

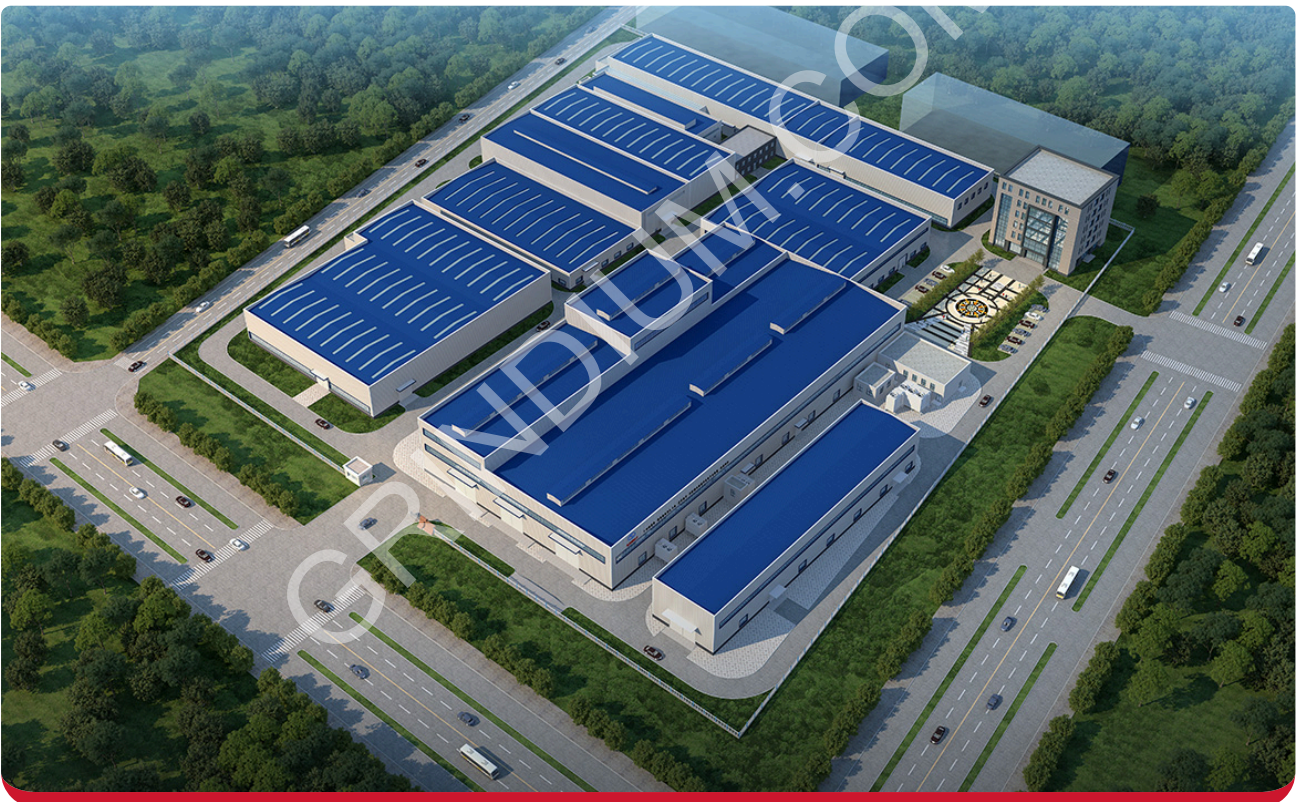
## WHO WE ARE - ABOUT THE FACTORY

### Harness Rear Earth, Benefit the World.

Our Factory, located in Inner Mongolia, one of the largest rare earth production areas in China, was established on May 8, 2005, with a registered capital of 70.55 million RMB, covers 80 acres and has a production capacity of 200,000 tons. As a high-tech enterprise, it specializes in the research, development, and manufacturing of rare earth applications in industrial metal components – Grinding Balls, Grinding Cylpebs and Grinding Rods.

It is the first company in China to achieve the standardized application of rare earth and rare earth alloy materials in industrial metal components. It is the largest production base for rare earth alloy industrial metal components in the country. Multiple core technologies and products developed by the company have filled industry gaps.

In addition to our flagship facility in Inner Mongolia, we have also established production plants in Shandong and Anhui provinces. These strategically located facilities enable us to efficiently serve customers in Northern and Eastern China, offering significant logistical and cost advantages for shipping and distribution.



**5**

SUBSIDIARY

**4**

R&D INSTITUTION

**300+**

EMPLOYEES

**200M**

ANNUAL OUTPUT

**50**

CORE TECHNOLOGY

**64**

PATENTS

**20K**

TONS CAPACITY


**3**

INTERNATIONAL PATENTS

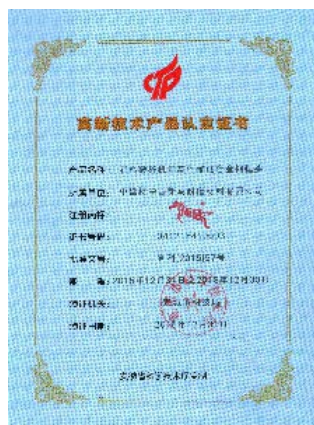
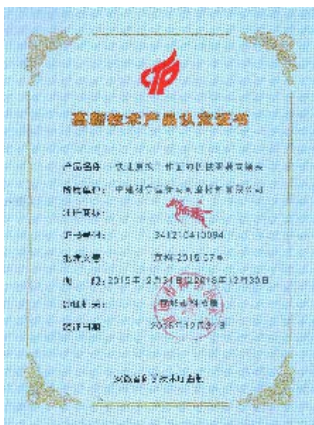
## FACTORY VIEW



## WHY CHOOSE US

 <p><b>Industry-Leading Technology</b></p>	 <p><b>Strong R&amp;D and Innovation</b></p>	 <p><b>Comprehensive Product Range</b></p>
 <p><b>Largest Production Base</b></p>	 <p><b>Resource and Cost Advantage</b></p>	 <p><b>Reliable and Secure Partnership</b></p>

## PATENTS & CERTIFICATIONS



View more at our website: [www.grindium.com](http://www.grindium.com)

## CAST GRINDING BALL - High Chromium

- High Chromium Cast Grinding Balls
- Premium type of cast grinding media
- Superior wear resistance and durability, good corrosion resistance
- Diameter Range: 17mm - 150mm
- Customized available
- MOQ: 25 tons / 20ft container



We need **SIZE, MATERIAL, Chemical Composition**, or other requirements to provide an accurate quotation. We provide a variety of materials such as high chromium, medium chromium, and low chromium, and they are numbered in the parameters below. You can directly select or send us your product requirements, and we will give an accurate quotation based on the product requirements.

### Technical Features

Material Gr.	Diameter(mm)	Hardness(HRC)	Breakage rate	Impact value(J/cm <sup>2</sup> )	Drop Times	Micro Structure
ZQCr26	17-150	>62	<1%	>7	≥20,000	M+C
ZQCr20	17-150	>62	<1%	>6	≥20,000	M+C
ZQCr15	17-150	>62	<1%	>5	≥20,000	M+C
ZQCr12	17-150	>60	<1%	>3.5	≥20,000	M+C
ZQCr8	17-150	>58	<1%	>3	≥20,000	M+C

### Diameter Tolerance

Diameter(mm)	φ<30	30<φ<60	60<φ<80	80<φ<100	φ>100
Tolerance(mm)	+1, -1	+1.5, -1	+2, -1	+2.5, -1	+3, -1

### Chemical Composition

Material Gr.	Chemical Composition (%)								
	C	Si	Mn	Cr	Mo	Cu	Ni	P	S
ZQCr26	2.0-3.3	1.2max	0.3-1.5	>23.0-30.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr20	2.0-3.3	1.2max	0.3-1.5	>18.0-23.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr15	2.0-3.3	1.2max	0.3-1.5	>14.0-18.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr12	2.0-3.3	1.2max	0.3-1.5	>10.0-14.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr8	2.1-3.3	2.2max	0.3-1.5	7.0-10.0	0-1.0	0-0.8	-	≤0.10	≤0.06

## CAST GRINDING BALLS - Medium & Low Chromium

Medium Chrome Alloy Cast Grinding Balls offer a balance between hardness, toughness, and cost-effectiveness. Low chromium cast grinding balls are a type of grinding media with a relatively low chromium content, typically ranging from 1%-3%. These balls are widely used in cement plants, mining, power stations, and chemical industries for grinding applications in ball mills and vertical mills.

Diameter Range: 17mm - 150mm, customized available

MOQ: 25 tons / 20ft container



### Technical Features

Material Gr.	Diameter(mm)	Hardness(HRC)	Breakage rate	Impact value(J/cm <sup>2</sup> )	Drop times	Micro structure
ZQCr5	17-150	>47	<1%	>2	≥15,000	M+C
ZQCr2	17-150	>45	<1%	>1.5	≥15,000	P+C

### Diameter Tolerance

Diameter(mm)	φ<30	30<φ<60	60<φ<80	80<φ<100	φ>100
Tolerance(mm)	+1, -1	+1.5, -1	+2, -1	+2.5, -1	+3, -1

### Chemical Composition

Material Gr.	Chemical Composition (%)								
	C	Si	Mn	Cr	Mo	Cu		Ni	P
ZQCr5	2.1-3.3	1.5max	0.3-1.5	4.0-6.0	0-1.0	0-0.8	-	≤0.10	≤0.10
ZQCr2	2.1-3.6	1.5max	0.3-1.5	1.0-3.0	0-1.0	0-0.8	-	≤0.10	

### Specification of Weight

Diameter	Weight Per Ball	Qty. per Ton	Diameter	Weight Per Ball	Qty. per Ton
φ20	0.034	31,056	φ80	2.05	487
φ25	0.063	15,873	φ90	2.9	345
φ30	0.11	9,091	φ100	4.0	250
φ40	0.26	3,891	φ110	5.3	188
φ50	0.51	2,000	φ120	6.8	147
φ60	0.86	1,153	φ125	7.75	129
φ70	1.37	729	φ130	8.74	74

## FORGED (ROOLING) GRINDING BALLS

- Advanced Forging Technology and Processes
- High-Quality Material Selection
- Rigorous Quality Control Systems
- Customization and Product Diversity
- Diameter Range: 30 40 50 60 70 80 90 100 110 120 125 150mm
- MOQ: 25 tons / 20ft container



We need **SIZE, MATERIAL, Chemical Composition**, or other requirements to provide an accurate quotation. We provide a variety of materials and they are numbered in the parameters below. You can directly select or send us your product requirements, and we will give an accurate quotation based on the product requirements.

### Diameter Tolerance

Diameter	30	40	50	60	70	80	90	100	110	120	125	150
Diameter Tolerance (mm)	±2			+3, -2			+4, -3			+5, -4		
Roundness(%)	≤2			≤3			≤4			≤5		

### Chemical Composition

Material Gr.	Breakage rate	Hardness (HRC)	Impact value (J/cm <sup>2</sup> )	Drop Test (times)	Microstructure
45#	<1%	≥55	≥12	≥12000	M+C
60Mn	<1%	≥55	≥12	≥12000	M+C
65Mn	<1%	≥58	≥12	≥12000	M+C
70Mn	<1%	≥60	≥12	≥12000	M+C
40Cr	<1%	≥55	≥12	≥12000	M+C
70Cr2	<1%	≥58	≥12	≥12000	M+C
B-2	<1%	≥58	≥12	≥15000	M+C
B-3	<1%	≥60	≥12	≥15000	M+C

### Chemical Composition

Material Gr.	C (%)	Si (%)	Mn (%)	Cr (%)	Cu (%)	Mo (%)	P (%)	S (%)	Ni (%)
45#	0.42-0.50	0.17-0.37	0.5-0.80	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
60Mn	0.57-0.65	0.17-0.37	0.70-1.0	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
65Mn	0.62-0.70	0.17-0.37	0.90-1.0	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
70Mn	0.67-0.75	0.17-0.37	0.90-1.20	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
40Cr	0.37-0.45	0.17-0.37	0.50-0.8	0.80-1.1	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
70Cr2	0.65-0.75	0.20-0.30	0.75-0.90	0.55-0.70	0-0.25	0-0.30	0-0.030	0-0.030	0-0.30
B-2	0.70-0.80	0.17-0.37	0.70-0.80	0.50-0.60	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
B-3	0.58-0.66	1.2-1.6	0.65-0.80	0.70-0.90	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30

## CAST GRINDING CYLPEBS - High Chromium

- Diameter(mm): 8-60mm, customize diameter
- Hardness(HRC): >58
- Breakage rate: <1%
- Drop Test(times): ≥12000
- Customized available
- MOQ: 25 tons / 20ft container



We need **SIZE, MATERIAL, Chemical Composition**, or other requirements to provide an accurate quotation. We provide a variety of materials such as high chromium, medium chromium, and low chromium, and they are numbered in the parameters below. You can directly select or send us your product requirements, and we will give an accurate quotation based on the product requirements.

### Dimension & Tolerance

8x10	10x12	12x14	14x16	16x18	18x20	20x25	Diameter: +1, -1
25x30	30x35	35x40	40x45	45x50	50x55	55x60	Length: +2, -2

### Technical Features

Material Gr.	Diameter (mm)	Hardness (HRC)	Breakage rate	Impact value(J/cm <sup>2</sup> )	Drop Test (times)	Microstructure
ZQCr26	8-60	>58	<1%	>7	≥12000	M+C
ZQCr20	8-60	>58	<1%	>6	≥12000	M+C
ZQCr15	8-60	>58	<1%	>5	≥12000	M+C
ZQCr12	8-60	>58	<1%	>3.5	≥12000	M+C
ZQCr8	8-60	>58	<1%	>3	≥12000	M+C

### Chemical Composition

Material Gr.	Chemical Composition (%)								
	C	Si	Mn	Cr	Mo	Cu	Ni	P	S
ZQCr26	2.0-3.3	1.2max	0.3-1.5	>23.0-30.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr20	2.0-3.3	1.2max	0.3-1.5	>18.0-23.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr15	2.0-3.3	1.2max	0.3-1.5	>14.0-18.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr12	2.0-3.3	1.2max	0.3-1.5	>10.0-14.0	0-3.0	0-1.2	0-1.5	≤0.10	≤0.06
ZQCr8	2.1-3.3	2.2max	0.3-1.5	7.0-10.0	0-1.0	0-0.8	—	≤0.10	≤0.06

## CAST GRINDING CYLPEBS - Medium & Low Chromium

- Diameter(mm): 8-60mm
- Hardness(HRC): >58
- Breakage rate: <1%
- Drop Test(times): ≥12000
- Customized available
- MOQ: 25 tons / 20ft container



We need **SIZE, MATERIAL, Chemical Composition**, or other requirements to provide an accurate quotation. We provide a variety of materials such as high chromium, medium chromium, and low chromium, and they are numbered in the parameters below. You can directly select or send us your product requirements, and we will give an accurate quotation based on the product requirements.

### Dimension & Tolerance

8x10	10x12	12x14	14x16	16x18	18x20	20x25	Diameter: +1, -1
25x30	30x35	35x40	40x45	45x50	50x55	55x60	Length: +2, -2

### Technical Features

Material Gr.	Diameter(mm)	Hardness(HRC)	Breakage rate	Impact value(J/cm <sup>2</sup> )	Drop Test (times)	Micro structure
ZQCr5	8-60	>47	<1%	>2	≥10000	M+C
ZQCr2	8-60	>45	<1%	>1.5	≥8000	P+C

### Chemical Composition

Material Gr.	Chemical Composition (%)								
	C	Si	Mn	Cr	Mo	Cu	Ni	P	S
ZQCr5	2.1-3.3	1.5max	0.3-1.5	4.0-6.0	0-1.0	0-0.8	—	≤0.10	≤0.10
ZQCr2	2.1-3.6	1.5max	0.3-1.5	1.0-3.0	0-1.0	0-0.8	—	≤0.10	≤0.10



## Hot Rolling Steel Cylpebs

- Diameter(mm): 20-60mm, customize diameter
- Breakage rate: <1%
- Customized available
- MOQ: 25 tons / 20ft container



### Dimension & Tolerance

20x30	25x35	30x40	35x45	40x50	45x55	50x60	55x65	60x70	mm
-------	-------	-------	-------	-------	-------	-------	-------	-------	----

### Technical Features

Material GR.	Breakage rate	Hardness(HRC)	Impact value(J/cm <sup>2</sup> )	Drop Times	Micro structure
45#	<1%	≥45	≥12	≥8000	M+C
60Mn	<1%	≥55	≥12	≥12000	M+C
65Mn	<1%	≥58	≥12	≥12000	M+C
B-2	<1%	≥60	≥12	≥15000	M+C

### Chemical Composition

Brand	C (%)	Si (%)	Mn (%)	Cr (%)	Cu (%)	Mo (%)	P (%)	S (%)	Ni(%)
45#	0.42-0.50	0.17-0.37	0.5-0.80	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
60Mn	0.57-0.65	0.17-0.37	0.70-1.0	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
65Mn	0.62-0.70	0.17-0.37	0.90-1.0	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
B-2	0.70-0.80	0.17-0.37	0.70-0.80	0.50-0.60	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30

## STEEL GRINDING ROD



We need **SIZE, MATERIAL, Chemical Composition**, or other requirements to provide an accurate quotation. We provide a variety of materials and they are numbered in the parameters below. You can directly select or send us your product requirements, and we will give an accurate quotation based on the product requirements.

### Dimension & Tolerance

Diameter(mm)	Length(mm)	Diameter tolerance(mm)	Length tolerance(mm)
50-150	2000-6000	-1.6-0.2	-20-0

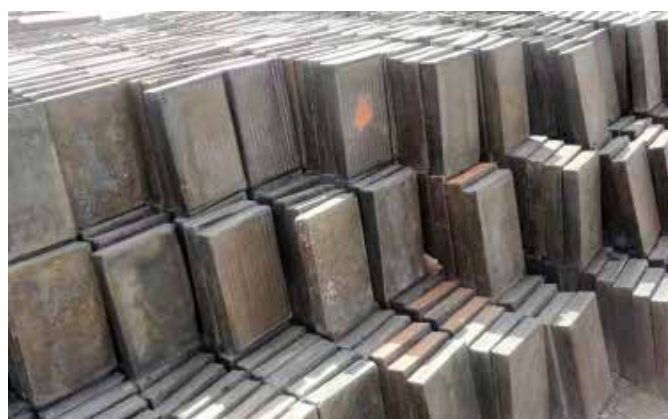
### Technical Features

Impact value(J/cm2)	Hardness (HRC)	Breakage rate	Drop times(times)	Straightness
5-7	45-55	<1%	≥10	2/1000

### Chemical Composition

Material Gr.	C (%)	Si (%)	Mn (%)	Cr (%)	Cu (%)	Mo (%)	P (%)	S (%)	Ni(%)
45#	0.42-0.50	0.17-0.37	0.5-0.80	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
60Mn	0.57-0.65	0.17-0.37	0.70-1.0	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
65Mn	0.62-0.70	0.17-0.37	0.90-1.0	0-0.25	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
40Cr	0.37-0.45	0.17-0.37	0.50-0.8	0.80-1.1	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30
42CrMo	0.38-0.45	0.17-0.37	0.50-0.80	0.90-1.2	0-0.03	0.15-0.25	0-0.035	0-0.035	0-0.30
B-2	0.70-0.80	0.17-0.37	0.70-0.80	0.50-0.60	0-0.25	0-0.30	0-0.035	0-0.035	0-0.30

## MILL LINER



Material Name	Application	Life Span	Hardness	Impact Toughness
High durability High Chromium Cast Iron	Liners, end liners, and vertical liners for mills $\Phi \leq 5$	$\geq 7$ Years	HRC $\geq 60$	8-10J/cm <sup>2</sup>
High-Cr Cast Iron I	Liners, end liners, and vertical liners for mills $\Phi \leq 5$	$\geq 6$ Years	HRC $\geq 60$	8-10J/cm <sup>2</sup>
High-Cr Cast Iron II	Liner and end liner of mill $\Phi \leq 4.2$ m	$\geq 5$ Years	HRC $\geq 58$	8-10J/cm <sup>2</sup>
High-Cr Cast Steel	Liner and end liner of mill $\Phi \leq 4.2$ m	$\geq 4$ Years	HRC $\geq 55$	8-10J/cm <sup>2</sup>
Cr-Mo- Ni Alloy Steel	Shell liner, head liner, diaphragm, grid plate for mill $\Phi \leq 5$ m	$\geq 3$ Years	HRC $\geq 52$	8-10J/cm <sup>2</sup>
Medium-carbon multi-component Alloy Steel	Shell liner, head liner, diaphragm, grid plate for mill $\Phi \leq 5$ m	$\geq 2$ Years	HRC $\geq 50$	8-10J/cm <sup>2</sup>
Medium-Cr Alloy Steel	Shell liner, head liner, diaphragm, grid plate for mill $\Phi \leq 5$ m	$\geq 1.5$ Years	HRC $\geq 48$	8-10J/cm <sup>2</sup>
Low Alloy Steel	Shell liner, head liner, grid plate for mine wet mill	$\geq 1$ Years	HRC $\geq 45$	8-10J/cm <sup>2</sup>
Low Carbon High Alloy Steel	Blind plate of drying chamber for large-sized raw mill	$\geq 3$ Years	HRC $\geq 46$	8-10J/cm <sup>2</sup>
High-Mn Steel(Mn13)	Shell liner,head liner,grid plate for mine wet mill	$\geq 6$ month	HRC $\geq 200$	8-10J/cm <sup>2</sup>
Alloyed High-Mn Steel	Impact plate, grid plate,jaw plate of all kinds of crushers	$\geq 1$ Years	HRC $\geq 220$	8-10J/cm <sup>2</sup>

According to the application conditions of wear-resistant parts and the user's requirements for service life, we provide material optimization to achieve low income and high returns.

## CRUSHER HAMMER



Material Name	Application	Hardness	Impact Toughness
(Cr22Mo2NiCuWV) Super high-toughness high-Cr cast iron	Clinker crusher hammer, Blow bar	HRC≥60	7-10J/cm <sup>2</sup>
Super high-toughness high-Cr cast iron and Co-based carbide alloy	Built-up hammer of crusher	HRC≥60 HRA≥88	7-10J/cm <sup>2</sup>
(Mn13Cr3) Alloyed high-Mn steel	Large-scale crusher hammer	Hb≥220	≥120J/cm <sup>2</sup>
(mn17cr3) Super High-Mn Steel	Large-scale crusher hammer	Hb≥240	≥120J/cm <sup>2</sup>
Bimetal composite casting	Large-scale crusher hammer	head HRC= 60	handle ≥50J/cm <sup>2</sup>