

DISCBINE® DISC MOWER-CONDITIONERS

Discbine 313 | Discbine 316



Discbine®: the definition of disc mower-conditioners.

New Holland has always been well-known for its expertise in hay equipment, and the company's experience and leadership with Discbine® disc mower-conditioners is no exception. In fact, New Holland coined the term "Discbine," which has become the popular name that's loosely used to refer to any disc mower-conditioner, regardless of brand. It's no surprise, because even in tough conditions, a genuine Discbine disc mower-conditioner swiftly turns heavy crop into fast-drying windrows or swaths. The Discbine Series 313 and 316 center-pivot models are perfect examples of New Holland's Discbine legacy. These are highly productive machines that knock down from 13' to 16' of crop per pass, dry crops fast, gently condition, and deliver the reliable performance of rugged modular cutters backed by an exceptional warranty.



Model	Tractor Requirement	Cutterbar	Cutting Width	Tongue Design	Conditioning System
Discbine® 313	90 PTO hp	MowMax II	13' 0" (4.0 m)	Center-pivot	Rubber or steel rolls or LeaningEdge flails
Discbine® 316	100 PTO hp	MowMax II	16' 3" (4.95 m)	Center-pivot	Rubber or steel rolls



A cut above the rest: MowMax™ II cutterbars

Discbine 313 and 316 center-pivot models feature the MowMax II disc cutterbar, a modular cutterbar designed for the rigors of large harvesting operations. While this cutterbar incorporates the same modular concept as the traditional MowMax design, it features heavy-duty components and a larger disc concept also found on Durabine™ disc heads for New Holland Speedrower® self-propelled windrowers.

Fast, simple adjustment, easy serviceability

From the hitch to the swath doors, the Discbine Series 313 and 316 are designed with you in mind. It's no secret that faster hay drying retains higher forage quality. That's why critical machine adjustments are located for easy access, allowing for quick adjustments to respond to changing conditions. At the heart of every Discbine model is the reliability to start mowing when you want, combined with performance and durability to finish quickly.

3-Year MowMax™ cutterbar warranty

With every Discbine Series 313 and 316 model you get the proven reliability of the MowMax II disc cutterbar and the peace of mind provided by 36-months of cutterbar warranty coverage. Coverage includes one full-year of base factory warranty, plus two additional full years of MowMax disc cutterbar warranty. Mow with confidence—you're backed by the best in the business.

Faster drying with Wide-Dry™ conditioning

You'll harvest crops quickly and produce nutritious, high-value feed with your choice of three conditioning systems. For consistent crop flow, uniform conditioning, and the widest swath possible, Discbine Series 313 and 316 conditioning systems are 22% wider than the prior generation. Choose the gentle conditioning of rubber chevron-intermeshing rolls that save delicate leaves, steel chevron rolls for winter forage or long-stem and cane grasses, or LeaningEdge™ flails (313 model only) for fast drying of grass hay.

Make tall hayfields look like close-cut lawns.

Close cutting is standard with the MowMax™ II disc cutterbar. How close? Less than one inch, which can make your tallest hayfields look like close-cut lawns. Want to cut higher? Easily adjust cutting height hydraulically on-the-go from $\frac{3}{4}$ to 2- $\frac{3}{4}$ inches with standard skid shoes, or set the tilt limiting pin at a preset height you prefer. The large disc design means less stubble damage and provides more consistent stubble height, leaving less valuable crop behind.

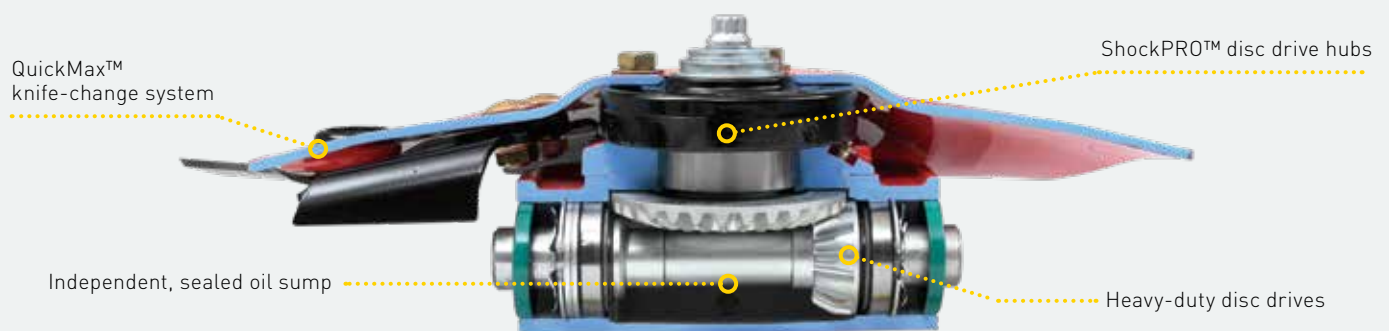
The benefits of big disc cutting

A larger disc diameter allows for closer cutting with a shallower cutterbar angle, providing a more consistent cutting height with less scalloping. The increased surface area of the larger discs and the “tapered skirt” disc profile provide a smoother transition of crop to the conditioner—even without crop lifters—for more uniform conditioning and reduced power consumption.



Commercial durability for larger haying operations

Originally developed for the Durabine™ heads used on Speedrower® self-propelled windrowers, this rugged MowMax II cutterbar version features the same true modular design, heavy-duty gears and bearings. It is also combined with unique interconnecting shafts and special 24.3-inch tapered skirt discs for superb cut quality and maximum durability. The interconnecting drive shafts are upgraded from prior models to a larger diameter to improve power transfer and simplify the cutterbar drive. Precision-cut spline ends and heat treatment provide a snug fit between each disc module. The full width of the cutterbar is protected by heavy-duty, cast rock guards for ample protection.



The ShockPRO™ cutterbar protection advantage

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



QuickMax™ knife-change system saves time

Time is precious when you're making hay, and the patented QuickMax™ system allows you to quickly change damaged knives or flip an entire set so you're back clean-cutting quickly. Because the QuickMax system allows you to change knives with discs at a 45-degree angle to the cutterbar, you can change knives in just one-half rotation of the cutterbar, saving you time compared to traditional bolted knives and other quick-change systems. New Holland knife-lock technology assures knife retention 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. The QuickMax knife-change system is now standard equipment on all Discbine models.



HOW IT WORKS:

Quick in-field knife changes

The tool pries the spring plate down to release the knife from the knife nut, quickly releasing each knife. Flip the existing knife or swap it out for new and check for wear of the knife nut with the integrated gauge on the tool. The QuickMax knife release tool stows on board your machine, so it's already ready and easily accessed for quick in-field knife changes.

Saves you time and effort at 45-degrees

Every specialized rock guard provides two locations that accommodate the QuickMax tool. This patented design allows you to change knives by first rotating the discs to a 45-degree angle, exchange the knives, then rotating the cutterbar just one time to expose the remaining knives. Repetitively turning the cutterbar by hand is eliminated, making the process faster and easier. Time to completely exchange the knives can be measured in just seconds!

Securely held, yet easy to exchange

The special eccentric knife nut forms a notch between the bottom of the disc on the back of each nut where the knife is held. Centrifugal force of the fast turning discs securely holds each knife in the notch. The spring plate helps to ensure the knife remains in-line with the notch securing it in place.

Better protection. Closer cutting. Less maintenance.

The Discbine® header is suspended independently from the trail frame, allowing it to closely follow changing ground contours and reduce stubble damage and skid shoe wear. The trail frame tires and rims are located to the inside of the frame, allowing for better 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 of your valuable crop.



Better access for simple maintenance

New Holland makes it extremely easy to reach the cutting discs and drive components on every Discbine 313 and 316 disc mower-conditioner. Poly bifold upper shields are light, foldable and easy to lift, and they're more impact-resistant to dents from foreign objects. The driven-end access steel door is double layered to resist denting in that area, too. Material overlap keeps curtains in place without the need for clips or magnets.

Clean cutting with even better protection

Improved header suspension geometry contributes to more responsive flotation. 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.



Ultimate reliability with less maintenance

The 313 and 316 feature a swivel-style hitch, heavy-duty gearboxes for power transfer, and well protected drivelines with turn bumpers that simplify maintenance and leave the top of the header uncluttered. 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 remain in perfect alignment. Only the driveline extending from the second swivel box to the header drive bevel gearbox extends and retracts as the header is raised and lowered. All U-joints are easily accessible for servicing, and the lube interval is extended to 50 hours, so you spend less time on maintenance.



Fast, worry-free headland turns

Featuring big center-pivot productivity and swift headland turning, the Discbine 313 and 316 are equipped with a 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 the turn, the PTO will remain straight. This virtually eliminates PTO wear and there is never a risk of a collision between the PTO and tractor lift arm. This high-reliability swivel hitch option is available with your choice of drawbar or two-point attachment.

WideDry™ conditioning systems ensure fast crop drying.

New Holland's WideDry™ conditioning systems are over 22% wider than the conditioning systems on previous models. This results in a thinner crop mat that feeds smoothly through the conditioning system. Uniform conditioning aids in faster drying in the field. The crop transitions more smoothly from the cutterbar to the conditioning system, reducing crop feeding issues, particularly in thick grasses, cane, and other high-volume crops.



Reduced crop convergence

Converging disc modules have been eliminated on the Discbine® 313 and reduced to just one pair on each end of the Discbine 316. Crop flows directly to the conditioner, which means cleaner cutting on the ends and more uniform conditioning. Whether you're mowing alfalfa, clover, orchard grass, timothy, Bermuda grass, Bahia grass, fescue, cereal rye, forage wheat or oats, Discbine Series 313 and 316 center-pivot models harvest crops quickly and produce nutritious, high-value feed using your choice of conditioning systems. Both models are available with the choice of gentle, effective conditioning with rubber chevron-intermeshing or steel chevron intermeshing rolls for abrasive crops. The Discbine 313 is also available with LeaningEdge™ flail tines for fast grass hay drying. No matter the system, each offers fast, infinite adjustments to conditioning intensity to match crop and weather conditions.

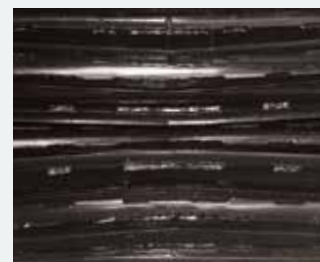


Chevron intermeshing rubber rolls

Gentle chevron rubber intermeshing rolls offer maximum versatility. They provide full-stem crimping and cracking with a scrubbing action, while handling leaves of high-value feeds delicately. They're the ultimate solution for alfalfa and clover.



Rubber chevron-design



Steel chevron-design

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.

Non-stop, plug-free mowing

Both roll conditioning versions come with the New Holland torsion-bar roll-pressure system for consistent, thorough conditioning. A unique, over-center linkage allows crop slugs or foreign objects to pass without plugging for non-stop mowing. The no-tools-required hand crank makes it easy to tailor roll pressure to the crop without crawling under the machine with wrenches.



LeaningEdge™ flail tine conditioning

Grass hay producers know that crushing and crimping fine stem grass is a real challenge. For fast drying of coastal and other fine grass, the LeaningEdge flail tine conditioning system available for the Discbine 313 pushes crop against an adjustable hood to scuff wax away. Crop receives even more scuffing action as New Holland flail tines are angled rearward to create more outward crop pressure against the hood. You can adjust the conditioning hood position with a single crank and use the provided crop-conditioning gauge to see the relative hood position.

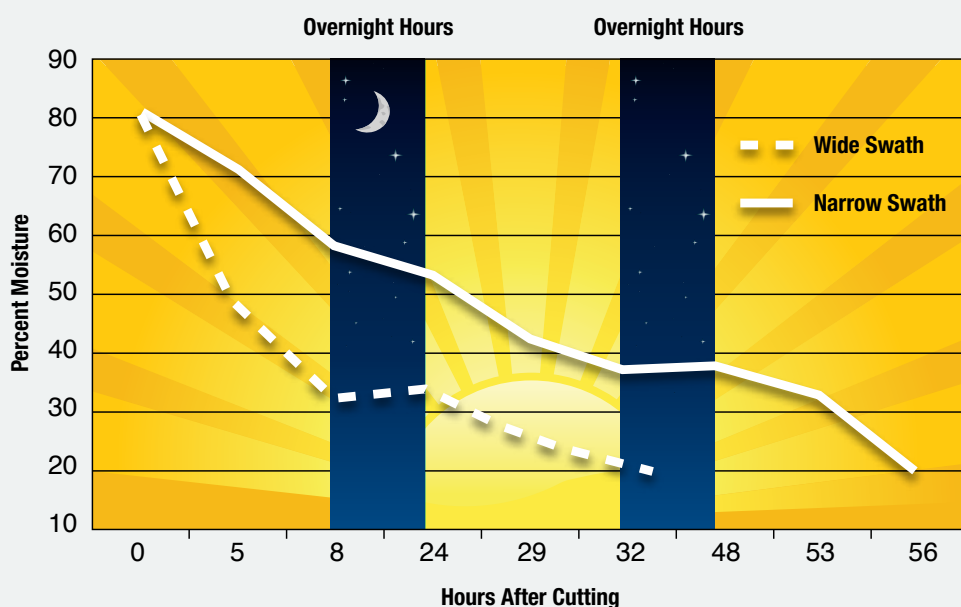


The advantages of spreading crop wide and thin.

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. The WideDry™ conditioning system and swath board wedges spread the crop wide and thin, exposing more crop to the sun and providing faster drying.

Cleaner cutting with a slower roll speed

Roll conditioning systems generate air movement that can blow lighter crop away from the cutterbar and adversely affect cutting 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 minimizes air bursts while maintaining cutterbar speed to provide excellent light crop cut quality.



[Source: University of Wisconsin-Extension, Arlington, WI, July 30 and 31, 2007]

Perfectly shaped wide swaths or windrows to suit your needs

The full-width swath board and two swath doors allow you to create fast-drying wide swaths, well-shaped, three-foot-wide windrows, or any setting in between. If conditions are right, Wide-Dry conditioners let you choose a fast-drying wide swath or switch quickly to a windrow when conditions change.



SPECIFICATIONS

Model		Discbine 313	Discbine 316
Cutterbar			
Cutting width	ft. in. (m)	13' 0" [4.0]	16' 3" [4.95]
Cutterbar model		MowMax™ II with ShockPRO™ hubs	MowMax™ II with ShockPRO™ hubs
Type		Modular	Modular
Number of discs		8	10
Knives per disc		2	2
Disc speed @ 1,000 rpm PTO speed	rpm	2,250	2,250
Tilt angle	degrees	2-10	2-10
Flotation		Vertical and lateral, adjustable springs	Vertical and lateral, adjustable springs
Drive method		PTO drive w/slip clutch to bevel gearbox to LH end of header, vertical PTO shaft to cutterbar	PTO drive w/slip clutch to bevel gearbox to LH end of header, vertical PTO shaft to cutterbar
Cutting height	in. (mm)	0.79-2.7 [20-69]	0.79-2.7 [20-69]
Cutting height w/ opt. high-stubble shoes	in. (mm)	3.1-5.5 [79-140]	3.1-5.5 [79-140]
Cutting height w/ opt. Biomass shoes	in. (mm)	4.9-7.8 [124-198]	4.9-7.8 [124-198]
Cutting height w/ opt. adjustable shoes	in. (mm)	0.79-5.8 [20-147]	0.79-5.8 [20-147]
Roll Conditioners			
Type		Chevron intermeshing rubber or steel rolls	Chevron intermeshing rubber or steel rolls
Length	in. (mm)	125 [3175]	125 [3175]
Diameter	in. (mm)	10.4 [264]	10.4 [264]
Drive method		4 HB V-belt and enclosed gears	4 HB V-belt and enclosed gears
Speed	rpm	750 or 640	750 or 640
Conditioner roll tension adjustment		Single crank	Single crank
Conditioner gap adjustment		Adjustable drawbolt stop, each end	Adjustable drawbolt stop, each end
LeaningEdge Flail Conditioners			
Type		Flail rotor with 120 tapered flails	–
Length	in. (mm)	125 [3175]	–
Diameter	in. (mm)	22 [560]	–
Drive method		4 HB v-belt	–
Speed	rpm	1042 std. 752 opt.	–
Conditioner gap adjustment		Single crank adjustable rotor hood	–
Crop Discharge			
Swath width	ft. (m)	10 [3.0]	10 [3.0]
Windrow width	ft. (m)	3-8 [0.9-2.4]	3-8 [0.9-2.4]
Driveline			
Input speed	rpm	1000	1000
Driveline protection		Slip clutch and overrunning clutch assembly at rear of PTO shaft	
Tongue Options			
Type		Center pivot straight hitch	Center pivot straight hitch
Hitch type		Drawbar swivel or 2-point swivel	Drawbar swivel or 2-point swivel
Tractor Requirements			
Minimum PTO power required	hp (kW)	90 [67]	100 [75]
Hydraulic circuits required		2	2
Minimum relief pressure required	psi (bar)	1,500 [103]	1,500 [103]
Drawbar		ASAE Category II or III	ASAE Category III
3 pt hitch (swivel models)		Category III	Category III
Electrical		7-pin electrical connector for transport lights	7-pin electrical connector for transport lights
Tires			
Tubeless ag rib implement tires		12.5L x 15 8PR	12.5L x 15 8PR
Transport Speed			
Max road speed	mph (kph)	20 [32]	20 [32]
Dimensions*			
Width-transport	ft. in. (m)	13' 4" [4.04]	16' 7" [5.05]
Width-operating [2 pt swivel hitch]	ft. in. (m)	21' 3" [6.5]	25' 7" [7.8]
–operating [drawbar swivel hitch]		19' 7" [6.0]	23' 11" [7.3]
Length-transport [2 pt swivel hitch]	ft. in. (m)	27' 5" [8.4]	32' 0" [9.7]
–transport [drawbar swivel hitch]		26' 5" [8.1]	31' 0" [9.4]
Length-operating [2pt swivel hitch]	ft. in. (m)	23' 0" [7.0]	26' 7" [8.1]
–operating [drawbar swivel hitch]		22' 0" [6.7]	25' 7" [7.8]
Height-transport	ft. in. (m)	7' 5" [2.26]	7' 5" [2.26]
–operating		6' 7" [2.01]	6' 7" [2.01]
Ground clearance with head fully raised	in. (mm)	16.2 [411]	16.2 [411]
Weights**			
Operating weight		6,275 [2846]	6,700 [3039]

- Not Available

*Rear curtain down for all height and length measurements on machines with flail conditioners. Subtract 2" (50.8 mm) for flail curtain up. Windrow shields fully open for length in both positions.

**Weights with rubber conditioning rolls. Add 100 lbs. (45 kg) for steel rolls.

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