

Square Bar Tolerances | Stainless Steel

Square Bar Tolerances | Bright Square Bar Tolerances

- X = Stocked Item
- P = Call For availability square bar can be cut to size.
- Square bar can be polished per customer specifications.
- Square bar is stocked in Penn met 2000 for improved machinability.

SIZE IN INCHES	WT PER FT	WT PER 12'	303	304/L	316/L	416
3/16"	0.120	1.440	X	X	X	P
1/4"	0.210	2.52	X	X	X	P
5/16"	0.330	3.96	X	X	X	X
3/8"	0.480	5.76	X	X	X	X
7/16"	0.650	7.80	X	X	X	X
1/2"	0.850	10.20	X	X	X	X
9/16"	1.080	12.96	X	X	X	X
5/8"	1.330	15.96	X	X	X	X
3/4"	1.910	22.92	X	X	X	X
7/8"	2.610	31.32	X	X	X	X
1"	3.400	40.80	X	X	X	X
1-1/8"	4.310	51.72	X	X	X	X
1-1/4"	5.320	63.84	X	X	X	X
1-3/8"	6.400	76.80	X	X	X	X
1-1/2"	7.600	91.20	X	X	X	X
1-3/4"	10.400	124.80	X	X	X	X
2"	13.600	163.20	X	X	X	X
2-1/4"	17.200	206.40	X	X	X	X
2-1/2"	21.300	255.60	X	X	X	X
3"	30.63	367.56	X	X	X	P

4"	54.40	652.80	X	X	X	P
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For other sizes and grades, contact a Penn Stainless sales associate for availability and delivery

Tolerances for Cold & Hot Square Bars

Cold Finished Square Bar Tolerances:

CF TOLERANCES	PLUS	MINUS
1/8" to 5/16" (exclusive)	0.000	0.002
5/16" to 1/2" (exclusive)	0.000	0.003
1/2" to 1" (inclusive)	0.000	0.004
over 1" to 2" (inclusive)	0.000	0.006
over 2" to 3" (inclusive)	0.000	0.008

Cold Finished Square Bar Straightness Tolerance:

CF: 1/16 inch in any 5 foot; but may not exceed 1/16 X (length in ft/5)

Hot Finished Square Bar Tolerances:

HF TOLERANCES	PLUS	MINUS	OUT OF SQ
Over 7/8" to 1" (inclusive)	0.009	0.009	0.013
Over 1" to 1-1/8" (inclusive)	0.010	0.010	0.015
Over 1-1/8" to 1-1/4" (inclusive)	0.011	0.011	0.016
Over 1-1/4" to 1-3/8" (inclusive)	0.012	0.012	0.018
Over 1-3/8" to 1-1/2" (inclusive)	0.014	0.014	0.021
Over 1-1/2" to 2" (inclusive)	1/64	1/64	0.023

Hot Finished Square Bar Straightness Tolerance:

HF: 1/8 inch in any 5 foot; but may not exceed 1/8 X (length in ft/5)

Specifications for Cold & Hot Square Bars

Below you will find a brief overview of a number of stainless steel bar specifications. If you do not see a specification listed, please contact us.

Stainless Steel Square Bar Specifications

ASTM A276	This specification encompasses cold-finished or hot-finished bars, including rounds, squares, and hexagons, and hot-rolled or extruded shapes, such as angles, tees, and channels in the more commonly used types of stainless steels.
ASTM A479	This specification includes cold and hot finished stainless steel bars, including rounds, squares, and hexagons, and hot-rolled or extruded shapes such as angles, tees, and channels.
ASTM A484	This specification includes wrought stainless steel bars, shapes, forgings, and billets or other semi-finished materials, except wire, for forging. The materials are available in four types of conditions.
ASTM A582	This specification includes cold or hot finished bars, which are suitable for machining processes. This specification includes rounds, squares, and hexagons, from common types of stainless free-machining steels.
ASTM B473	This specification includes nickel alloy bar & wire, which can be produced in a solution-annealed condition, stabilized-annealed condition, or annealed condition.

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