

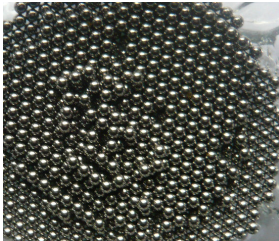
CHROME STEEL 52100 BALLS, STAINLESS STEEL BALLS, CERAMIC (Si3N4) BALLS!



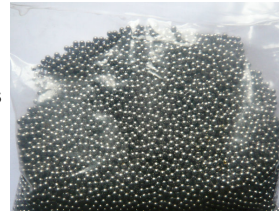
YDTECH™ SUPPLIERS OF STEEL METAL SPHERES, TUNGSTEN CARBIDE BALLS, STAINLESS STEEL SPHERES! MANUFACTURERS OF TITANIUM BALLS, CHROME STEEL SPHERES, CERAMIC BALLS, BRASS SPHERES IN CHINA.

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- steel balls
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AISI 52100 steel balls for bearings



the steel balls for bearings is high carbon chromium steel AISI 52100, stainless steel 440C by its steel alloy provides a good balance of hardness, wear resistance, and toughness.



chrome alloy steel balls, primarily used in bearings but also found in other industrial equipment application. chrome steel balls are used in a wide array of applications from aerospace to automotive. the applications of chrome steel balls most people are familiar with are ball bearings, both radial and linear.

precision stainless steel 440C balls



stainless steel balls have similar mechanical properties as chrome steel balls with the advantage of being resistant to corrosive environments. stainless



steel Balls for maximum hardness with corrosion resistance in bearing and valve applications.

steel ball materials and heat treatment technology

precision steel balls, stainless steel balls, chrome steel balls, carbon steel balls, bearing balls

steel ball materials		material standard	heat treatment standard
high carbon chromium bearing steel	GCr15, GCr15SiMn, GCr15SiMo, GCr18Mo,	GB/T 18254-2002, GB/T18579-2001	JB/T 1255
high carbon chromium stainless bearing steel	G95Cr18(9Cr18), G102Cr18Mo (9Cr18Mo), G65Cr14Mo	GB/T 3086-2008	JB/T 1460-2011
high temperature bearing steel	Cr4Mo4V	YB688-1976	JB/T 2850-2007
precision bearing balls, steel balls, stainless steel balls, chrome steel balls, carbon steel balls, ceramic balls, titanium spheres,			

titanium TiC steel balls

one option to consider when enhanced ball performance is a concern is titanium carbide coated (TiC) balls. TiC balls typically offer the advantages of longer service life, reduced friction and wear, and lower rates of lubricant degradation. titanium carbide coatings, when applied to a stainless steel substrate, are extremely hard and are resistant to corrosive attack. ask your Winsted customer service representative if TiC balls might be appropriate for your application.

grade of steel balls and surface roughness of steel balls

precision steel balls, stainless steel balls, chrome steel balls, carbon steel balls, bearing balls

steel ball grade	steel ball diameter changes(VD _{ws})	spherical error(RS _w)	surface roughness Ra
G3	0.08	0.08	0.01
G5	0.13	0.13	0.014
G10	0.25	0.25	0.02
G16	0.4	0.4	0.025
G20	0.5	0.2	0.032
G24	0.6	0.6	0.04

G28	0.7	0.7	0.05
G40	1	1	0.06
G60	1.5	1.5	0.08
G100	2.5	2.5	0.1
G200	5	5	0.15
precision bearing balls, steel balls, stainless steel balls,chrome steel balls,carbon steel balls,ceramic balls, titanium spheres,			

tungsten carbide balls

tungsten carbide balls itself is resistant to corrosion, but the metal binder can be susceptible to corrosion in certain conditions. The corrosion resistance of tungsten carbide balls depends on the specific composition and application. tungsten carbide balls maintains its hardness and strength at elevated temperatures, making it suitable for applications involving high-temperature conditions.

tungsten carbide balls are used in various industrial applications, including:tungsten carbide balls can be used in specialized ball bearings, particularly in situations where extreme hardness and wear resistance are required. tungsten carbide balls are used in valves and other components in industries where resistance to wear and corrosion is crucial.

regulation value of steel balls and sorting of steel balls

precision steel balls, stainless steel balls,chrome steel balls,carbon steel balls, bearing balls

steel ball grade	steel ball diameter changes(VD _{wl})	regulation value gap	regulation value priority	score regulation value gap	ball score regulation value
G3	0.13	0.5	-5,....,-0.5,0,+0.5,....,+5	0.1	-0.2,-0.1,0,+0.1,+0.2
G3	0.13	0.5	-5,....,-0.5,0,+0.5,....,+5	0.1	-0.2,-0.1,0,+0.1,+0.2
G5	0.25	1	-5,....,-1,0,+0.5,....,+5	0.2	-0.4,-0.2,0,+0.2,+0.4
G10	0.5	1	-9,....,-1,0,+1,....,+9	0.2	-0.4,-0.2,0,+0.2,+0.4
G16	0.8	2	-10,....,-2,0,+2,....,+10	0.4	-0.8,-0.4,0,+0.4,+0.8
G20	1	2	-10,....,-2,0,+2,....,+10	0.4	-0.8,-0.4,0,+0.4,+0.8
G24	1.2	2	-12,....,-2,0,+2,....,+12	0.4	-0.8,-0.4,0,+0.4,+0.8
G28	1.4	2	-12,....,-2,0,+2,....,+12	0.4	-0.8,-0.4,0,+0.4,+0.8
G40	2	4	-16,....,-4,0,+4,....,+16	0.8	-1.6,-0.8,0,+0.8,+1.6
G60	3	6	-18,....,-6,0,+6,....,+18	1.2	-2.4,-1.2,0,+1.2,+4
G100	5	10	-40,....,-10,0,+10,....,+40	2	-4,-2,0,+2,+4
G200	10	15	-60,....,-15,0,+15,....,+60	3	-6,-3,0,+3,+6
precision bearing balls, steel balls, stainless steel balls,chrome steel balls,carbon steel balls,ceramic balls, titanium spheres,					

copper balls for bearings

copper balls may be used in electrical contacts, connectors, and other components where high electrical conductivity is essential.while steel is more commonly used for ball bearings, copper balls could be used in specialized applications where the unique properties of copper are beneficial.

copper balls might be used in decorative items or artistic projects due to their distinctive appearance and the ease with which copper can be shaped and polished. copper balls has natural corrosion resistance, and its surfaces can develop a protective oxide layer that helps prevent further corrosion. This characteristic makes copper suitable for certain outdoor and corrosive environments.

the conversion of metal balls quantity to weight

precision steel balls, stainless steel balls,chrome steel balls,carbon steel balls, bearing balls

inch	mm	kgs/ 1000pcs	pcs/kg	inch	mm	kgs/ 1000pcs	pcs/kg
0.052"	0.3208	0.00955	104762	0.057"	1.4478	0.01257	76541
1/16"	1.5875	0.01657	60336	---	2.0000	0.03314	30174
0.082"	2.0828	0.03743	26716	3/32"	2.3812	0.5593	17878
0.09645"	2.4498	0.0691	16418	---	2.5000	0.06473	15449
7/64"	0.7781	0.08882	11258	----	3.0000	0.11185	8940
1/8"	3.1750	0.13259	7542	0.1260"	3.2004	0.13580	7542
0.1260"	3.2004	0.13580	7364	0.135"	3.4290	0.16703	5987
---	3.5000	0.17762	5630	9/64"	3.5719	0.18879	5297
5/32"	3.9688	0.25898	861	---	4.0000	0.26513	3772
3/16"	4.7625	0.44750	2235	----	5.0000	0.51784	1931
7/32"	5.5562	0.71059	1407	15/64"	5.9531	0.87400	1144
---	6.0000	0.89482	1118	1/4"	6.3500	1.06073	943
17/64"	6.7469	1.27232	786	9/32"	7.1438	1.51033	662
5/16"	7.9375	2.07174	483	---	8.0000	2.12107	471
---	8.5000	2.54414	393	11/32"	8.7312	2.75744	363
----		9.0000	3.02003	331	0.369"	3.41086	293
3/8"	9.5250	3.57997	297	0.386"	9.8044	3.90434	256
----	10.0000	4.14271	41	13/32"	10.3188	4.55168	220
----	1.000	5.51394	181	7/16"	11.1125	5.68486	176
----	11.5000	6.30054	159	29/64"	11.5094	6.31600	158
15/32"	11.9062	6.99204	143	----	12.0000	7.15860	140
31/64"	12.3031	7.71486	130	1/2"	12.7000	7.71486	118
17/32"	13.4938	10.17858	98	----	14.0000	11.36759	88
9/16"	14.2875	12.08239	83	19/32"	15.0812	14.20993	70
5/8"	15.8750	16.57393	60	----	16.0000	16.96853	59
21/32"	16.6688	19.18656	52	----	17.0000	20.35312	49
11/16"	17.4625	22.05989	45	23/32"	18.2562	25.20666	40
----	19.0000	28.41483	35	3/4"	19.0500	28.63974	35
25/32"	19.8438	32.37119	31	13/16"	20.6375	36.41291	27
----	21.0000	37.75	26.50	27/32"	21.4313	40.1	24.9
7/8"	22.2250	44.8	22	----	23.0000	49.59	20
29/32"	23.0188	49.8	20	15/16"	23.8125	55.1	18
----	24.0000	56.34	17.75	31/32"	24.6063	60.8	17
----	25.0000	63.68	16	1"	25.4000	66.8	15
1 1/32"	26.1938	73.3	14	1 1/16"	26.9875	80.2	12
1 3/32"	27.7812	87.4	1	----	28.0000	89.47	11
1 1/8"	28.5750	95.2	11	1 3/16"	30.1625	112	9
1 1/4"	31.7500	131	8	----	32.0000	133.6	7
1 5/16"	33.3375	151.1	7	----	34.0000	160.2	6
1 3/8"	34.9250	174	6	1 13/32"	35.7188	184.0	5
1 7/16"	36.5125	198.0	5	1 15/32"	37.3062	216.9	5
1 1/2"	38.1000	225.6	4	1 9/16"	39.6875	255.0	4
----	40.0000	260.8	4	1 5/8"	41.2750	287.0	3
----	42.0000	302	3	1 11/16"	42.8625	321.2	3
1 3/4"	44.4500	358.3	3	----	45.0000	371.4	3
1 7/8"	47.6250	440.5	2	----	48.0000	450.7	2

precision bearing balls, steel balls, stainless steel balls,chrome steel balls,tungsten spheres, carbon steel balls,ceramic balls, titanium spheres, copper balls.

ceramic silicon nitride (Si3N4) balls

ceramic silicon nitride balls has excellent thermal stability, maintaining its properties at high temperatures.

This property makes it suitable for applications involving elevated temperatures. silicon nitride has a low

coefficient of friction, contributing to reduced wear and efficient operation in certain applications.

ceramic silicon nitride balls are used in ceramic bearings, particularly in high-speed and high-temperature applications. their low friction and wear resistance make them suitable for demanding bearing environments. silicon nitride balls are used in valves and flow control devices where corrosion resistance and durability are critical.

silicon nitride balls find applications in aerospace and automotive industries where lightweight, high-strength materials are required. silicon nitride is biocompatible, and ceramic balls are used in certain medical devices and implants.

steel balls batch diameter variation and sub-rules value

precision steel balls, stainless steel balls,chrome steel balls,carbon steel balls, bearing balls

grade	Vdwl	Rvs	gauge clearance	subgauge	group
10	0.5	1	-9,...,-1,0,+1,...,+9	0.2	-0.4,-0.2,0,+0.2,+0.4
16	0.8	2	-10,...,-2,0,+2,...,+10	0.4	-0.8,-0.4,0,+0.4,+0.8
20	1	2	-10,...,-2,0,+2,...,+10	0.4	-0.8,-0.4,0,+0.4,+0.8
28	1.1	2	-12,...,-2,0,+2,...,+12	0.4	-0.8,-0.4,0,+0.4,+0.8
40	2	4	-16,...,-4,0,+4,...,+16	0.8	-1.6,-0.8,0,+0.8,+1.6
60	3	5	-20,...,-5,0,+5,...,+20	1	-2,-1,0,+1,+2

precision bearing balls, steel balls, stainless steel balls,chrome steel balls,tungsten spheres, carbon steel balls,ceramic balls, titanium spheres, copper balls.

coated/plated metals balls

coatings are used to enhance the physical properties of precision balls. these may include added hardness, corrosion resistance , noise suppression, and electrical characteristics . thomson offers a myriad of coatings to meet your needs.

parameters of steel balls metric diameter and inch size

precision bearing balls, steel balls, stainless steel balls,chrome steel balls,carbon steel balls

metric diameter(mm)	inch sizes(in)	metric diameter(mm)	inch sizes(in)	metric diameter(mm)	inch sizes(in)
0.3	...	2.1	...	6.74688	17/64
0.396 88	1/16	2.77812	7/64	7	...
0.4	...	3	..	7.14375	9/32
0.5	...	3.175	1/8	7.5	...
0.508	0.02	3.5	...	7.54062	9/32
0.6	...	3.57188	9/64	7.5	...
0.635	0.025	3.96875	5/32	7.54062	19/64
0.68	...	4	...	7.9375	5/16
0.7	...	4.36552	11/54	8	...
0.793 75	1/32	4.5
0.8	...	4.7625	3/16	9	...
1	...	5	...	9.12812	23/64
1.190	3/64	5.15938	13/64		
1.2	...	5.5	...	9.5	...
1.5	...	5.55625	7/32	9.92188	25/64
1.5875	1/16	5.95312	15/64	10	..
1.98438	5/64		6	10.31875	13/32
2	...	6.35	1/4	10.05	...
2.38125	3/326.5	...		11	...
11.112	7/16	23	...	47.625	17/8
11.5	...	23.01875	29/32	49.2125	115/16
11.50938	29/64	23.8125	15//16	50	...
11.50938	29/64	23.8125	15//16	50	...
11.90625	15/32	24	...	50.8	2

12	...	24.60625	31/32	53.975	21/8
12.3031	31/64	25	...	55	...
12.5	...	25.4	1	57.15	21/4
12.7	1/2	26	...	60	...
13	...	26.19375	11/32	60.325	23/8
13.49375	17/32	26.9875	11/16	63.5	21/2
14	...	28	...	65	...
14.2875	9/16	28.575	11/8	66.675	25/8
15	...	30	...	69.84	23/4
15.08125	19/32	30.1625	13/16	70	...
15.875	5/8	31.75	11/4	73.025	27/8
16	...	32	...	75	...
16.66875	21/32	33	...	76.2	3
17	...	33.3357	15/16	79.375	31/8
17.4625	11/16	34	...	80	...
18	...	34.925	13/8	82.55	31/4
18.25625	23/32	35	...	85	...
19	...	36	...	85.725	338
19.05	3/4	36.5125	17/16	88.9	31/2
19.84375	25/32	38	...	90	...
20	...	38.1	11/2	92.075	35/8
20.5	...	39.6875	19/16	95	...
20.6375	13/16	40	...	95.25	33/4
21	...	41.275	15/8	98.425	37/8
21.43125	27/32	42.8625	111/16	100	...
22	...	44.45	13/4	101.6	4
22.225	7/8	45	...	104.775	41/8
22.5	...	46.0375	113/16
precision bearing balls, steel balls, stainless steel balls,chrome steel balls,tungsten spheres, carbon steel balls,ceramic balls, titanium spheres, copper balls.					

crushing load of bearing steel balls

precision bearing balls, steel balls, stainless steel balls,chrome steel balls,carbon steel balls

nominal diameter (mm)	crushing load(N)	nominal diameter (mm)	crushing load(N)	nominal diameter (mm)	crushing load(N)
3	4800	11	62720	23.8125	281260
3.175	5390	11.1125	63700	24	287140
3.5	6570	11.5	68510	24.60625	300700
3.57188	6840	11.50938	68600	25	309680
3.96875	8430	11.90625	73500	25.4	318500
4	8530	12	74480	26	333200
4.36562	10150	12.30312	78400	26.19375	337940
4.5	10780	12.5	80810	26.9875	357700
4.7625	12050	12.7	83300	28	355140
5	13330	13	872200	28.575	396900
5.5	15970	14	100940	30.1625	441000
5.95312	18130	15	115640	32	494900
6	19010	15.08125	116620	33	524070
6.35	21270	15.875	128380	33.3375	534100
6.5	22340	16	131320	34	557620
6.74888	24000	16.66875	142100	34.925	582120
7	25870	17	147000	35	588000
7.14375	26950	17.4625	15840	36	617400
7.5	29690	18	164640	36.5125	632100
7.54062	29980	18.25625	168560	38	683040
7.9375	32830	19	182770	38.1	589000

8	33320	19.05	183260	39.6878	732820
8.33438	36170	19.84675	198940	40	745780
8.5	37630	20	201880	41.275	798700
8.73125	39690	20.5	211830	42.8525	852600
9	41940	20.6375	214620	44.45	911400
9.12812	43170	21	221480	45	931000
9.5	46840	21.43125	229810	46.0375	972340
9.525	47040	22	241030	47.625	1038800
9.92188	451120	22.225	246960	49.2125	1116620
10	51940	22.5	252480	50	1156400
10.31875	54880	23	262640	50.8	1166200
10.5	556910	23.01875	263070		
precision bearing balls, steel balls, stainless steel balls,chrome steel balls,tungsten spheres, carbon steel balls,ceramic balls, titanium spheres, copper balls.					

bearing Steel ball hardness and bearing steel ball crushing load

precision bearing balls, steel balls, stainless steel balls,chrome steel balls,carbon steel balls

Steel ball size D _w /mm		High carbon chromium bearing steel balls		High carbon chromium stainless steel balls		High temperature bearing steel balls	
Greater than	Less than	Hardness HRC	Crushing load	Hardness HRC	Crushing load	Hardness HRC	Crushing load
...	30	61~66	Standard B	more than58	JB/T1460-2011	61~66	JB/T2850-2007
30	50	60~65					
50	...	58~64					
precision bearing balls, steel balls, stainless steel balls,chrome steel balls,tungsten spheres, carbon steel balls,ceramic balls, titanium spheres, copper balls.							

needle roller bearings cylindrical roller bearings tapered roller bearings spherical roller bearings slewing bearings miniature bearings
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