



➤ Steel Balls for grinding



Steel balls for grinding are produced in a range of 60-125mm diameter. They are used in ore grinding mills, such as SAG (Semi Autogenous Grinding) mills when it is for initial grinding or ball mills for regrinding.

The most common applications of these steel balls are in gold, copper, iron, zinc, nickel and silver mining. Different hardness level of the product can be used depending on metal ore in order for grinding to be optimized.

During the manufacturing process Vacuum Degasser is used so to ensure high quality of final product by lowering its hydrogen and nitrogen content. The degasser was put into operation and brought about spectacular improvement in the quality of steel balls produced at Stomana Industry. The degassing of molten steel significantly lowers its hydrogen and nitrogen content. The use of the Vacuum Degasser yields high quality "pure steel", which in turn leads to high value-added finished products with technical characteristics and properties that can respond to the needs of the most demanding applications.

Vacuum degassing is performed only by top steel manufacturers in Europe and around the world. Equipped with the system, Stomana Industry is able to produce new qualities of alloy steels and target higher standard sectors.



### Steel chemical composition in %

C	Mn	Si	P	S	Cu	Cr	Ni	Al
0.60-1.00	0.70-1.20	0.25-0.50	max. 0.035	max. 0.035	max. 0.40	max. 0.60	max. 0.30	0.01-0.06

### Dimensional features

Diameter (mm)	Tolerance (mm)	Surface Area per piece cm <sup>2</sup>	Nominal Volume cm <sup>3</sup>	Weight (kg)	Number of Balls per Metric Ton
60	(+3.0/-2.0)	113.1	113.12	0.89	1126
70	(+3.0/-2.0)	153.9	179.5	1.41	709
80	(+4.0/-2.0)	201	268.02	2.10	475
90	(+4.0/-3.0)	254	381.66	3.00	334
100	(+5.0/-3.0)	314	523.57	4.11	243
110	(+5.0/-5.0)	380	696.55	5.47	183
115	(+5.0/-5.0)	415	795.92	6.25	160
120	(+5.0/-5.0)	452	904.78	7.10	141
125	(+5.0/-5.0)	491	1022.65	8.02	124

### Surface hardness

Nominal Diameter (mm)	Surface hardness as per Rockwell - HRC (Brinel - HB) not less than:			
	Category			
	Normal (NH)	Enhanced (EH)	High (HH)	Very High (VHH)*
60	48 (461)	53 (534)	57 (601)	60 (653)
70	48 (461)	52 (514)	56 (578)	60 (653)
80	48 (461)	51 (495)	55 (555)	60 (653)
90	40 (375)	48 (461)	51 (495)	58 (627)
100	40 (375)	44 (415)	44 (415)	57 (601)
110	40 (375)	44 (415)	44 (415)	55 (555)
115	40 (375)	44 (415)	44 (415)	55 (555)
120	40 (375)	44 (415)	44 (415)	55 (555)
125	40 (375)	44 (415)	44 (415)	55 (555)

Hardness variation to the center is less than 3 HRC  
 (\*) Higher hardness available upon agreement



#### Type

Hot Rolled Steel Balls for grinding



#### Form dimensions

Diameters from 60 to 125mm



#### Surface hardness

As per Brinel & Rockwell



#### Packing

Steel drums, Big bags, Bulk



#### Dimensions, weight & tolerances

According to FN-SPP-03-18

## ➤ Steel Balls sales in more than 20 countries and 4 continents



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