SPECIFICATIONS SIDE FOLD 19’ BOOM WITH 50” ROTARY MOWER

GENERAL

It is the purpose of the following specifications to describe a self contained hydraulic driven, boom type rotary mower which shall mow forward and right of the right rear tire, and extend by means of an articulated, two-section boom. This unit shall be constructed to interchange with any of the following: 60” rotary boom head, 50” flail boom head; 63” flail boom head, saw blade head, & ditcher head. The unit shall be of the manufacturer’s current production model, meeting or exceeding the terms of these specifications. The vendor shall guarantee that a stock of component parts be available at a location convenient to the user or within a 48 hour period via ground freight from the manufacturer. The product is to have a guarantee against defects in workmanship and materials for a period of (1) one-year. The manufacturer shall furnish parts and operation manuals for the unit bid

SPECIFICATIONS REQUIRED	COMPLY	DEVIATIONS/EXCEPTIONS/COMMENTS

CUTTING HEAD

Cutting width shall be 50” of actual cut
Cutting head deck shall have 100,000 lb rated steel housing, with full length replaceable skid shoes on inner and outer ends.
Cutting head shall have 435 degrees of combined rotation.
Cutting head shall not weigh less than 790 lbs.
Cutting head shall have a 23” solid steel disk with the ability to have up to (6) six rotary blades attached by keyed 1 3/16” bolts (Mower comes standard with (2) two rotary blades)
Cutting head shall be attach to the spindle by (6) six 5/8” grade 8 fine thread bolts with hex head protection.
Cutting assembly shall be rotary and be hydraulically driven

SPINDLE

Spindle shall be one piece steel
Spindle shall have heavy duty replaceable tapered roller bearings on the top and bottom of the spindle, and replaceable seals
Spindle shall be coupled with the hydraulic motor by a chain drive coupler on the motor and spindle side.
Spindle is to include fingers to prevent material from winding on the lower seal in the spindle housing.

TRANSPORT POSITION

Mower stores beside the tractor for transporting

BOOM REACH

Boom shall be capable of extending cutting head out 19’6”. Boom shall be capable of reaching a maximum height of 18’ and have a maximum depth of 13’. Reach is measured form tractor centerline, height and depth are from approximately ground level. Boom reach, height, and depth may vary depending on tractor configuration and tire size.

BOOM SPECIFICATIONS

Mainframe of mower is properly braced to the rear axle and front axle housing to absorb side torque and impact of severe applications.
All pivot points shall have replaceable bushings with grease pockets.
Boom shall be supported by a hardened plain bearing
The base plate shall have an integral reinforced swing cylinder attachment point.
A wheel weight of no less than 1400 lb capacity will be provided,

and the left rear tire will be filled with calcium (or with the fluid specified by the end user)
A polycarbonate lexan window shall be installed to provide safety protection for the operator. It can be installed in place of, or over the glass, or attached to a frame on the right side of the cab windows.
Pressure and return lines will be preformed steel tubes with hoses at pivot points and are required to be mounted on the back of the boom.
Inner boom structural tube shall be constructed of net less 8" x 6" x ¼" tube and reinforced with a minimum of 3/8" steel.
Outer boom structural tube shall be constructed of not less 6" x 4" x 3/16" tube and reinforced with a minimum of 3/8" steel.

HYDRAULIC CYLINDERS

Boom shall have a hydraulically operated maneuvering cylinder for horizontal movement of the cutter head. Cutter head shall have the capability of 26 degrees forward and 27 degrees rearward with limited pressure relief.
All cylinders are heavy duty industrial type.
All boom cylinders are to be mounted on top of the boom with replaceable bushings with grease pockets.
Inner boom will have a single acting cylinder with an accumulator.
Outer boom, cutter head, and maneuvering will have double acting cylinders.

HYDRAULIC SYSTEM

Lift control valves shall use a (4) four bank electro-hydraulic, proportional, single lever joystick controller.
Boom functions will be powered from the tractors power beyond circuit or from a tandem crankshaft pump. (Power beyond will be used unless it is not available on tractor provided)
Hydraulic oil reservoir shall have a minimum capacity of 65 gallons.
Hydraulic oil reservoir shall be filled to a minimum of 50 gallons of oil.
Hydraulic oil reservoir shall have a sight/temp fill glass.
Hydraulic oil reservoir shall have an in-tank filter with a 10 micron element, rated at 75 gpm.
Hydraulic oil reservoir shall have a breather cap and fill screen.
Hydraulic oil reservoir shall be used as the power source for the cutting head.
Hydraulic oil reservoir shall include a restriction gauge visible to the operator.
Hydraulic oil reservoir shall on off ball valves installed in customer specified locations.
Suction hose shall be 1 ½" ID (excluding the suction filter and screen)
Hydraulic oil pressure and return system hoses shall be 1" ID high pressure unrestricted. Hoses shall have a burst pressure (4) four times working pressure.
Pump drive shaft attached to tractor crankshaft shall have a rating of not less than 180 hp, and must be greaseable.
Hydraulic pump and motor shall be gear type with cast steel housing and steel gears.
Hydraulic pump shall have a rating of 98 input hp.
Hydraulic motor shall have a rating of 99 hp
Hydraulic pump and motor shall use split flange type hydraulic fittings
Main hydraulic control valve shall be non-restrictive, electric solenoid type, with starter lockout switch and hydraulic brake.

SPECIFICATIONS FOR A SIDE FOLD 23’ BOOM, 50” ROTARY DECK MOWER WITH CABLE CONTROLS.

GENERAL

It is the purpose of the following specifications to describe a self contained hydraulic driven, boom type rotary mower which shall mow forward and right of the right rear tire, and extend by means of an articulated, two-section boom. This unit shall be constructed to interchange with any of the following: 60” rotary boom head, 50” flail boom head; 63” flail boom head, saw blade head, & ditcher head. The unit shall be of the manufacturer’s current production model, meeting or exceeding the terms of these specifications. The vendor shall guarantee that a stock of component parts be available at a location convenient to the user or within a 48 hour period via ground freight from the manufacturer. The product is to have a guarantee against defects in workmanship and materials for a period of (1) one-year. The manufacturer shall furnish parts and operation manuals for the unit bid. Complete unit completely made in the United States.

SPECIFICATIONS REQUIRED	COMPLY	DEVIATIONS/EXCEPTIONS/COMMENTS

CUTTING HEAD

Cutting width shall be 50” of actual cut
Cutting head deck shall have 100,000 lb rated steel housing, with full-length replaceable skid shoes on inner and outer ends.
Cutting head shall have 435 degrees of combined rotation.
Cutting head shall not weigh less than 790 lbs.
Cutting head shall have a 23” solid steel disk with the ability to have up to (6) six rotary blades attached by keyed 1 3/16” bolts (Mower comes standard with (2) two rotary blades)
Cutting head shall be attach to the spindle by (6) six 5/8” grade 8 fine thread bolts with hex head protection.
Cutting assembly shall be rotary and be hydraulically driven

SPINDLE

Spindle shall be one-piece steel
Spindle shall have heavy-duty replaceable tapered roller bearings on the top and bottom of the spindle, and replaceable seals
Spindle shall be coupled with the hydraulic motor by a chain drive coupler on the motor and spindle side.
Spindle is to include fingers to prevent material from winding on the lower seal in the spindle housing.

TRANSPORT POSITION

Mower stores beside the tractor for transporting

BOOM REACH

Boom shall be capable of extending cutting head out 23’. Boom shall be capable of reaching a maximum height of 21’ and have a maximum depth of 12’. Reach is measured form tractor centerline, height and depth are from approximately ground level. Boom reach, height, and depth may vary depending on tractor configuration and tire size.

BOOM SPECIFICATIONS

Mainframe of mower is properly braced to the rear axle and front axle housing to absorb side torque and impact of severe applications.
All pivot points shall have replaceable bushings with grease pockets.
Boom shall be supported by a hardened plain bearing
The base plate shall have an integral reinforced swing cylinder attachment point.
A wheel weight of no less than 1400 lb capacity will be provided,

and the left rear tire will be filled with calcium (or with the fluid specified by the end user)
A polycarbonate lexan window shall be installed to provide safety protection for the operator. It can be installed in place of, or over the glass, or attached to a frame on the right side of the cab windows.
Pressure and return lines will be preformed steel tubes with hoses at pivot points and are required to be mounted on the back of the boom.
Inner boom structural tube shall be constructed of net less 8" x 6" x ¼" tube and reinforced with a minimum of 3/8" steel.
Outer boom structural tube shall be constructed of not less 6" x 4" x 3/16" tube and reinforced with a minimum of 3/8" steel.

HYDRAULIC CYLINDERS

Boom shall have a hydraulically operated maneuvering cylinder for horizontal movement of the cutter head. Cutter head shall have the capability of 26 degrees forward and 27 degrees rearward with limited pressure relief.
All cylinders are heavy-duty industrial type.
All boom cylinders are to be mounted on top of the boom with replaceable bushings with grease pockets.
Inner boom will have a single acting cylinder with an accumulator.
Outer boom, cutter head, and maneuvering will have double acting cylinders.

HYDRAULIC SYSTEM

Lift control valves shall use a (4) four bank hydraulic valve with (4) cable single lever controllers.
Boom functions will be powered from the tractors power beyond circuit or from a tandem crankshaft pump. (Power beyond will be used unless it is not available on tractor provided)
Hydraulic oil reservoir shall have a minimum capacity of 65 gallons.
Hydraulic oil reservoir shall be filled to a minimum of 50 gallons of oil.
Hydraulic oil reservoir shall have a sight/temp fill glass.
Hydraulic oil reservoir shall have an in-tank filter with a 10-micron element, rated at 75 gpm.
Hydraulic oil reservoir shall have a breather cap and fill screen.
Hydraulic oil reservoir shall be used as the power source for the cutting head.
Hydraulic oil reservoir shall include a restriction gauge visible to the operator.
Hydraulic oil reservoir shall on off ball valves installed in customer specified locations.
Suction hose shall be 1 ½" ID (excluding the suction filter and screen)
Hydraulic oil pressure and return system hoses shall be 1" ID high pressure unrestricted. Hoses shall have a burst pressure (4) four times working pressure.
Pump drive shaft attached to tractor crankshaft shall have a rating of not less than 180 hp, and must be greaseable.
Hydraulic pump and motor shall be gear type with cast steel housing and steel gears.
Hydraulic pump shall have a rating of 98 input hp.
Hydraulic motor shall have a rating of 99 hp
Hydraulic pump and motor shall use split flange type hydraulic fittings
Main hydraulic control valve shall be non-restrictive, electric solenoid type, with starter lockout switch and hydraulic brake.