

Timken® Steel Special Bar Quality Requirements

TIMKEN

Where You Turn

Representative Sample of Carbon and Alloy Grades

10XX series	MicroTec®
11XX series	HF1
13XX series	HS220-XX
15XX series	S38MS1V
33XX series	St-52
40XX series	16MnCr5
41XX series	9Cr1Mo
43XX series	13Cr
50XX series	17CrNiMo6
51XX series	18CrNiMo7-6
86XX series	34CrNiMo6
88XX series	D6A
93XX series	EN30B
SCM4XX series	42CrMo4
SCR4XX series	410/420
52100-bearing	A485-X

Other grades available upon request.

The Timken Company is a leading global manufacturer of carbon and alloy bar, seamless mechanical tubing and precision components. We produce ingot-cast and continuous-cast steel bars for the industrial, oil and gas, bearing, mobile on highway and wind energy markets. Combining our rigorous steelmaking and rolling practices with advanced inspection capabilities, our steel bar products will help your product perform more effectively in the most demanding applications. With more than 400 different grades available, we're certain to have the custom steel solution you need. Timken is Where You Turn® for the innovation, quality and value-added options to help your product perform more efficiently and cost effectively.

Conditions

- Hot Rolled
- Rough Turned

Quality levels

- Aircraft
- Bearing
- Commercial
- Parapremium™ (AMS 2304)

Heat treatments

- Anneal
- Temper
- Stress-relieved
- Normalize
- Quench and Temper (Stress-free)
- Spheroidize Anneal

Benefits

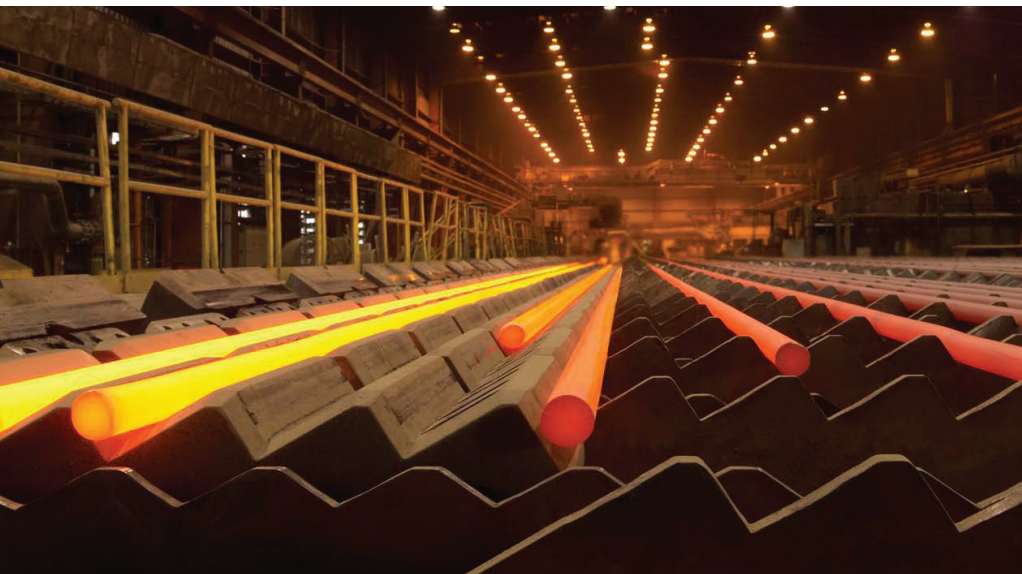
- Dedicated Application Development and Technology Center for your specific needs.
- Large starting section sizes for increased finish-size capability and performance.
- Technical expertise gained from years of working in demanding applications in different markets.

Minimum quantity

- 10-ton minimums for standard grades.

Size range

- Rounds: 1" (25.4 mm) through 16" (406 mm)
- Squares: Round-cornered 3 1/5" (81 mm) through 12 1/2" (317 mm)



For more information on Timken® steel and other value-added services or products, call +1-866-284-6536 (USA), +44-1455-826320 (international), fax 1-330-471-4118 or visit our Web site at www.timken.com/products/alloysteel.

Special Bar Size Dimensional Chart

Shape	Size	Size	TFW	Size	Weight
	in.	in.		mm	kg/m
round ⁽¹⁾	1.000	1	2.67	25.4	3.97
round ⁽¹⁾	1.875	1 7/8	9.39	47.63	13.97
round ⁽¹⁾	1.938	2	10.03	49.23	14.93
round ⁽¹⁾	1.969	2	10.35	50.01	15.40
round ⁽¹⁾	2.000	2	10.68	50.80	15.89
round ⁽¹⁾	2.125	2 1/8	12.06	53.98	17.94
round ⁽¹⁾	2.156	2 5/32	12.41	54.76	18.47
round ⁽¹⁾	2.188	2 3/16	12.78	55.58	19.03
round ⁽¹⁾	2.250	2 1/4	13.52	57.15	20.12
round ⁽¹⁾	2.281	2 9/32	13.89	57.94	20.68
round ⁽¹⁾	2.375	2 3/8	15.06	60.33	22.41
round ⁽¹⁾	2.438	2 4/9	15.87	61.93	23.62
round ⁽¹⁾	2.500	2 1/2	16.69	63.50	24.83
round ⁽¹⁾	2.563	2 9/16	17.54	65.10	26.10
round ⁽¹⁾	2.625	2 5/8	18.40	66.68	27.38
round ⁽¹⁾	2.750	2 3/4	20.19	69.85	30.05
round ⁽¹⁾	2.875	2 7/8	22.07	73.03	32.84
round ⁽¹⁾	3.000	3	24.03	76.20	35.76
round ⁽¹⁾	3.063	3	25.05	77.80	37.28
round ⁽¹⁾	3.125	3 1/8	26.07	79.38	38.80
round ⁽¹⁾	3.187	3 3/16	27.12	80.95	40.36
round ⁽¹⁾	3.250	3 1/4	28.20	82.55	41.97
round ⁽¹⁾	3.313	3 5/16	29.31	84.15	43.61
round ⁽¹⁾	3.375	3 3/8	30.41	85.73	45.26
round ⁽¹⁾	3.500	3 1/2	32.71	88.90	48.67
round ⁽¹⁾	3.625	3 5/8	35.09	92.08	52.21
round ⁽¹⁾	3.750	3 3/4	37.55	95.25	55.88
round ⁽¹⁾	3.875	3 7/8	40.09	98.43	59.66
round ⁽¹⁾	4.000	4	42.72	101.60	63.57
round ⁽¹⁾	4.125	4 1/8	45.43	104.78	67.61
round ⁽¹⁾	4.250	4 1/4	48.23	107.95	71.77
round ⁽¹⁾	4.375	4 3/8	51.11	111.13	76.05
round ⁽¹⁾	4.500	4 1/2	54.07	114.30	80.46
round ⁽¹⁾	4.625	4 5/8	57.11	117.48	84.99
round ⁽¹⁾	4.750	4 3/4	60.24	120.65	89.65
round ⁽¹⁾	4.875	4 7/8	63.45	123.83	94.43
round ⁽¹⁾	4.921	5	64.66	125.00	96.23
round ⁽¹⁾	5.000	5	66.75	127.00	99.33
round	5.125	5 1/8	70.13	130.18	104.36
round	5.250	5 1/4	73.59	133.35	109.52
round	5.500	5 1/2	80.77	139.70	120.20
round	5.750	5 3/4	88.28	146.05	131.37
round	6.000	6	96.12	152.40	143.04
round	6.250	6 1/4	104.30	158.75	155.21
round	6.500	6 1/2	112.81	165.10	167.88
round	6.750	6 3/4	121.65	171.45	181.04
round	7.000	7	130.83	177.80	194.70
round	7.250	7 1/4	140.34	184.15	208.85
round	7.500	7 1/2	150.19	190.50	223.50
round	7.750	7 3/4	160.37	196.85	238.65
round	8.000	8	170.88	203.20	254.30
round	8.250	8 1/4	181.73	209.55	270.44
round	8.500	8 1/2	192.91	215.90	287.08
round	9.000	9	216.27	228.60	321.84
round	9.250	9 1/4	228.45	234.95	339.97
round	9.500	9 1/2	240.97	241.30	358.60
round	9.750	9 3/4	253.82	247.65	377.72
round	10.000	10	267.00	254.00	397.34
round	10.250	10 1/4	280.52	260.35	417.45
round	10.500	10 1/2	294.37	266.70	438.07
round	11.000	11	323.07	279.40	480.78
round	11.500	11 1/2	353.11	292.10	525.48
round	12.000	12	384.48	304.80	572.17
round	12.500	12 1/2	417.19	317.50	620.84
round	13.000	13	451.23	330.20	671.50
round	14.000	14	523.32	355.60	778.79
round	15.000	15	600.75	381.00	894.01
round	16.000	16	684.00	406.40	1017.92

Shape	Size	Size	TFW	Size	Weight
	in.	in.		mm	kg/m
square ⁽²⁾	3.187	3 3/16	29.88	80.98	44.46
square ⁽²⁾	3.312	3 5/16	32.61	84.12	48.52
square ⁽²⁾	3.375	3 3/8	34.04	85.73	50.66
square	3.500	3 1/2	35.54	88.90	52.89
square	3.625	3 5/8	38.57	92.08	57.39
square ⁽²⁾	3.959	—	43.75	100.56	65.11
square	4.000	4	44.86	101.60	66.76
square ⁽²⁾	4.146	—	48.89	105.30	72.76
square ⁽²⁾	4.173	—	49.66	105.99	73.91
square	4.250	4 1/4	51.87	107.95	77.19
square	4.500	4 1/2	59.30	114.30	88.24
square	4.750	4 3/4	62.98	120.65	93.72
square	5.000	5	71.26	127.00	106.04
square	5.188	5 3/16	77.76	131.78	115.72
square	5.250	5 1/4	79.96	133.35	118.99
square	5.500	5 1/2	89.09	139.70	132.58
square	5.750	5 3/4	88.03	146.05	131.00
square	6.000	6	98.00	152.40	145.84
square	6.125	6 1/8	103.15	155.58	153.50
square	6.250	6 1/4	108.40	158.75	161.32
square	6.375	6 3/8	113.76	161.93	169.30
square	6.500	6 1/2	119.23	165.10	177.43
square	6.562	6 5/9	121.98	166.67	181.52
square	6.625	6 5/8	124.80	168.28	185.72
square	6.750	6 3/4	130.48	171.45	194.17
square	7.000	7	142.15	177.80	211.54
square ⁽³⁾	7.250	7 1/4	150.00	184.15	223.22
square ⁽³⁾	7.500	7 1/2	160.00	190.50	238.11
square ⁽³⁾	7.610	—	170.00	193.30	252.99
square ⁽³⁾	7.750	7 3/4	175.00	196.85	260.43
square ⁽³⁾	8.000	8	200.00	203.20	297.63
square ⁽³⁾	8.500	8 1/2	210.00	215.90	312.51
square ⁽³⁾	8.750	8 3/4	250.00	222.25	372.04
square ⁽³⁾	9.000	9	270.00	228.60	401.80
square ⁽³⁾	9.500	9 1/2	300.00	241.30	446.45
square ⁽³⁾	10.000	10	330.00	254.00	491.09
square ⁽³⁾	10.500	10 1/2	370.00	266.70	550.62
square ⁽³⁾	11.000	11	400.00	279.40	595.27
square ⁽³⁾	11.125	11 1/8	410.00	282.58	610.15
square ⁽³⁾	12.000	12	480.00	304.80	714.32
square ⁽³⁾	12.500	12 1/2	531.20	317.50	790.52

- (1) Capable to roll decimal and metric sizes (upon review by the mill).
(2) These sizes require special review at the mill due to limited capability within these ranges.
(3) TFW estimated due to non-standard corner radius per ASTM-A29.



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