

# Bid Specifications



## Woods DBH5.31 Hydraulic Ditch Bank Rotary Cutter

**General:** The specification is to describe a 5' hydraulic ditch bank rotary cutter suitable for highway right-of-way, ditch, waterway, and roadside vegetation maintenance. The unit shall incorporate 5' cutter deck. The unit shall be equipped with 35 gallon oil reservoir, frame-mounted gearbox-driven hydraulic pump, hydraulic extension and deck lift cylinders, and hydraulic drive motor on deck.

**Deck:** The cutter deck shall provide a cut width of no less than 5'. The cutter must be equipped with "quick-change" blade pins. The top of the deck shall be free of structural members to keep water and debris from accumulating on the deck top. The top deck sheets shall be of not less than (0.135") 10-gauge steel. The cutter frame shall incorporate two 3" x 4" structural tubes extending front to back and 2" round tubular rear bumper. The deck pivot pin shall be a minimum of 1" diameter solid steel. Two replaceable skid shoes on deck. The depth of the deck side frame shall be 9.5" from the deck to the bottom of the side skid shoes. Cutting height shall range from 2" to 10".

**Frame:** The hitch frame shall be compatible to tractors equipped with Category 2 or 3 three point arms and 2 or 3 quick-hitch. Counter weights shall be mounted to the left side of the frame to balance the unit. Placement of the counter weights shall not extend beyond 51" to the left of the center of the tractor. Total transport width shall not exceed 119".

**Gearbox and Spindle Flange:** The cutter shall have an input gearbox horsepower rating of a minimum of 100 hp. Gearbox shall carry a 6-year limited warranty which covers defect in material and workmanship. The spindle flange shall have an output shaft diameter of 2.38 inches. The lower neck of the spindle flange shall have the seals protected by an anti-wrap device. Both the gearbox and spindle flange shall utilize tapered roller bearings throughout.

**Hydraulic Pump and Motor:** Pump and motor shall be external gear-type positive displacement. Fluid power shall be delivered at 19 gallons per minute at 4,000 psi maximum pressure and capable of producing up to 40 HP at the cutting head. Construction shall be steel and cast iron. Pump is attached to gearbox output shaft using a rubber disc flexible coupler. Motor shall be mounted directly to spindle flange at the deck. Both pump and motor are protected from pressure spikes in excess of 4,000 psi with a bypass valve. Seals in the pump and motor shall be capable of withstanding 212 degrees F maximum peak temperature.

**Drive Line:** The input drive from the tractor to the gearbox shall be ASABE Category 4. Drive line protect shall be achieved with hydraulic relief valve.

**Blade Rotation:** The blade tip speed shall be 15,800 ft/min at 540 RPM or 16,000 ft/min at 1,000 RPM input from the tractor. The cutting deck blades shall rotate counter clockwise as viewed from above the deck facing the tractor. Blade rotation in clockwise direction shall be available via conversion of the hydraulic motor and installation of blades with cutting edge on clockwise leading edge. The cutter shall be capable of cutting material up to 2" in diameter.

**Hydraulic Cylinders:** The unit shall utilize a 3" bore by 10" stroke tie rod type cylinder for raising and lowering the deck. The deck operating angle shall range from 90 degrees up to 90 degrees down. A single 2" bore by 30" stroke tie rod type double acting cylinder shall be used to extend the deck horizontally to reach up to 158 inches away from the tractor center. Hoses shall be provided to connect the cylinders to the tractor.

**Safety:** The unit shall be equipped with 5/16" chain guards to adequately control thrown objects. All front and rear openings shall be covered with bolt-on chain guards that extend at least 1" below the blade line. The frame extension shall have a 1" pin to lock in the retracted position for transport. The unit shall also have provision to lock the deck in the raised position for transport. The mechanical transport locking mechanisms shall withstand the full weight of the components and relieve all stress from the hydraulic cylinders.

**Optional Hydraulic Cooling System:** An optional hydraulic cooling system designed to rapidly remove heat from the hydraulic fluid shall be available for installation on the unit. This option system would be applicable for continuous power consumption in extreme mowing conditions.



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Tractor HP Range	60 – 150 HP
Cutting Width	60"
Cutting Capacity Diameter	2"
Cutting Height	2" – 10"
Transport Width	119"
Deck Side Shift	30"
Reach: Tractor Center to Outside of Cutter	158"
Overall Length	72"
Deck Flex Range	90° up, 90° down
Approximate Weight (without hydraulic oil)	2,091 lbs
Minimum Tractor Weight	6,000 lbs
Minimum Tractor 3-Point Hitch Lift Capacity	2,500 lbs
Maximum HP at Cutting Head	40 HP
Hydraulic Flow Rate	19 gallon/min
Hydraulic Pressure	4,000 psi
Tractor PTO Speed (RPM)	540 / 1,000
Hitch	Category 2 & 3
Quick-Hitch Ready	Yes
Blade Tip Speed, 540 RPM	15,800 ft/min
Blade Tip Speed, 1000 RPM	16,000 ft/min
Cutter Deck Thickness	0.135" (10 gauge)
Deck Side Depth	9.5"
Side Frame Thickness	0.135" (10 gauge)
Shielding	Chain
Gauge Wheel	Optional – Deck Mounted
Tail Wheel	Optional – Hitch Frame Mounted
Hydraulic Cooler	Optional
Hydraulic Tank Capacity	35 gallon

