

Hammer-Forged Steel Grinding Media

Engineered to Endure



Section 1: Product Profile & Application

Engineered specifically for high-impact, high-abrasion environments. Manufactured via advanced hammer-forging lines to ensure a dense, flawless internal microstructure. This eliminates internal voids, providing extreme impact toughness, even wear, and a guaranteed low breakage rate.

- **Primary Applications:** Cement Mills, SAG Mills, Ball Mills, and Heavy Mining Operations.
- **Manufacturing Process:** Rotary Heating, Hammer Forging, Isothermal Quenching, and Tempering.

Section 2: Technical Specifications

- **Dimensional & Mass Specifications**

Diameter (mm)	Diameter (in)	Minimum Mass (g)	Maximum Mass (g)
40	1.50	236	304
50	2.00	511	620
60	2.36	888	1000
65	2.50	1122	1346
70	2.75	1410	1590
80	3.00	2091	2509
90	3.50	2996	3414
100	4.00	4110	4758
125	4.50	8028	9050
150	6.00	13873	16836

Note: Mass tolerances are strictly controlled to a 0 to +5% overweight variance to ensure highly predictable mill charge kinetics.

- **Chemical Composition (% Weight)**

Dia (mm)	C	Mn	Cr	Si	P
40	0.70 - 1.10	0.60 - 1.20	0.40 - 0.70	0.10 - 0.50	0.10 - 0.50
50	0.70 - 1.10	0.60 - 1.20	0.40 - 0.70	0.10 - 0.50	0.10 - 0.50
60	0.70 - 1.10	0.60 - 1.20	0.40 - 0.70	0.10 - 0.50	0.10 - 0.50
65	0.70 - 1.10	0.60 - 1.20	0.40 - 0.70	0.10 - 0.50	0.10 - 0.50
70	0.70 - 1.10	0.60 - 1.20	0.40 - 0.70	0.10 - 0.50	0.10 - 0.50
80	0.70 - 1.10	0.60 - 1.20	0.40 - 0.70	0.10 - 0.50	0.10 - 0.50
90	0.60 - 1.00	0.60 - 1.20	0.80 - 1.00	0.10 - 0.50	0.10 - 0.50
100	0.60 - 1.00	0.60 - 1.20	0.80 - 1.00	0.10 - 0.50	0.10 - 0.50
125	0.60 - 1.00	0.60 - 1.20	0.80 - 1.00	0.10 - 0.50	0.10 - 0.50
150	0.60 - 1.00	0.60 - 1.20	0.80 - 1.00	0.10 - 0.50	0.10 - 0.50

Note: Chemical compositions listed reflect standard parameters. Custom alloy profiles can be engineered upon request to optimize wear rates for specific mill conditions and ore hardness.

- **Mechanical Properties & Performance**

Property	Testing Standard	Metric / Performance
Surface Hardness	Rockwell (HRC)	55 - 63
Volumetric Hardness	Rockwell (HRC)	52 - 60
Impact Toughness	Charpy V-Notch	≥ 12.0 J/cm²
Breakage Rate	10-Meter Drop Test	≤ 1.0%
Microstructure	Metallurgical Phase	Martensite / Fine Pearlite

Hammer-Forged Steel Grinding Media

Engineered to Endure



Section 3: Manufacturing

Our hammer-forged grinding media is manufactured using fully automated, high-pressure hammer-forging lines. High-carbon alloy steel billets raw material are heated via rotary induction and subjected to intense multi-directional forging pressure. This drastic physical compression refines the internal grain structure and eliminates metallurgical porosity. Followed by highly controlled isothermal quenching and tempering, this process guarantees an optimal balance of extreme wear resistance and impact toughness, preventing the internal voids that cause spalling and breakage in standard grinding media.



Section 4: Packaging & Delivery Configurations



Industrial Steel Drums

- **Capacity:** 850kg to 1,000kg
- **Design:** Heavy-gauge, weather-sealed steel drums securely strapped to heavy-duty wooden or steel pallets.
- **Advantage:** The ultimate protection for long-term outdoor storage in extreme weather environments and seamless ocean-to-site freight.



Heavy-Duty Polypropylene Bags

- **Capacity:** 1,000kg (1 Metric Ton)
- **Design:** UV-resistant, moisture-lined bulk bags engineered with reinforced 4-point lifting straps.
- **Advantage:** Highly efficient for rapid offloading, mill-side staging, and direct-to-hopper loading.



Ready to Optimize your Milling Operations

+966 53 337 2775 | thaer.h@kd-grindingmedia.com

www.kd-grindingmedia.com

