

○ Carbon steel balls

| Product Features

These balls are headed from carbon steel and their surfaces are strengthened by carburization and quenching. This is our historic product, which has been produced since the inauguration of AKS.



| Usage Examples

- Bicycle hubs
- Automotive parts (Seat adjusters, stabilizer link balls, etc.)
- Canister balls and more



| Product Specification

1. Chemical Composition of Material (%)

	C	Mn	P	S
Carbon Steel Balls JIS	0.08~0.13	0.30~0.60	0.040 or less	0.040 or less

※Mainly JIS G 3507SWCH 10R is used.

※Cu contents as impurities shall not exceed 0.30% respectively. Ni and Cr contents as impurities shall not exceed 0.20% respectively.

2. Applicable range of ball grades and dimensional accuracy

Ball Grade	Range of ball sizes	Ball gauges (μm)	Variation of ball lot diameter (μm)	Deviation from spherical form (μm)
100	3/8 (9.525mm) ~1/2 (12.700mm)	± 5.0	5	2.5
200	1/8 (3.175mm) ~1/2 (12.700mm)	± 5.0	10	5
Special grade	1/8 (3.175mm) ~1/2 (12.700mm)	± 12.5	25	12.5

※The values in parentheses are in accordance with ISO grade.

※Balls of sizes or grades other than the above-mentioned can be manufactured at your request.

3.Hardness on spherical surface and crushing load

Ball sizes	Nominal ball diameters (mm)	Hardness (Min) (HRC) Measured value on spherical surface	Crushing load (Min) kN{kgf}
1/8	3.175	56.0	4.90{ 500}
5/32	3.969	57.0	7.85{ 800}
3/16	4.762	58.0	10.79{1100}
7/32	5.556	59.0	13.73{1400}
15/64	5.953	59.5	15.69{1600}
1/4	6.350		17.65{1800}
17/64	6.747	60.0	19.61{2000}
9/32	7.144		21.57{2200}
5/16	7.938		26.48{2700}
11/32	8.731		31.38{3200}
3/8	9.525		36.28{3700}
13/32	10.319		38.25{3900}
7/16	11.112		41.19{4200}
15/32	11.906		45.11{4600}
1/2	12.700		49.03{5000}