

# Bid Specifications



## Woods BW15.60 Batwing Rotary Cutter

**General:** The specification is to describe a 15' flexible wing rotary cutter suitable for highway right-of-way, ditch, and roadside vegetation maintenance. The unit shall incorporate two 5' wings and a 6' center section. The unit shall be equipped with four gearboxes, six wheels, swivel clevis type hitch, two hydraulic wing cylinders, one hydraulic cut height adjustment cylinder, and adjustable parking jack.

**Deck and Frame:** The cutter shall be a pull type with three (3) sections hinged together with 6" blade overlap between sections to provide a cut width of no less than 15'. The blades shall cut the full width of the unit, and shall be so designed that no uncut areas will exist between each section. The cutter must be equipped with greaseable "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 (0.179") 7-gauge steel. The frame structure shall be on the underside of the deck. The frame structure shall consist of full boxed in perimeter with curved leading edge rolled structural tubing. The lateral structure of each cutter section shall extend the full width. The wing pivot pins shall be greaseless, heat treated and a minimum of 1" dia. solid steel. The two skid shoes on the center deck and each wing skid shoe shall be replaceable. The depth of the deck side frame shall be 13" from the deck to the bottom of the side skid shoes. The side frame material shall be .25" in thickness. The cutter shall be fully baffled, with .179" high-strength steel baffles welded to the frame. The baffles must be rugged enough to withstand all mowing conditions encountered in heavy use.

**Gearboxes and Clutches:** The cutter shall have an input gearbox horsepower rating of a minimum of 275 hp. The spindle gearbox shall have a horsepower rating of a minimum of 225 hp. The output shaft on each gearbox shall be 3.0" in diameter. Each blade spindle shall be equipped with an independent slip clutch in the event that the blades contact an immovable object. The clutches shall utilize two (2) friction discs. Gearboxes shall carry a 6-year limited warranty which covers defect in material and workmanship and includes the seals. The gearboxes shall utilize tapered roller bearings throughout. The lower neck of each gearbox shall have the seals protected by an anti-wrap device. An oil level dipstick shall be threaded into each gearbox to allow for oil level inspection. The spindle gearbox shall have a removable oil drain on the lower neck. The spindle gearbox shall have a lower seal which incorporates additional protection for rubber seal.

**Drive Lines:** The input drive from the tractor to the center gearbox shall be ASABE Category 6 Constant Velocity drive and the drive from the center gearbox to the wings shall be ASABE Category 4 and contain in-line driveline grease fittings. All drives shall be of North American manufacture. Drive line shields shall be metal and easy opening without tools or knobs.

**Blade Rotation:** The blade tip speed shall be 16,000 ft/min at 540 RPM or 1,000 RPM input from the tractor. The right and center sections shall rotate counter clockwise and the left deck rotate clockwise as viewed from above the deck facing the tractor. The cutter shall be capable of cutting material up to 4.0" in diameter. The cutter shall include full round stump jumpers no less than (.179") 7-gauge steel.

**Hydraulic Equipment:** The unit shall utilize a 3" bore by 10" stroke tie rod type cylinder for raising and lowering each wing. A single 3.5" bore by 8" stroke tie rod type cylinder shall be used to raise and lower the unit for cut heights from 2" to 15". Hoses shall be provided to connect the cylinders to the tractor and raised above the deck.

**Wheels and Tires:** Each unit shall be equipped with six (6) 29" 5-bolt, foam-filled, used aircraft tires or six (6) 25.5" 5-bolt, foam-filled, 20PR severe duty ag tires mounted on 5-hole, split pressed steel rims. The center section shall be equipped with two spring loaded wheel arm and dual wheels on each wheel arm. The wing shall be equipped with a single wheel that shall trail within the cut width with the ability to add an additional one wheel for dual wing wheels.

**Hitch:** The hitch shall be a swivel clevis type hitch. Dual 1.0" dia. leveling rods allow the deck to maintain proper cut attitude at all cut heights. The unit shall be equipped with a CV lift assist feature to add connecting input CV PTO shaft to tractor.

**Parking Jack:** A retractable pin-on type, hand operated, screw jack shall be provided to assist in the attachment of the cutter to the tractor. The jack shall be perpendicular to the ground at any cut height. A second mount shall also be provided above the deck for jack storage when the cutter is attached to the tractor.

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**Safety:** The unit shall be equipped with 5/16" chain guards located away from the front leading edge for durability and 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 wings shall have a .75" pin to lock each wing in the upright position for transport. The unit shall also have a 1.25" pin to lock the center section 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.



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|--------------------------------|---|
| Cutting width                  | 180"  |
| Overall width                  | 189"  |
| Overall length                 | 195"  |
| Transport width                | 96"   |
| Cutting height                 | 2-15"   |
| Cutting height adjustment      | hydraulic cylinder  |
| Cut capacity                   | 4.0"  |
| PTO hp minimum                 | 55 hp   |
| Weight                         | 4,600 lbs   |
| Tongue weight                  | 1,350 lbs   |
| Hitch                          | swivel clevis   |
| Deck type                      | smooth, sloped  |
| Deck thickness                 | 7-gauge (.179")   |
| Side frame thickness           | .25"  |
| Side frame depth               | 13"   |
| Deck shielding, front and rear | 5/16" chain guards  |
| Material flow system           | fully baffled deck  |
| Blade tip speed 540 rpm        | 16,000 fpm  |
| Blade tip speed 1,000 rpm      | 16,000 fpm  |
| Blade carrier                  | Round   |
| Blade type                     | .5"x4" quick-change blade pins  |
| Blade overlap                  | 6"  |
| Wing flex                      | 90° up, 22° down  |
| Wing leveling adjust           | turnbuckle  |
| Hinge rod diameter             | 1" full length  |
| Driveline rating: Main         | Cat 6 CV  |
| Driveline rating: Wing         | Cat 4, slip clutch  |
| Output shaft diameter          | 3.00"   |
| Gearbox rating splitter        | 275 hp  |
| Gearbox rating spindle         | 225 hp  |
| Gearbox warranty               | 6-year  |
| Suspension                     | single spring on center deck wheel yoke,<br>spring-loaded on each axle arm,<br>walking tandem axles |