

**Cartech.com Tech Center
Hardness Conversion Tables –
Austenitic Steels**



These charts have been established following ASTM standards A370, E10, and E140.

Approximate Hardness Conversions for Austenitic Steels

Rockwell		Brinell	Superficial		
C	A		15N	30N	45N
48	74.4	---	84.1	66.2	52.1
47	73.9	---	83.6	65.3	50.9
46	73.4	---	83.1	64.5	49.8
45	72.9	---	82.6	63.6	48.7
44	72.4	---	82.1	62.7	47.5
43	71.9	---	81.6	61.8	46.4
42	71.4	---	81.0	61.0	45.2
41	70.9	---	80.5	60.1	44.1
40	70.4	---	80.0	59.2	43.0
39	69.9	---	79.5	58.4	41.8
38	69.3	---	79.0	57.5	40.7
37	68.8	---	78.5	56.6	39.6
36	68.3	---	78.0	55.7	38.4
35	67.8	---	77.5	54.9	37.3
34	67.3	---	77.0	54.0	36.1
33	66.8	---	76.5	53.1	35.0
32	66.3	---	75.9	52.3	33.9
31	65.8	---	75.4	51.4	32.7
30	65.3	---	74.9	50.5	31.6
29	64.8	---	74.4	49.6	30.4
28	64.3	---	73.9	48.8	29.3
27	63.8	---	73.4	47.9	28.2
26	63.3	---	72.9	47.0	27.0
25	62.8	---	72.4	46.2	25.9
24	62.3	---	71.9	45.3	24.8
23	61.8	---	71.3	44.4	23.6
22	61.3	---	70.8	43.5	22.5
21	60.8	---	70.3	42.7	21.3
20	60.3	---	69.8	41.8	20.2

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Hardness Conversion Tables (continued)

Approximate Hardness Conversions for Austenitic Steels

Rockwell		Brinell*		Superficial		
B	A	Dia. (mm)	Number	15T	30T	45T
100	61.5	3.79	256	91.5	80.4	70.2
99	60.9	3.85	248	91.2	79.7	69.2
98	60.3	3.86	240	90.8	79.0	68.2
97	59.7	3.97	233	90.4	78.3	67.2
96	59.1	4.02	226	90.1	77.7	66.1
95	58.5	4.08	219	89.7	77.0	65.1
94	58.0	4.14	213	89.3	76.3	64.1
93	57.4	4.20	207	88.9	75.6	63.1
92	56.8	4.24	202	88.6	74.9	62.1
91	56.2	4.30	197	88.2	74.2	61.1
90	55.6	4.35	192	87.8	73.5	60.1
89	55.0	4.40	187	87.5	72.8	59.0
88	54.5	4.45	183	87.1	72.3	58.0
87	53.9	4.51	178	86.7	71.4	57.0
86	53.3	4.55	174	86.4	70.7	56.0
85	52.7	4.61	170	86.0	70.0	55.0
84	52.1	4.64	167	85.6	69.3	54.0
83	51.5	4.70	163	85.2	68.6	52.9
82	50.9	4.74	160	84.9	67.9	51.9
81	50.4	4.79	156	84.5	67.2	50.9
80	49.8	4.84	153	84.1	66.5	49.9
79	49.2	4.88	150	83.8	65.8	48.9
78	48.6	4.93	147	83.4	65.1	47.9
77	48.0	4.98	144	83.0	64.4	46.8
76	47.4	5.01	142	82.6	63.7	45.8
75	46.9	5.06	139	82.3	63.0	44.8
74	46.3	5.09	137	81.9	62.4	43.8
73	45.7	5.13	135	81.5	61.7	42.8
72	45.1	5.18	132	81.2	61.0	41.8
71	44.5	5.22	130	80.8	60.3	40.7
70	43.9	5.26	128	80.4	59.6	39.7
69	43.3	5.29	126	80.1	58.9	38.7
68	42.8	5.33	124	79.7	58.2	37.7
67	42.2	5.37	122	79.3	57.5	36.7
66	41.6	5.41	120	78.9	56.8	35.7
65	41.0	5.45	118	78.6	56.1	34.7
64	40.4	5.50	116	78.2	55.4	33.6
63	39.8	5.54	114	77.8	54.7	32.6
62	39.3	5.56	113	77.5	54.0	31.6
61	38.7	5.61	111	77.1	53.3	30.6
60	38.1	5.63	110	76.7	52.6	29.6

* 3000 kgf load, 10 mm ball