

# HM SERIES HAMMERMILL



## ROSKAMP CHAMPION

*Your Partner in Productivity*

The HM Series Hammermill is designed for the most demanding operation. This rugged, high efficiency hammermill is capable of fine grinding either friable or fibrous materials. The high density frame is designed to minimize noise and vibration.

The HM Series features the air swept teardrop design and Champion's patented regrind chamber. The HM Series one-piece, full-access doors, mounted on unique pivoting arms, allow the doors to move completely out of the way during service.

The HM Series engineering combines the latest in manufacturing technology to provide you with the highest quality hammermill in the world.

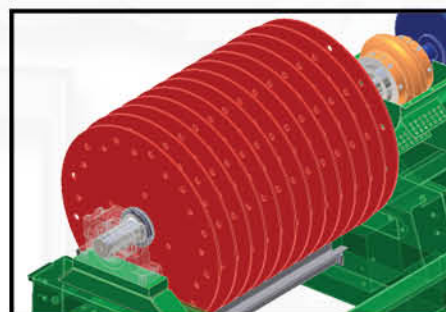




## HM SERIES HAMMERMILL SPECIFICATIONS:

### ROTOR

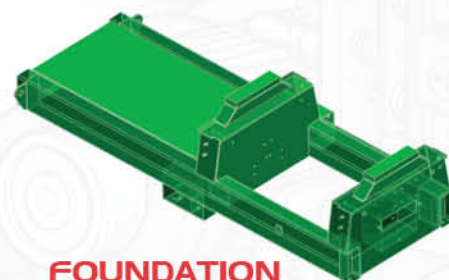
- Dual position rotor standard with “coarse” and “fine” hammer position. Coarse position hammers are approximately 7/16” (11 mm) from screen. Fine position hammers are approximately 7/32” (5.5 mm) from screen.
- Rotors are dynamically balanced to a grade of G 6.3 (ISI 1040 and ANSI S2.19,1975), outside of the hammermill, using a precession-installed, factory-calibrated balancer.



- Rotor shaft machined from 4140 calcium-treated alloy steel or forged 4150 resulfurized steel (based on applications).
- Double row spherical bearings support and maintain rotor balance and motor alignment for optimum energy transfer.
- Omega orange flexible motor coupling ensures smooth transfer of power at reduced breakage risk.

### SAFETY

- Mill is fit with state-of-the-art castell EMF trapped key interlock system that requires positive stop of rotor before doors can be opened for maintenance or inspection. Will not allow motor to start until doors are secured and keys are in proper operating position.
- All machine safety labels are available for free in any language.
- Vibration monitor switch included. Vibration switch shuts hammermill down in the event of an unbalanced running condition. Vibration switch is fully adjustable to accommodate a wide range of operating conditions. Vibration switch satisfies CL1 Group C&D electrical hazard locations.



### FOUNDATION

- Massive Uni-Weld Base, fabricated from 6” x 12” x 1/2” (152 mm x 305 mm x 6.4 mm) rectangular steel tubing, maintains strict power train alignment and efficient energy transfer in the most demanding conditions. Features an adjustable motor mounting system that accommodates a wide variety of motor frames and sizes.
- Bearing support columns are double wall box construction fabricated from 1/4” (6.4 mm) A36 carbon steel, fully gusseted and welded with 3/4” (19mm) precision machined steel bearing mounts.
- Hammermill base filled with a high-density aggregate providing additional mass and improved vibration damping characteristics.

### GRIND CHAMBER

- Top feed full width mill inlet introduces material evenly in either rotation using the bi-directional inlet flow director.
- Allows for maximum hammer/screen utilization, and guides feed into the path of the hammers on the down swing, promoting uniform motor loading without surging.
- Air swept design reduces dead air space in hammermill housing for more efficient air flow.
- Champion patented regrind chamber (Patent No. 3,904,134) prevents material from rotating within the grinding chamber for improved grinding capacity and efficiency.
- Screen carriages manufactured from A36 carbon steel—plasma-cut on CNC machinery for precise fit to the screens—and wear liner and are hinged to simplify screen change.
- Fine grind options: screen carriage with roller chain take-up, extended-wear liners and fine-grind inserts.

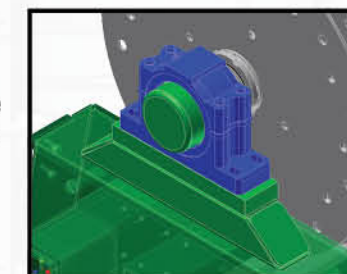


### HAMMER AND SCREENS

- Hammers are single hole C1045 alloy steel (body is through hardened to 42-45 rc with the hardface being tungsten carbide matrix 64-68 rc and carbide particles 90-95 rc).
- Pins are case hardened 56-60 rc, stress relieved and straightened.
- All hammer sets are balanced and matched for optimum performance and wear.
- Every hammermill is supplied with two sets of screens that maintain maximum open area.

### BEARINGS

- Pillow block bearings support the rotor on both sides utilizing tapered adapter sleeves that grip the full circumference of the shaft to maintain positive rotor position in the toughest environments.
- LER labyrinth grease seal and RTD bearing temperature probes standard to ensure safe, efficient and maintenance-friendly operation.

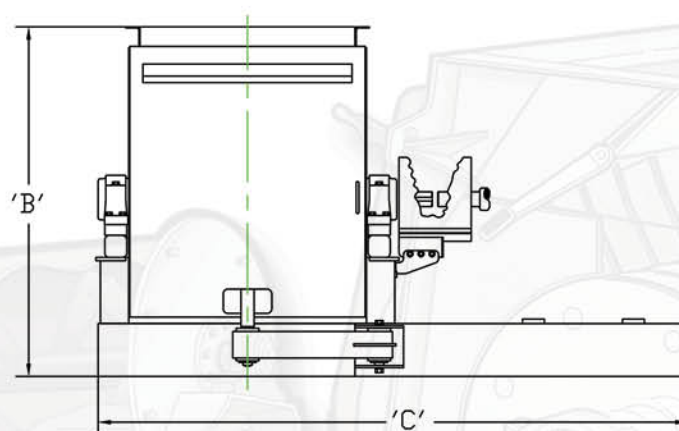
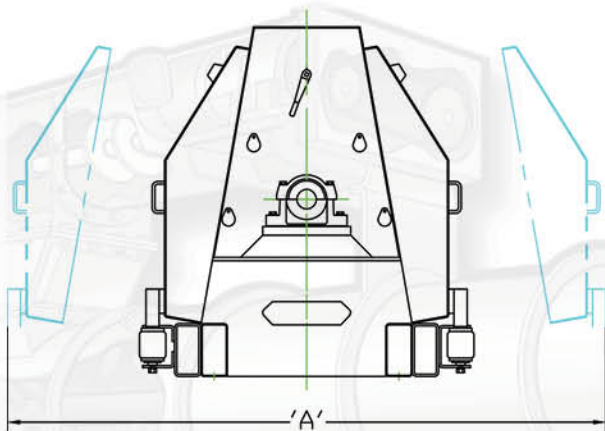


### HOUSING AND DOORS

- Assembled using a maintenance-friendly vertical split side wall design, the housing maintains the rigidity needed for the most demanding applications while allowing for quick disassembly with little downtime.
- Maintenance-friendly, split-mount teardrop wear liners overlap housing walls to strengthen and absorb chamber wear, prolonging housing life.
- Straight through discharge, available in gravity or air assisted, has fewer ledges, helps move product through the mill and lessens buildup to reduce cross-contamination.
- Inlet flow director, teardrop wear liner and wear plates are all fabricated from abrasion resistant (AR235) plate steel for extended life.
- Champion HM Series Hammermills require minimal floor space and feature unique double pivoting doors that swing away completely from the grinding chamber to provide total access for screen and hammer service.
- Heavy duty De-Staco over center door latches, fully flanged 1/2” laminated doors and continuous reinforced polymer gaskets ensure positive door sealing and dust elimination.

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	<b>HM 38</b>	<b>HM 44</b>	<b>HM 54</b>
Tip Speed: 1800 rpm	17,898 Ft./min.(91M/sec)	20,724 Ft./min. (105 M/sec)	25,434 Ft./min. (129 M/sec)
Tip Speed: 1500 rpm	14,915 Ft./min. (76 M/sec)	17,270 Ft./min. (88 M/sec)	21,195 Ft./min. (108 M/sec)
Rotor Diameter x Width (MM)	38 x 16 - 56 (968 x 406 -1,422)	44 x 16 - 56 (1,118 x 406 -1,422)	54 x 16 - 48 (1,372 x 406 -1,219)
Screen Area Sq. In. (Sq M)	1,728 - 5,184 (1.12 - 3.35)	1,920 x 5,760 (1.24 - 3.72)	2,368 - 7,104 (1.53 - 4.58)
HP Range (kW)	75 - 450 (55 - 335)	100 - 500 (75 - 370)	125 - 500 (90 - 370)
Air Requirements CFM (M3/Hr)	2,160 - 6,480 (3,670 - 11,011)	2,400 - 7,200 (4,078 - 12,234)	2,960 - 8,880 (5,029 - 15,089)
Dim A (MM)	59 1/2" (1,511)	65 1/2" (1,664)	79 1/4" (2,013)
Dim B (MM)	93 7/8" (2,385)	93 7/8" (2,385)	103 7/8" (2,639)
Dim C (MM)	86" - 150" (2,184 - 3,810)	86" - 154" (2,184 - 3,912)	86" - 146" (2,184 - 3,708)

## ROSKAMP CHAMPION'S STRATEGIC ADVANTAGE

The ability to deliver to the customer the best "Value Package."

In other words, in the long-term, when all things are considered, we offer customers equipment and services that represent the lowest operating cost solution.



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