



# THE KC HOG SERIES

## HIGH VOLUME BIOMASS

### An Increased Appetite for Reducing Waste

Energy efficient and ruggedly built for the harsh mill environment, the KC Model series sets the standard in producing efficient burn biomass for pulp and paper mills throughout the United States.

## Overview:

### Applications

- Bark and Mulch
- Pallets and Whole Logs
- Particleboard
- Charcoal
- Automobile Tires
- Thick Slabs and Log Butts
- RR Crossties
- Construction Dunnage
- Veneer Scrap and Cores



### Design Features

- Energy Efficient Punch-and-Die System
- Ability to process stringy material
- Tramp Metal Protection
- Replaceable Wear Plates
- Replaceable Ring Lug Inserts
- Hydraulic Accessories

Montgomery Industries International, Inc.  
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### The Punch and Die System: Stage One

The Punch and Die System provides a two-stage grind in a single machine. The first grind occurs when a set of rotating teeth (hammers) punch material through a series of rectangular pockets formed by stationary dies (anvils). The teeth are secured to a spinning rotor assembly. The anvils are comprised of anvil points bolted to massive holders that are pinned to the side of the machine. The combination provides a deep pocket for the first stage cut.

A pattern of high and low teeth with large and small anvils keeps material moving with nowhere to hide, allowing the hog to rapidly process material with relentless efficiency. The KC cut employs three-inch-wide cutting teeth grinding against three-inch-wide stationary anvils. An overlap cut is built into the design to allow the successful processing of even soft, spongy or stringy material.



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### The Punch and Die System: Stage Two

The second grind occurs after the material has been processed past the anvils and directed downward across a curved sizing screen. The screen openings can be made of various shapes and sizes to customize the end product. Steel bars (baffles) are typically added on larger sized holes to control the length of material that is allowed to get through. Baffles can be applied in varying configurations in order to optimize throughput while avoiding unwanted sticks and slivers that can clog pipes, jam screw conveyors, reduce boiler efficiency or degrade the salability of mulch.



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### The Punch and Die System: Stage Two

When grinding bark for hogged fuel and for other coarse breakdown applications, a solid baffle screen with rectangular openings can be used to increase throughput and drive efficiency.



Hardsurfacing is applied to the leading edges and cutting surfaces to increase durability and extend economic life.

With a large number of screen configurations available, a Montgomery Hog can be adapted to variations in process requirements, including the seasonal rise and fall of moisture content in freshly harvested wood.

All screens are designed for easy removal and replacement.

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### Tramp Metal Protection: External Shear Bolts

- In addition to assuring longer life, the rugged construction of a Montgomery Hog allows it to process light metal (1/4 inch and thinner), nails, small bolts and steel strapping.
- Should something more substantial come between the teeth and anvil points, External Shear Bolts are used to protect the hog and mitigate the potential for damage.
- The anvil points are bolted to a series of anvil holders that are individually secured to the lower housing and held in position by 1" diameter brass shear bolts. The shearing strength of each bolt is sufficient to carry loads encountered during normal operation but will shear if heavy tramp metal enters the hog, allowing the anvil holder to pivot away from the cutting chamber.



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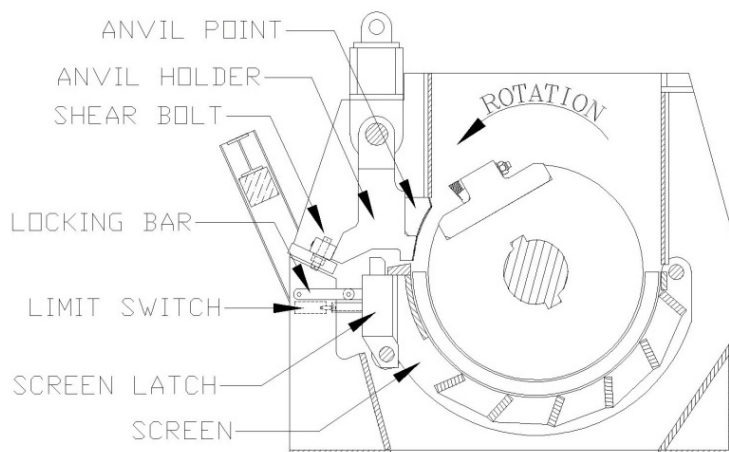


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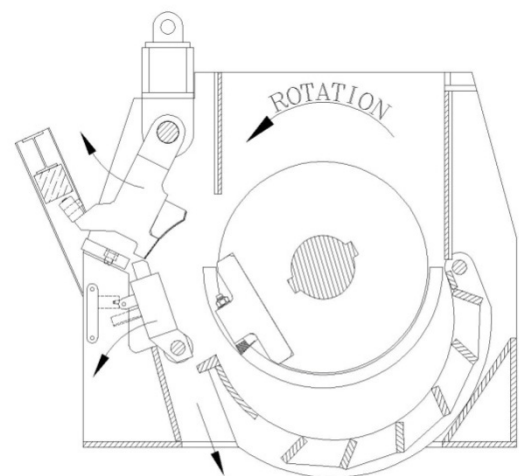
## HIGH VOLUME BIOMASS

### Tramp Metal Protection: Trip Latch & Breakaway Screen

- The pivoting anvil holder pushes outward on a screen trip latch mechanism, shearing the bolt on the locking bar that holds the trip latch in position. As the trip latch pivots away from the rotor, the hinged screen under the rotor drops away, allowing the tramp steel to clear the machine.
- The pivoting trip latch also triggers a limit switch attached to the lower housing. The limit switch signal can be wired to shut down the hog and its infeed conveyor. It can also be wired to activate visual and/or audible signaling devices to alert operating personnel that the latch has tripped and requires resetting.
- A hydraulic reset mechanism is available to provide mechanical advantage to pivot the screen back into position and facilitate easy resetting of the screen.



NORMAL  
OPERATION



TRAMP METAL  
PROTECTION ACTIVATED

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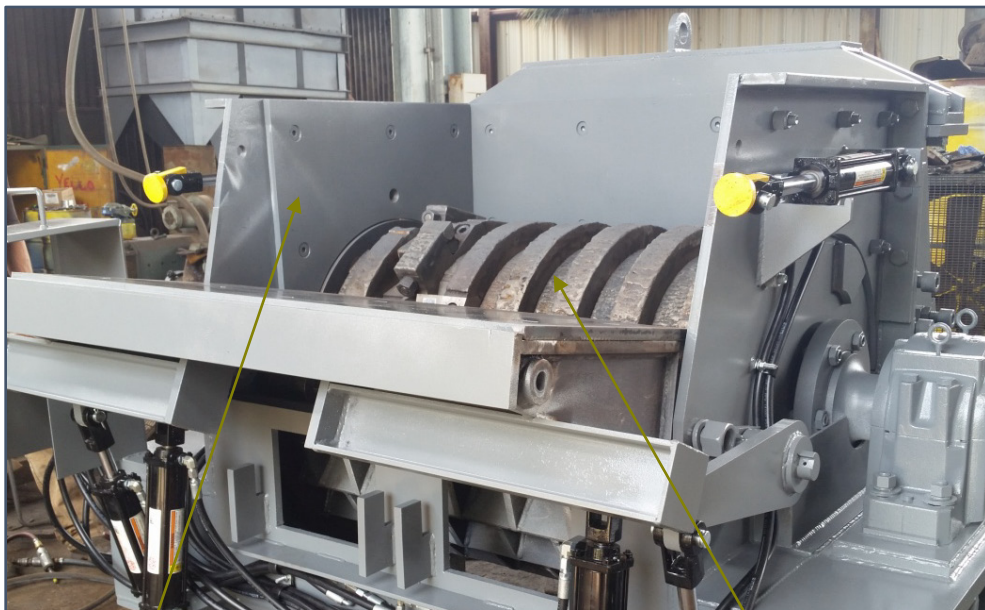


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### Anticipating Wear: Protecting Your Investment

Processing high volumes of material with sandy or abrasive contaminants can act like a sandblasting operation on steel. In addition to welded hardsurfacing on the teeth, anvil points, anvil holders, screen, ring lugs and ring perimeters (optional), all KC Model Hogs incorporate abrasion resistant wear liners on all four sides of the cutting chamber. Like the other routine wear items on the hog, the wear liners are securely bolted into position but can be removed and replaced as needed.



Wear Liners

Hardsurfacing  
(Optional)

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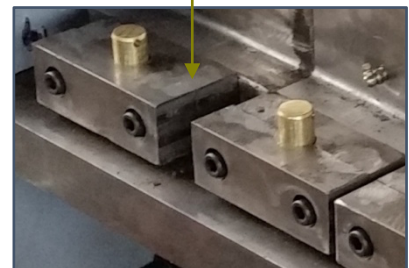
### Special Design Features

- The K.C. Model uses an “overlapping cut” in which the leading edges of the high teeth overlap the leading edges of the low teeth. This prevents material binding between the sides of the large breaker rings which carry the high teeth and the adjacent large anvil points, and is especially important when operating on soft, spongy billets, cores, slabs, or bark.
- The Shear Bolt Bushing Block Assembly involves use of a split steel block which surrounds the upper half of the shear bolt, enabling the shear bolt to be removed and replaced easily. The block is securely attached to the anvil holder by a socket head capscrew.
- Rather than having to replace the entire breaker ring when it is worn, use of the removable lug insert permits repair or replacement without removing the rotor from the hog. The additional first cost of this feature is minimal compared to the labor and cost of removing the entire rotating element to replace solid breaker rings.



Removable Lug Insert

Split Bushing Block



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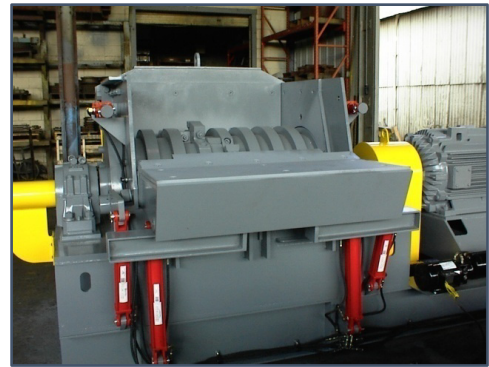
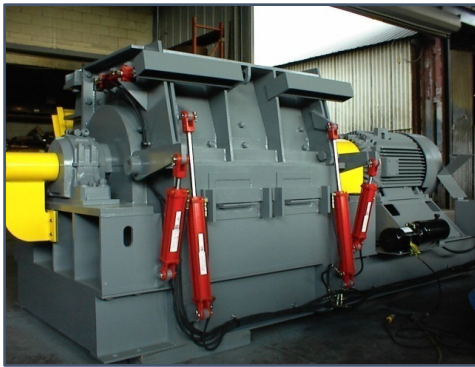
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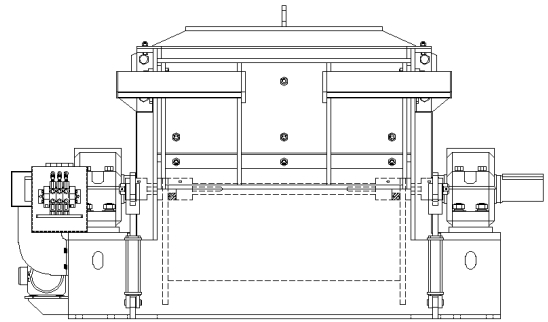
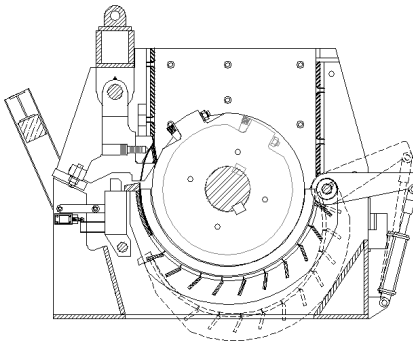
### Hydraulic Accessories

Minimize down time, facilitate maintenance and increase worker safety.

**Rear  
Door  
Opener**



**Screen  
Reset**



**Brake**



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### PM-KC

- Typical applications include bark, wood blocks and lily pads up to 7" thick, slabs, logs up to 85 pounds, broken pallets and 60" whole pallets.
- Can also be configured with special thin plate screens to process oil shale and plastics.
- PM-KC fixed lug rings have a 22" cutting circle and the rotor incorporates a 6" X 36" steel flywheel to process through momentary surge loads.



#### **Bark Processing Capacity:**

Up to 68 tons per hour (average rate)

#### **Wood Processing Capacity:**

Up to 20 tons per hour (average rate)

#### **Power Requirements:**

75 hp – 450 hp

#### **Optional Sizes:**

15" – 21" – 27" – 33" – 39" – 45" – 51" –  
57" – 63" – 69" – 75"

#### **Cutting Circle:**

22" Diameter

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### CS-KC

- Typical applications include bark, wood blocks and lily pads up to 9" thick, slabs, crossties and logs up to 125 pounds, broken pallets and 60" whole pallets.
- CS-KC rings have a 32" cutting circle and come in either a fixed or removable lug configuration.
- A flywheel is not needed due to the overall mass of the rotor.



#### **Bark Processing Capacity:**

Up to 99 tons per hour (average rate)

#### **Wood Processing Capacity:**

Up to 29 tons per hour (average rate)

#### **Power Requirements:**

100 hp – 600 hp

#### **Optional Sizes:**

15" – 21" – 27" – 33" – 39" – 45" – 51" –  
57" – 63" – 69" – 75"

#### **Cutting Circle:**

32" Diameter

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### XL-KC

- Typical applications include bark, wood blocks and lily pads up to 11" thick, slabs, crossties and logs up to 165 pounds, broken pallets, 60" whole pallets and automobile tires.
- XL-KC rings accommodate two teeth per ring in either a fixed or removable lug configuration with a 36" cutting circle.



#### **Bark Processing Capacity:**

Up to 136 tons per hour (average rate)

#### **Wood Processing Capacity:**

Up to 40 tons per hour (average rate)

#### **Power Requirements:**

100 hp – 700 hp

#### **Optional Sizes:**

15" – 21" – 27" – 33" – 39" – 45" – 51" –  
57" – 63" – 69" – 75"

#### **Cutting Circle:**

36" Diameter

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