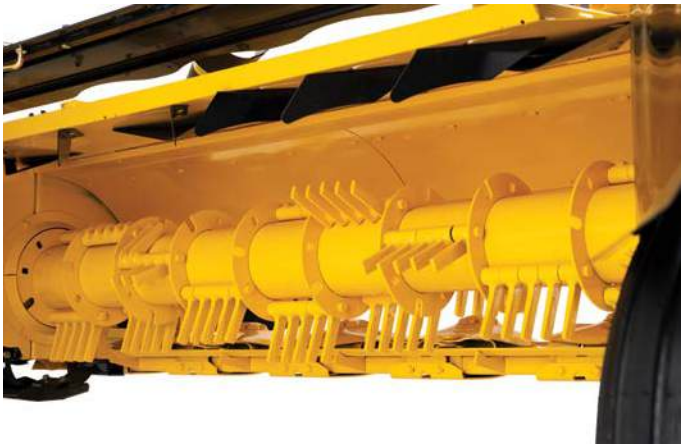
Gain an edge in grass conditioning.

Grass hay producers know that crushing and crimping fine-stem grass, like coastal grass, can be a real challenge. To promote fast drying, the LeaningEdge™ flail tine conditioning system pushes crop against an adjustable hood to scuff wax away. Crop receives even more scuffing action as the 20-degree tangent flail tines are angled rearward, creating more outward crop pressure against the hood.

Conditioning System	Discbine® 310 PLUS	Discbine® 312 PLUS	Discbine® 313 PLUS	Discbine® 316 PLUS
LeaningEdge™ flail tines	O	O	O	–

O Optional – Not available





Semi-swinging tine design

Tines are individually mounted so they can swing freely rearward, providing protection from rocks and debris. The semi-swinging design ensures crop is released at the ideal moment to form uniform, fast-drying swaths or windrows. It also prevents forward overswing to ensure the tines are always ideally positioned to pick up crop, while crop discharge is improved compared to fully swinging tine designs.

Adjusting conditioning intensity

For lighter conditioning of delicate crops, raise the hood away from the flails. Or, for maximum conditioning, lower the hood to increase friction. A crop-conditioning gauge lets you see the relative hood position. A dealer-installed textured hood liner is also available for even more aggressive conditioning.

Delicate conditioning

For even more delicate conditioning, a dealer-installed rotor slowdown kit slows the flail rotor from 1042 rpm to 752 rpm.

Windrow formation

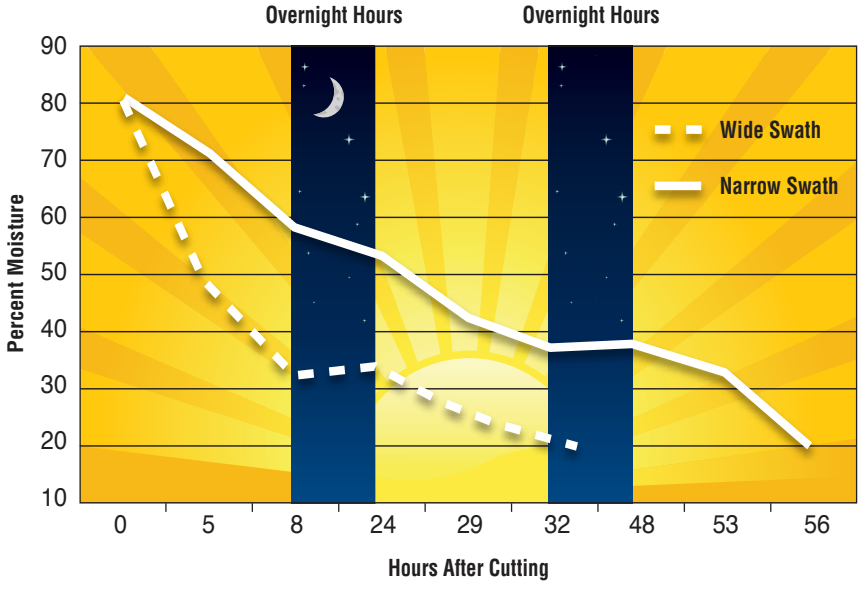
The LeaningEdge flail conditioning system is fitted with additional safety guards, including a rear curtain and support and unique windrow-forming shields. While different than roll conditioning systems, adjustment of the horizontal swath gate is done on the left end of the header behind the bevel gearbox and provides the same functionality.

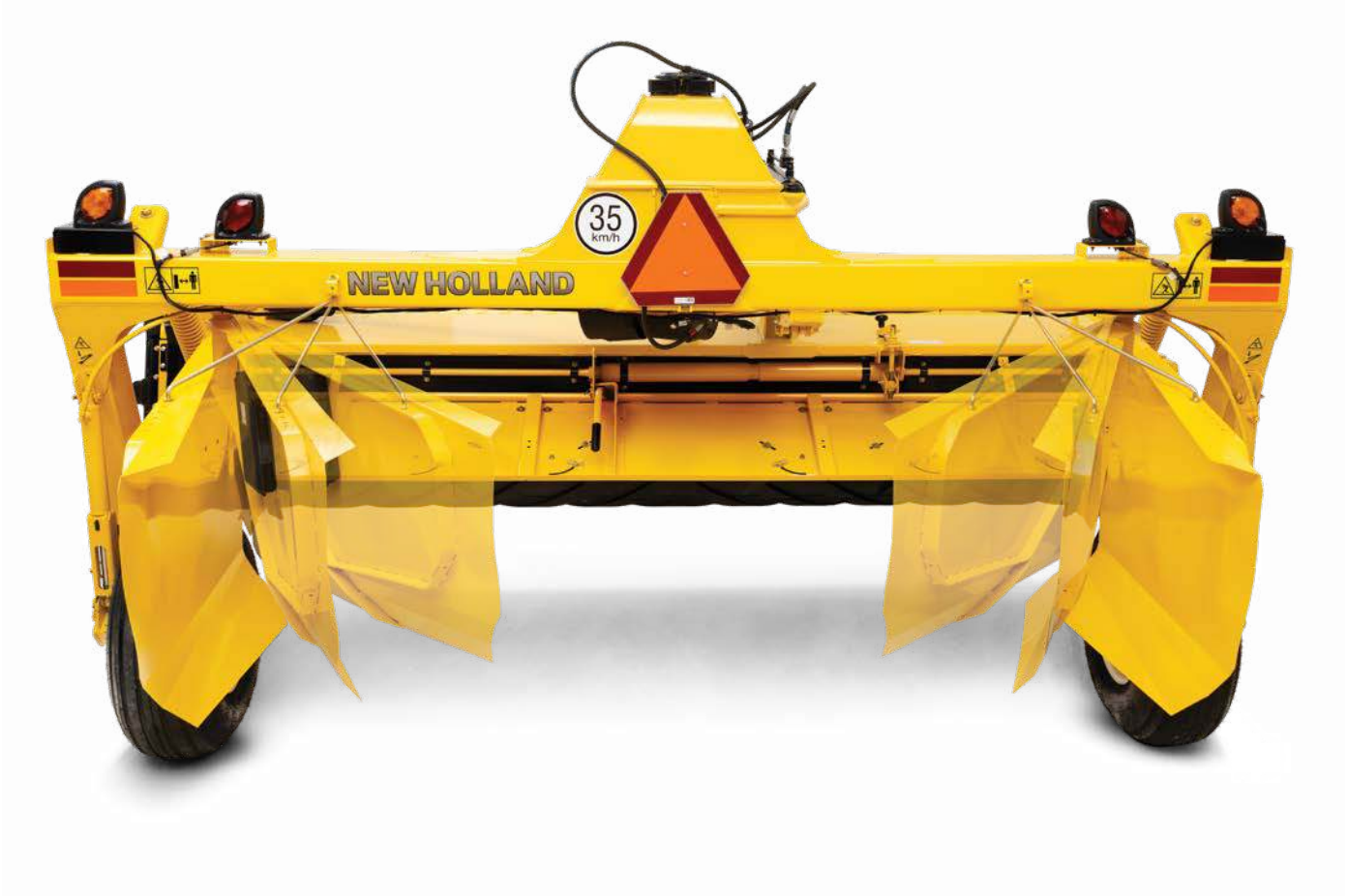
From wide swaths to narrow windrows.

Fast drying requires crop to be evenly distributed over a wide swath. The Discbine® PLUS Series provides perfect swath control surfaces behind the conditioning system.

The advantages of spreading crop wide and thin

University tests confirm that the more leaves that are exposed to the sun, the faster crops dry and the more feed value is retained. Quick drying reduces sun bleaching and gives you an advantage when you need to beat the weather and bale or chop before the rain. Along with the WideDry™ conditioning system of your choice, the swath board wedges and adjustable fins spread your crop wide and thin, exposing it to more sun for faster drying.





Better control means better windrows

The full-width horizontal swath gate has been extended five inches (12.7 cm) longer than prior models for improved crop control and greater windrow uniformity. Windrows can be neatly shaped as narrow as three-feet- (0.9 meters-) wide to any setting in between—up to six feet (1.8 meters) on the Discbine 310 PLUS, seven feet (2.1 meters) on the 312 PLUS, or eight-feet (2.4 meters) on the 313 PLUS and 316 PLUS. Dry down is helped by crop-spreading wedges and adjustable crop fins that improve windrow center fill in light conditions. Windrow forming shields are over five inches (12.7 cm) taller than previous models and work with the swath gate to produce a tunnel effect. Specifically, this taller design—with greater curvature at the bottom—provides more precise windrow control, helping to tuck the edges in for neater looking swaths with improved dry down.

Better protection. Less maintenance.

The Discbine® PLUS header is suspended independently from the trail frame, allowing it to closely follow changing ground contours and reduce stubble damage and skid-shoe wear. Trail frame wheels are located on the inside of the frame, allowing for impressive contour following on uneven terrain. Use the adjustable header flotation springs to reduce cutterbar ground pressure, ensuring the head tracks the ground precisely so you harvest all your valuable crop.

Easy access for simple maintenance

Cutting discs and drive components on every Discbine PLUS are easy to reach. Poly bifold upper shields are light, easy to lift, and impact-resistant to avoid denting by foreign objects. The driven-end access steel door is double-layered to resist denting, while the roll drive door on the opposite side is made from durable poly with a steel plate at the bottom for added protection. Material overlap keeps curtains in place without the need for clips or magnets.

Clean cutting with ideal protection

Innovative header suspension geometry results in responsive flotation in the field. When operated in float, the tilt cylinder can automatically retract to adapt to contours, while the innovative header linkage allows the header to move up and rearward to dissipate force if you encounter an obstacle. To provide for free flotation of the head, the flotation springs are anchored to the trail frame with a ball joint to reduce binding as the header moves through its full flotation range.

Fast, worry-free headland turns

For ultimate maneuverability, especially on headlands, the Discbine PLUS Series is equipped with either a drawbar swivel or two-point attachment swivel-style hitch. Compared to traditional hitches that pivot on the drawbar, the pivoting action of a swivel hitch is moved rearward, behind the PTO, at the swivel gearbox. No matter how sharp you turn, the PTO remains straight, virtually eliminating PTO wear and the risk of the PTO and tractor lift arm colliding.

Geared for benefits

All Discbine PLUS models feature swivel-style, heavy-duty gearboxes for power transfer and well-protected drivelines with turn bumpers to simplify maintenance and unclutter the top of the header. Power is transferred from the front swivel gearbox to a second swivel gearbox at the rear of the tongue, so the drivelines never swing and maintain perfect alignment. Only the driveline extending from the second swivel box to the header drive bevel gearbox extends and retracts as the header raises and lowers. All models are fitted with a combination slip and overrunning clutch behind the main swivel gearbox to protect both the mower and your tractor. U-joints are easily accessible for servicing, and the lube interval is 50 hours for maximum uptime.

Travel with confidence

The center-pivot design, transport lights, and safety locks on the wheel cylinders let you travel to and from the field with confidence. A one-quarter turn valve on the hose end and a Pilot Operated (PO) check valve on the cylinder prevents tongue swing during transport.

Models	310 PLUS	312 PLUS	313 PLUS	316 PLUS
MowMax™ II PLUS Cutterbar				
Cutting width *[ft. in. (m)]*	10' 1" (3.0)	11' 7" (3.5)	13' 1" (4.0)	16' 5" (5.0)
Cutting height *[in. (mm)]**	0.5 – 2.6 (12 – 65)	0.5 – 2.6 (12 – 65)	0.5 – 2.6 (12 – 65)	0.5 – 2.6 (12 – 65)
Cutting height w/ opt. adjustable shoes *[in. (mm)]*	0.5 – 5.6 (12 – 143)	0.5 – 5.6 (12 – 143)	0.5 – 5.6 (12 – 143)	0.5 – 5.6 (12 – 143)
Type	Modular	Modular	Modular	Modular
Number of discs / knives per disc	6 / 2	7 / 2	8 / 2	10 / 2
Maximum disc speed @ 1,000 rpm PTO	2250	2250	2250	2250
Hydraulic tilt/cutting height control	●	●	●	●
Tilt angle *[degrees]*	-2° to -10°	-2° to -10°	-2° to -10°	-2° to -10°
Header flotation	Vertical & lateral, adjustable springs			
ShockPRO™ disc drive protection system	●	●	●	●
Roll Conditioning Systems				
Chevron intermeshing rubber rolls	○	○	○	○
Chevron intermeshing steel rolls	–	○	○	○
Length *[in. (mm)]*	90 (2286)	102 (2591)	125 (3175)	125 (3175)
Diameter *[in. (mm)]*	10.4 (264)	10.4 (264)	10.4 (264)	10.4 (264)
Drive method	Belt-driven, enclosed gearbox			
Speed *[rpm]*	750 or 640	750 or 640	750 or 640	750 or 640
Conditioner roll tension adjustment	●	●	●	●
Conditioner gap adjustment	●	●	●	●
LeaningEdge™ Flail Tine Conditioning System				
Compatibility	○	○	○	–
Number of tapered flail tines	90	100	120	–
Length *[in. (mm)]*	90 (2286)	102 (2591)	125 (3175)	–
Diameter *[in. (mm)]*	22 (560)	22 (560)	22 (560)	–
Drive method	Belt	Belt	Belt	–
Speed *[rpm]*	1042 or 752 with kit	1042 or 752 with kit	1042 or 752 with kit	–
Conditioner gap adjustment	●	●	●	–

Models	310 PLUS	312 PLUS	313 PLUS	316 PLUS
Crop Discharge				
Swath width *[ft. (m)]*	6 (1.8)	7 (2.1)	10 (3)	10 (3)
Windrow width *[ft. (m)]*	3 – 6 (.91 – 1.8)	3 – 7 (.91 – 2.1)	3 – 8 (.91 – 2.4)	3 – 8 (.91 – 2.4)
Driveline				
540 rpm, 6-spline 1-3/8” input speed	O	–	–	–
1,000 rpm, 21-spline 1-3/8” input speed	●	●	●	●
Slip and overrunning clutch protection	●	●	●	●
Hitches				
Drawbar swivel	●	●	●	●
Drawbar category	ASAE Category II or III	ASAE Category II or III	ASAE Category II or III	ASAE Category II or III
2-point semi-mount swivel	O	O	O	O
3-point hitch category	ASAE Category II, III-N, or III	ASAE Category II, III-N, or III	ASAE Category II, III-N, or III	ASAE Category II, III-N, or III
Tractor Requirements				
Minimum PTO power *[hp (kW)]*	80 (60)	85 (63)	90 (67)	100 (75)
Hydraulic requirement – rubber rolls	1 double acting, 1 single acting			
Hydraulic requirement – steel rolls	–	1 double acting, 1 single acting		
Hydraulic requirement – flails	2 double acting	2 double acting	2 double acting	–
Electrical	7-pin connector for transport lights			
Dimensions				
Transport width *[ft. in. (m)]*	10’ 4” (3.2)	11’ 10” (3.6)	13’ 5” (4.03)	16’ 8” (5.07)
Operating weight – rubber rolls *[lbs. (kg)]*	5760 (2613)	5880 (2667)	6255 (2837)	6980 (3166)
Operating weight – steel rolls *[lbs. (kg)]*	–	5980 (2712)	6355 (2882)	7080 (3211)
Operating weight – flails *[lbs. (kg)]*	5660 (2567)	5760 (2613)	6147 (2788)	–

● Standard O Optional – Not available

*With 20 in. (508 mm) drawbar. Cut height will be reduced with a lower drawbar.

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