

Materials Services  
Copper and Brass Sales

# Stainless Steel



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Our sales representatives are always pleased to help you and furnish technical assistance to resolve your special application problems. Contact us today to learn how we can satisfy all of your stainless steel requirements.

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Note: The data contained within this brochure has been compiled and developed from many sources. While every effort has been made to cross-check and verify this information, thyssenkrupp Materials NA, Inc., does not guarantee its accuracy. This data is not to be used for design or specification purposes.

# Introduction to Stainless Steel

## Stainless Steel Defined

Stainless steel came into being in the early 20th Century because of an urgent need for better materials. Chemical processing, oil refining, and other new manufacturing activities of the time were quickly surpassing the performance barriers imposed by conventional engineering materials.

It was an English metallurgist, Harry Brearley, who discovered stainless steel while searching for an improved alloy to protect cannon bores. He found that by adding chromium to low carbon steel, the steel became stain resistant. Further research showed that the protection mechanism that inhibited this rust was the formation of a microscopically-tight, self-healing, protective-oxide film on the surface of the metal.

This film has proven resistant to corrosives such as water, air, foods, and alkalis. The oxide is so thin and transparent that it escapes detection by the unaided eye. When scratched, nicked, or otherwise penetrated, a fresh film forms almost instantly on the exposed portion of the metal.

Stainless steel is defined today as a steel alloy containing at least 10% chromium, plus other elements — especially nickel. Generally speaking, stainless steel may be subdivided into four basic families:

## Austenitic Family

Austenitic stainless steels are iron-chromium-nickel alloys which are hardenable only by cold working. Nickel is the main element varied within the alloys of this class while carbon is kept to low levels. The nickel content may be varied from about 4% to 22% — higher values of nickel are added to increase the ductility of the metal. When chromium is increased to raise the corrosion resistance of the metal, nickel must also be increased to maintain the austenitic structure.

These alloys are slightly magnetic in the cold-worked condition, but are essentially non-magnetic in the annealed condition in which they are most often used.

The austenitic types feature adaptability to cold forming, ease of welding, high-temperature service, and, in general, the highest corrosion resistance.

Austenitic Summary:

- Hardenable by cold working
- Medium to high strength
- Non-magnetic
- High resistance to corrosion
- Contains nickel

## Ferritic Family

Ferritic stainless steels are iron-chromium alloys which cannot be hardened significantly by heat treatment.

The ferritic types are intermediate in their ability to withstand corrosion. Increasing the amount of chromium raises the corrosion resistance of the metal. A chromium content of about 10% is necessary to ensure maximum corrosion resistance. Additional amounts of chromium (up to about 20%) are utilized to further increase the resistance of the metal to oxidation and scaling at elevated temperatures.

Ferritic types are highly resistant to atmospheric oxidation and strong oxidizing solutions. Qualities include adaptability to high-temperature, chemical, and outdoor use.

Ferritic stainless steels are magnetic in all conditions.

Ferritic Summary:

- Not hardenable by heat treatment or cold working
- Moderate strength
- Magnetic
- Low resistance to corrosion
- Does not contain nickel

## Martensitic Family

Martensitic stainless steels are iron-chromium alloys that contain from 10% to 18% chromium and can be hardened by heat treatment to high strength levels. Type 410 stainless steel is the basic alloy in this grouping. The martensitic types are the lowest in their ability to withstand corrosion.

Adding more carbon to the basic martensitic alloy increases hardness. But, as carbon is increased, chromium content is also increased to as high as 18% to maintain no less than 10% free chromium for corrosion resistance.

Other modified martensitic alloys contain additional elements, such as sulfur or selenium.

Martensitic varieties find major applications in products that must resist atmospheric oxidation, mildly corrosive chemicals, and wet or dry corrosion environments found in steam and gas turbine parts, bearings, and cutlery.

The martensitic types are magnetic in all conditions.

Martensitic Summary:

Hardenable by heat treatment

Magnetic

High strength

Moderate resistance to corrosion

Contains no nickel

## Precipitation Hardening Family

This group of iron-chromium-nickel alloys has a corrosion resistance approaching that of the austenitic types and can be heat treated to high strength levels—approaching that of the hardenable martensitic types—through a special heat-treating cycle. (See the chart on page 8.)

Type 17-4 is normally supplied from the mill in the solution-heat-treated condition (Condition A) when fabrication calls for machining, welding, or cold forming prior to hardening.

The precipitation-hardening types are magnetic in the hardened condition.

Precipitation Hardening Summary:

Hardenable by heat treatment and aging

Medium to high strength

Magnetic

High resistance to corrosion

Contains nickel

# Type Designations

Stainless steel alloys in North America are usually designated by one of two different numbering systems: the 3-Digit System and the U.N.S. Number System.

## 3-Digit System

In the traditional three-digit numbering system, the first digit indicates the series or group and the last two digits indicate the specific type. Modifications of the basic alloys are indicated by an alphabetic suffix to the series designation.

### Series Groups

2XX Chromium-Nickel-Manganese Steels — Non-hardenable by heat treatment, austenitic, and non-magnetic hardenable by cold working.

3XX Chromium-Nickel Steels — Non-hardenable by heat treatment, austenitic, and non-magnetic hardenable by cold working.

4XX Chromium Steels — Hardenable by heat treatment, martensitic, and magnetic.

4XX Chromium Steels — Non-hardenable, ferritic, and magnetic.

5XX Chromium Steels — Low chromium, heat resisting. (Note: Although these alloys are sometimes associated with the stainless family, they are not true stainless steels as they only contain from 4% to 6% chromium.)

Note that the precipitation-hardening type alloys are not covered by the three-digit numbering system.

## U.N.S. Number

A second numbering system, the Unified Numbering System (UNS), has more recently come into practice. This system had its origin in a cooperative effort of the American Society for Testing and Materials and the Society of Automotive Engineers. It is designed to designate each metal and alloy thereof by a unique five-digit number and alphabetic prefix. The prefix for Stainless Steel is "S."

# Alloy Descriptions

Type No.	UNS No.	Group	Product Forms	Description
301	S30100	Austenitic	Sheet, Strip	High work-hardening rate due to reduced chromium and nickel content.
302	S30200	Austenitic	Bar	General purpose material with greater corrosion resistance but less work hardening than Type 301. This is the basic alloy of the austenitic group often referred to as 18:8.
303	S30300	Austenitic	Bar, Plate	Phosphorus and sulfur added for easier machining. For heavier cuts in automatic machining operations.
304	S30400	Austenitic	Bar, Sheet, Strip	Carbon lower to minimize carbide precipitation. Less heat sensitive than other 18:8 steels. Used in high-temperature applications.
304L	S30403	Austenitic	Bar, Sheet, Strip, Plate	Extra low carbon content to avoid harmful carbide precipitation in welding applications. Corrosion resistance comparable to Type 304.
316	S31600	Austenitic	Bar, Sheet, Plate	Contains molybdenum for better corrosion resistance—particularly to pitting.
316L	S31603	Austenitic	Bar, Plate	Carbon lower than Type 316 to avoid carbide precipitation in welding applications.
321	S32100	Austenitic	Bar, Sheet, Strip, Plate	Titanium added to avoid chromium-carbide precipitation when heated. Good for welding.
410	S41000	Martensitic	Bar	Basic martensitic type. General purpose, heat-treatable type used where corrosion is not severe.
410 HT	S41000	Martensitic	Bar	Heat treated version of Type 410. Basic martensitic type. General purpose, used where corrosion is not severe.
416	S41600	Martensitic	Bar	Free machining variation of Type 410 by virtue of added sulfur.
420	S42000	Martensitic	Bar	Hardenable stainless steel, which can be hardened to approximately Rockwell C 50.
430F	S43020	Martensitic	Bar	Free machining version of Type 430. Non-hardenable by thermal treatment and is used for heat resistance and corrosion resistance under many conditions. Excellent machinability and good forming.
440C	S44004	Martensitic	Bar	A high carbon type. Can be heat treated for high strength and hardness. Greater abrasion and wear resistance for use in bearing and bushing applications. Corrosion resistant only in the hardened condition.
15-5	S15500	Precipitation-Hardening	Bar	High strength, corrosion resistant and easy to heat treat. Use for high pressure applications.
17-4	S17400	Precipitation-Hardening	Bar, Plate	Chromium, nickel, copper, columbium, tantalum, and carbon balanced for high corrosion resistance and hardening by heat treatment.

# Equivalent Designations

Trade Name	ASTM	UNS No.	EN No. (Europe)	DIN No. (Germany)	SS No. (Sweden)	BS No. (British)
201	201	S20100	1.4372	—	—	284S16
XM-19	S20910	S20910	—	—	—	—
301	301	S30100	1.431	1.431	2331	301S21
302	302	S30200	1.4319	1.4319	2332	302S31
303	303	S30300	1.4305	1.4305	2346	303S31
304	304	S30400	1.4301	1.4301	2333	304S31
304L	304L	S30403	1.4306	1.4306	2352	304S11
304LN	304LN	S30453	1.4311	1.4311	2371	304S61
304N	304N	S30451	1.6907	1.6907	—	304S71
305	305	S30500	1.4303	1.4303	—	305S19
308	S30880	S30880	1.4303	1.4303	—	—
308L	308L	S30883	19 9 L	—	—	—
308LSi	S30880	S30880	19 9 LSi	—	—	—
316	316	S31600	1.4401	1.4401	2347	316S31
316	316	S31600	1.4436	1.4436	2343	316S33
316H	S31609	S31609	1.4401/1.4919	—	—	—
316L	316L	S31603	1.4404	1.4404	2348	316S11
316L	316L	S31603	1.4432	1.4432	2353	316S13
316LN	316LN	S31653	1.4406	1.4406	—	316S61
316Ti	316Ti	S31635	1.4571	1.4571	2350	320S31
317L	317L	S31703	1.4438	1.4438	2367	317S12
317LM	317LM	S31725	1.4439	1.4439	—	—
317LMN	317LMN	S31726	1.4439	1.4439	—	—
321	321	S32100	1.4541	1.4541	2337	321S31
347	347	S34700	1.455	—	2338	347S31
Alloy 20	N08020	N08020	—	—	—	—
904L	904L	N08904	1.4539	1.4539	2562	904S13
254 SMO	S31254	S31254	1.4547	—	2378	—
4565	S34565	S34565	1.4565	1.4565	—	—
2101	S32101	S32101	1.4162	—	—	—
2304	2304	S32304	1.4362	1.4362	2327	—
2205	2205	S32205/S31803	1.4462	1.4462	2377	318S13
2507	2507	S32750	1.441	—	2328	—
410	410	S41000	1.4006	1.4006	2302	410S21
410S	410S	S41008	1.4	1.4	2301	403S17
416	416	S41600	1.4005	1.4005	2380	416S21
430	430	S43000	1.4016	1.4016	2320	430S17
430F	S43020	S43020	1.4104	1.4104	2383	—
434	434	S43400	1.4113	—	—	—
439	439	S43035	1.451	—	—	—
441	441	S44100	1.4509	1.4509	—	—
444	444	S44400	1.4521	1.4521	2326	—
17-4	630	S17400	1.4542	1.4542	—	—
17-7	631	S17700	1.4568	1.4568	2388	—
304H	304H	S30409	1.4948	1.4948	2333	304S51
321H	321H	S32109	1.4878	1.4878	2337	321S51
347H	S34709	S34709	1.4961	1.4961	2347	316 Sxx
309H	S30909	S30909	—	—	—	—
309S	309S	S30908	1.4833	1.4833	—	309S16
310H	S31009	S31009	—	—	—	—
310S	310S	S31008	1.4845	1.4845	2361	310S16
253 MA	S30815	S30815	1.4835	—	2368	—

# Material Properties

## Physical Properties (Long Products)

Type No.	Density lb/in <sup>3</sup>	Specific Heat, BTU/°F/Lb 32—212°F	Thermal Conductivity, BTU/Ft <sup>2</sup> /Ft/HR/°F 212°F	Coefficient Of Thermal Expansion, Per °F x 10 <sup>-6</sup> 32—212°F	Electrical Resistivity, Microhm-cm 70°F	Magnetic Permeability Annealed, $\mu$
301	0.29	0.12	9.4	9.4	72	1.02
302	0.29	0.12	9.4	9.6	72	1.008
303	0.29	0.12	9.4	9.6	72	1.008
304	0.29	0.12	9.4	9.6	70	1.008
304L	0.29	0.12	9.4	9.6	70	1.008
316	0.29	0.12	9.4	8.9	74	1.008
316L	0.29	0.12	9.4	8.9	74	1.008
321	0.29	0.12	9.3	9.3	71	1.008
410	0.28	0.11	14.4	5.5	57	700-1000
416	0.28	0.11	14.4	5.5	57	700-1000
430F	0.28	0.11	15.1	5.8		
440C	0.28	0.11	14	5.6	60	
15-5	0.28	0.1	10.3	6		
17-4 (Condition A)	0.28	0.11		6	98	95

## Mechanical Properties (Long Products, Annealed Condition)

Type No.	Tensile Strength, ksi	Yield Strength, ksi	Elongation in 2 Inches, %	Reduction of Area, %	Brinell Hardness
301	110	40	60	70	165
302	90	40	55	70	150
303	90	35	50	55	160
304	85	35	55	70	150
304L	80	30	55	70	140
316	85	35	60	70	150
316L	78	30	55	65	145
321	85	35	55	65	150
410	75	40	35	70	155
416	75	40	30	65	155
420	95	50	25	—	241
430F	80	45	25	50	165
15-5	160	145	15	—	330
17-4 (Condition A)	150	110	10	45	332



## Chemical Compositions (Long Products)

Type No.	UNS No.	C	Cr	Ni	Mn	Si	S	P	Mo	Others
301	S30100	0.15	16-18	8-6	2	1	0.03	0.04		
302	S30200	0.15	17-19	10-8	2	1	0.03	0.04		
303	S30300	0.15	17-19	10-8	2	1	.15 Min.	0.2	0.6	
303 Project 70+®	S30300	0.12	17-19	10-8	2	1	.15 Min.	0.2		
303SE	S30323	0.12	17-19	10-8	2	1		.12/.17		Se .15/.35
304	S30400	0.08	18-20	12-8	2	1	0.03	0.04		
304 Project 70+®	S30400	0.08	18-20	8-10.5	2	1	0.03	0.045		
304L	S30403	0.03	18-20	12-8	2	1	0.03	0.04		
304L Project 70+®	S30403	0.03	18-20	12-8	2	1	0.03	0.045		
316	S31600	0.08	16-18	14-10	2	1	0.03	0.04	2.0-3.0	
316 Project 70+®	S31600	0.08	16-18	14-10	2	1	0.03	0.045	2.0-3.0	
316L	S31603	0.03	16-18	14-10	2	1	0.03	0.04	2.0-3.0	
316L Project 70+®	S31603	0.03	16-18	14-10	2	1	0.03	0.045	2.0-3.0	
321	S32100	0.08	17-19	12-8	2	1	0.03	0.04		Titanium Min. 5 x C
410	S41000	0.15	11.5-13.5		1	1	0.03	0.04		
416	S41600	0.15	14-12		1.25	1	.15 Min.	0.06	0.6	
416 Project 70+®	S41600	0.15	14-12		1.25	1	.15 Min	0.06		
420	S42000	.15 Min.	14-12		1	1	0.03	0.04		
430F	S43020	0.12	16-18	0.75	1	1	0.03	0.04		
440C	S44004	.95-1.2	16-18		1	1	0.03	0.04	0.75	
15-5	S15500	0.07	14-15.5	3.5-5.5	1	1	0.03	0.04		Copper 2.5/4.5; Cb and Ta .15/.45
17-4	S17400	0.07	15.5-17.5	5-3	1	1	0.03	0.04		Copper 5.0; Cb and Ta .45

### Alloying Elements

**Chromium** — Most important element of stainless steel. An addition of 10% chromium will form an oxide film (passive surface film) which renders the steel corrosion resistant. Chromium also increases resistance to scaling.

**Nickel** — Second most important element. It increases ductility, corrosion resistance, scaling resistance, and high-temperature strength.

**Silicon** — Primarily increases resistance to scaling.

**Manganese** — Improves hot-working properties.

**Molybdenum** — Increases corrosion and high-temperature strength.

**Sulfur-Phosphorus-Selenium** — Increases machinability.

**Titanium or Columbium-Tantalum** — Stabilizes carbon and prevents chromium-carbide precipitation and subsequent intergranular corrosion.

## Type 17-4, Mechanical Properties (AMS 5643)

Condition	Tensile Strength, ksi (MPa)	Yield Strength at 0.2% Offset, ksi (MPa)	Elongation in 4D, %	Reduction of Area, %	Hardness, <sup>(1)</sup> HB	Hardness, <sup>(1)</sup> HRC	Temperature/Time, °F(°C)/Hours
Solution Annealed					363(5)	39(5)	1900 (1038)(6)
H900	190 (1310)	170 (1172)	10	40(2)	388-444	40-47	900 (482)/1(3)
H925	170 (1172)	155 (1069)	10	44(2)	375-429	38-45	925 (496)/4(4)
H1025	155 (1069)	145 (1000)	12	45	331-401	34-42	1025 (552)/4(4)
H1075	145 (1000)	125 (862)	13	45	311-375	31-38	1075 (579)/4(4)
H1100	140 (965)	115 (793)	14	45	302-363	30-37	1100 (593)/4(4)
H1150	135 (931)	105 (724)	16	50	277-352	28-37	1150 (621)/4(4)
H1150 M (Typical)	123 (848)	87 (600)	22	62	239	29	1150 (621)/4(4)

### Notes:

(1) Hardness shall not be the basis for rejection if tensile properties are acceptable determined on specimens taken from the same sample as that with non-conforming hardness or from another sample with similar non-conforming hardness.

(2) For sizes over 3 inches (76 mm), 35% for H900 condition and 38% for H925 condition.

(3) Temperature tolerance  $\pm 10$  °F ( $\pm 6$  °C); time tolerance  $\pm 0.083$  hour ( $\pm 5$  minutes); cool in air.

(4) Temperature tolerance  $\pm 10$  °F ( $\pm 6$  °C); time tolerance  $\pm 0.25$  hour ( $\pm 15$  minutes); cool in air.

(5) Maximum; alternate for wire -175 ksi (1207 MPa) maximum tensile strength.

(6) Temperature tolerance  $\pm 25$  °F ( $\pm 14$  °C); time commensurate with thickness and equipment; cooled as required to below 90 °F (32 °C).



# Machining Data

## General Machining Guidelines

Premium machining grades of stainless steel contain small additives to improve the machinability by lubricating the cutting tool and producing non-clogging chips. As a result, tool life and cutting speeds are increased. The machining of stainless steels is best evaluated in actual production by the number of pieces having a satisfactory finish, within the required dimensional tolerances, that can be produced in a shift of a day with adequate tool life.

The following are essential practices for good machining of the stainless steels:

1. Maintain a high degree of rigidity in tools, tool holders, and equipment—no backlash.
2. Polish working faces of tools and keep cutting edges sharp.
3. Use a good lubricant or coolant in sufficient quantities. In most stainless steel machining it is more desirable to prevent heat from building up. High quality sulfur-base oils are usually used; however, soluble oils prove superior for clearing chips in deep drilling.
4. Use sufficient power to maintain constant speeds. Data on feeds and speeds are found below.
5. If equipment is sufficiently rigid, there is a great advantage in using high-speed steels or carbide tools. They permit significant increases in working speeds.
6. Milling cutters — use higher top rake angles, slower speeds.
7. Taps — keep them sharp. A 50% thread is preferred.
8. Reamers — for general work use a high speed, spiral-fluted reamer with 30 degrees lead or chamfer and mounted in a floating holder.
9. Drills — Use flatter angles such as 140 degrees instead of the conventional 118 degrees. Keep drills short and rigidly mounted. In general, drill speed will be about half that for mild steel.

## Fabrication Properties

Type No.	UNS No.	Machinability*	Drawing or Stamping	Welding
301	S30100	40%	Good	Very good, tough welds.
302	S30200	40%	Good	Very good, tough welds.
303	S30300	70%	Fairly Good	Fusion welding not recommended.
304	S30400	45%	Very Good	Very good, tough welds.
304L	S30403	44%	Very Good	Very good, recommend for welding.
316	S31600	45%	Good	Very good, tough welds.
316L	S31603	45%	Good	Very good, recommended for welding.
321	S32100	38%	Good	Very good, tough welds.
410	S41000	60%	Fairly Good	Fair, pre-heat 400-500 °F. Anneal 1250 °F after welding.
416	S41600	85%	Fair	Poor, pre-heat 400-500 °F. Anneal 1250 °F after welding.
420	S42000	52%		
430F	S43020	85%		
440C	S44004	40%	Not Recommended	Not recommended.
17-4	S17400	40%		Very good, tough welds.

\*Based on Bessemer Screw Stock No. B1112

# Machining Data

## Machinability Ratings

Machinability ratings must be recognized as approximate values. They are a reasonable guide to relative tool life and power required for cutting. Variables of speed, cutting oil, feed, and depth of cut will significantly affect these ratios.

Type No.	Approximate SFM	% Relative Speed (Based on C1212 as 100%)	Machinability*
303	150	75	70%
304	70	40	45%
304L	70	40	44%
316/316L	60	36	45%
321	60	36	38%
347	60	36	38%
410	95	54	60%
416 Ann.	150	75	85%
416 HT	85	50	85%
418 (Greek Ascoloy)	96	50	50%
420	85	50	52%
420F	125	68	68%
430	110	66	60%
430F	150	75	85%
431	80	48	45%
440A	65	40	45%
440C	65	40	40%
440FSE	80	48	50%
13-8 PH	60	36	40%
15-5 PH	75	45	45%
17-4 PH	75	45	45%
17-4 PH H1150	85	50	50%
17-7 PH	75	45	45%
Nitronic 40	50	22	25%
Nitronic 50	50	22	25%
Nitronic 60	50	22	25%

\*Based on Bessemer Screw Stock No. B1112

## Machining Speeds and Feeds (Cold Finished or Cold Drawn Stainless Steel Bars)

Tool Type	Tool Size (In.)	Type 303		Type 302/304/316		Type 416		Type 17-4	
		Speed (SFM)	Feed (In./Rev)	Speed (SFM)	Feed (In./Rev)	Speed (SFM)	Feed (In./Rev)	Speed (SFM)	Feed (In./Rev)
Form — Circular or Dovetail (Width of Cut)	1/2	130	0.0021	75	0.0016	180	0.0018	70	0.0016
	1	125	0.0017	73	0.0013	175	0.0014	69	0.0013
	1-1/2	125	0.0015	73	0.0012	175	0.0013	69	0.0012
	2	120	0.0013	70	0.001	168	0.0011	65	0.001
	2-1/2	115	0.001	68	0.0008	162	0.0009	64	0.0008
Twist Drills (Diameter)	1/4	82	0.004	48	0.0033	120	0.0035	45	0.0033
	1/2	82	0.0045	48	0.0036	120	0.004	45	0.0036
	3/4	90	0.0055	52	0.0044	126	0.0047	50	0.0044
	1	90	0.0064	52	0.0051	126	0.0055	50	0.0051
	1-1/4	94	0.007	54	0.0058	132	0.0064	51	0.0058
	1/8	130	0.0059	75	0.0046	180	0.005	70	0.0046
Box Tool Blades (Depth of Cut)	1/4	125	0.0055	72	0.0043	175	0.0047	70	0.0043
	3/8	120	0.0047	70	0.0036	168	0.004	68	0.0036
	1/2	115	0.004	68	0.003	162	0.0032	65	0.003
Hollow Mills (Depth of Cut)	1/16	115	0.0085	68	0.006	162	0.0072	65	0.006
	1/8	110	0.0068	64	0.0053	153	0.0058	60	0.0053
	1/4	100	0.0055	59	0.0043	141	0.0047	55	0.0043
Knurl Tools	In Turret, On	130	0.012	75	0.0099	180	0.011	70	0.0099
	In Turret, Off	130	0.024	75	0.0198	180	0.022	70	0.0198
	Cross Slide	130	0.012	75	0.0099	180	0.011	70	0.0099
Chamfer & Facing		155	.005 – .0072	91	.0038 – .0053	208	.004 – .006	85	.0038 – .0053
	Under 1/2" Diam.	113	0.006	66	0.0046	158	0.005	62	0.0046
	1/2" Diam. or over	113	0.0085	66	0.0066	158	0.0072	62	0.0066
	1/16	130	0.0017	75	0.0013	180	0.0015	70	0.0013
	1/8	135	0.0021	79	0.0016	190	0.002	75	0.0016
	1/4	145	0.0025	86	0.002	205	0.0024	81	0.002
		15 – 30		10 – 25		15 – 35		10 – 22	

Note: The data listed here are recommended starting points. Higher speeds and feeds may be obtainable based on the working environment. Keep in mind that speeds and feeds should always be adjusted in small steps. When using carbide tools; surface speed can be increased 2 to 3 times over the suggested values; feeds can be increased between 50 and 100%.

# Stainless Steel Bar Finishes

## Hot Rolled, Annealed and Pickled

These are bars that have been hot rolled to shape; they are not cold worked. These are sometimes called "true bars."

## Hot Rolled, Annealed and Rough Turned

These are typically, large diameter bars (3 inches and larger). These bars are hot rolled or forged and then the OD is turned. All tolerances are on the plus (+) side. This is an excellent finish for customers who will be machining the bar OD in subsequent operations.

## Cold Finished

Cold-finished bars are produced from hot-finished bars by additional operations at room temperature (cold finishing) to improve tolerances, surface finish, and mechanical properties. Because of their shape, cold-finished square, flat, hexagonal, octagonal, and special shape bars are produced from hot-finished bars, usually by cold rolling or cold drawing in straight lengths. When cold-finished bars are required to have higher strength and hardness, they are cold drawn or heat treated, depending upon the composition, cross section, and properties indicated. These bars, in the case of round sections, can subsequently be centerless ground, polished, or smooth turned to improve surface finish or tolerance. Cold drawing, smooth turning, and centerless grinding are all examples of cold finishing operations.

## Cold Drawing

Rod, bar, or wire in straight lengths or in coil is pulled through a die to attain the desired diameter or shape.

## Turning / Peeling

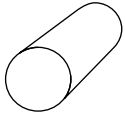
Sometimes called "peeling," this method removes material from the bar with a stationary cutting tool while the bar spins. This is a very cost effective process to cold finish material to commercial ASTM standards. Typically there is a slight spiral mark left by the tool down the length of the bar, but this can be burnished away if desired.

## Centerless Grinding

Centerless grinding is an OD grinding process for long bars. It differs from other cylindrical processes in that the work piece is not mechanically constrained. Instead, the work piece is supported on its own outer diameter by an angular-top work rest blade located between a high-speed grinding wheel and a slower speed regulating wheel of smaller diameter. The angle of the work rest blade helps keep the work piece in contact with and under the control of the slower regulating wheel.

Centerless grinding is able to actually improve the roundness of out-of-round bars. This makes it a popular pre-processing option for bars in many screw machine applications. Centerless grinding allows for very tight finish tolerances, typically  $\pm 0.0005$  inches.

# Round Bar

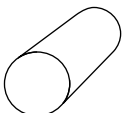


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## 13-8 Round Stainless Steel Bar

Cold Finished, Annealed  
Random 12 Foot Mill Lengths  
AMS 5629

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01098	0.625	(±.002)	1.0414
SSRD01150	0.75	(±.002)	1.4995
SSRD01704	0.875	(±.002)	2.041
SSRD01612	1	(±.0025)	2.6659
SSRD01093	1.125	(±.0025)	3.374
SSRD00897	1.25	(±.0025)	4.1654
SSRD01190	1.375	(±.0025)	5.0401
SSRD00975	1.5	(±.003)	5.9982
SSRD01233	1.625	(±.003)	7.0395
SSRD00077	1.75	(±.003)	8.1642
SSRD01155	1.812	(±.003)	8.7529
SSRD01170	2	(±.003)	10.6634
SSRD01095	2.25	(±.003)	13.4959
SSRD01279	2.5	(±.003)	16.6616
SSRD00963	2.625	(±.003)	18.3694
SSRD01262	2.75	(±.003)	20.1606

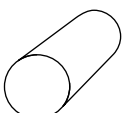


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## 13-8 Round Stainless Steel Bar

Rough Turned, Annealed  
Random 12 Foot Mill Lengths  
AMS 5629

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01133	3.375	(+.031 -0)	30.3658
SSRD01168	4.125	(+.031 -0)	45.3613
SSRD00984	4.25	(+.031 -0)	48.1521
SSRD01688	4.625	(+.031 -0)	57.0244
SSRD01674	5	(+.031 -0)	66.6465
SSRD01009	8	(+.031 -0)	170.615

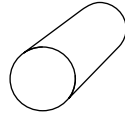


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## 15-5 Round Stainless Steel Bar Electro Slag Remelt / Type 2

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 2300, AMS 5659, ASTM A 484, ASTM A 564

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01905	2.375	(±.003)	15.2497
SSRD00059	2.5	(±.003)	16.8971
SSRD01148	2.75	(±.003)	20.4455
SSRD00054	3	(±.003)	24.3319

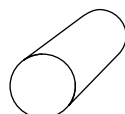


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## 15-5 Round Stainless Steel Bar Vacuum Arc Remelt / Type 1

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 2300, AMS 5659, ASTM A 484, ASTM A 564

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01616	0.25	(±.001)	0.169
SSRD01118	0.255	(±.001)	0.1758
SSRD00048	0.3125	(±.0015)	0.264
SSRD01005	0.375	(±.0015)	0.3802
SSRD01618	0.38	(±.0015)	0.3904
SSRD01024	0.4375	(±.0015)	0.5175
SSRD00052	0.5	(±.002)	0.6759
SSRD00910	0.505	(±.002)	0.6895
SSRD00051	0.562	(±.002)	0.8539
SSRD01001	0.625	(±.002)	1.0561
SSRD01620	0.63	(±.002)	1.073
SSRD01617	0.6875	(±.002)	1.2778
SSRD00911	0.75	(±.002)	1.5207
SSRD01242	0.755	(±.002)	1.5411
SSRD01025	0.8125	(±.002)	1.7848
SSRD00961	0.875	(±.002)	2.0699
SSRD01000	0.9375	(±.002)	2.3762
SSRD00927	1	(±.0025)	2.7035
SSRD01570	1.01	(±.0025)	2.7579
SSRD01003	1.062	(±.0025)	3.0492
SSRD01201	1.125	(±.0025)	3.4217
SSRD01002	1.1875	(±.0025)	3.8124
SSRD01619	1.25	(±.0025)	4.2243
SSRD01124	1.375	(±.0025)	5.1114
SSRD00040	1.4375	(±.0025)	5.5866
SSRD00991	1.5	(±.003)	6.083
SSRD00926	1.5625	(±.003)	6.6004
SSRD01026	1.625	(±.003)	7.139
SSRD01094	1.75	(±.003)	8.2796
SSRD01239	1.875	(±.003)	9.5046
SSRD00861	2	(±.003)	10.8142

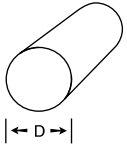


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## 15-5 Round Stainless Steel Bar Electro Slag Remelt / Type 2

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5659, ASTM A 484, ASTM A 564

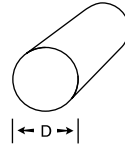
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00746	3.25	(+.047 -0)	28.3571
SSRD00943	3.5	(+.047 -0)	32.8876
SSRD00763	3.75	(+.062 -0)	37.7536
SSRD01065	4	(+.062 -0)	42.9552
SSRD00970	4.25	(+.062 -0)	48.4924
SSRD01028	4.75	(+.078 -0)	60.5735
SSRD01210	5	(+.078 -0)	67.5885
SSRD01663	5.25	(+.078 -0)	73.997
SSRD01016	5.5	(+.078 -0)	81.2122
SSRD00981	7	(+.156 -0)	130.9
SSRD01060	8	(+.156 -0)	171.821
SSRD00980	8.5	(+.1875 -0)	195.331



### 17-4 Round Stainless Steel Bar

Cold Finished, Condition A  
Random 12 Foot Mill Lengths  
AMS 5643, ASTM A 564

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01186	0.0937	(±.001)	0.0232
SSRD01167	0.125	(±.001)	0.0412
SSRD01226	0.1562	(±.001)	0.0644
SSRD00251	0.1875	(±.001)	0.0927
SSRD01654	0.2187	(±.001)	0.1262
SSRD00645	0.25	(±.001)	0.1648
SSRD00408	0.255	(±.001)	0.1715
SSRD00625	0.3125	(±.0015)	0.2575
SSRD01743	0.375	(±.0015)	0.3709
SSRD00205	0.4375	(±.0015)	0.5048
SSRD01291	0.5	(±.0015)	0.6594
SSRD00458	0.506	(±.002)	0.6753
SSRD00540	0.5625	(±.002)	0.8345
SSRD01518	0.625	(±.002)	1.0303
SSRD00624	0.633	(±.002)	1.0568
SSRD01535	0.6875	(±.002)	1.2466
SSRD01402	0.75	(±.002)	1.4836
SSRD01187	0.755	(±.0025)	1.5035
SSRD00517	0.8125	(±.002)	1.7412
SSRD01497	0.875	(±.002)	2.0194
SSRD01714	0.9375	(±.002)	2.3182
SSRD01536	1	(±.0025)	2.6376
SSRD00105	1.008	(±.0025)	2.6418
SSRD00994	1.0625	(±.0025)	2.9776
SSRD01653	1.125	(±.0025)	3.3382
SSRD00412	1.1875	(±.0025)	3.7194
SSRD00659	1.25	(±.0025)	4.1212
SSRD01656	1.3125	(±.0025)	4.5436
SSRD01080	1.375	(±.0025)	4.9867
SSRD01496	1.5	(±.003)	5.9346
SSRD00188	1.5625	(±.003)	6.4394
SSRD00224	1.625	(±.003)	6.9649
SSRD01975	1.6875	(±.003)	7.511
SSRD00386	1.75	(±.003)	8.0776
SSRD00400	1.875	(±.003)	9.2728
SSRD00227	2	(±.003)	10.5504
SSRD00163	2.125	(±.003)	11.9104
SSRD00301	2.25	(±.003)	13.3528
SSRD01537	2.375	(±.003)	14.8777
SSRD01314	2.5	(±.003)	16.485
SSRD01713	2.625	(±.003)	18.1747
SSRD00508	2.75	(±.003)	19.9468
SSRD01657	3	(±.003)	23.7384

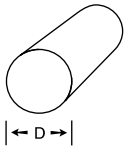


### 17-4 Round Stainless Steel Bar

Hot Forged Rough Turned, Condition A  
Random 12 Foot Mill Lengths  
AMS 5643, ASTM A 564

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00819	2.875	(+.0468 -0)	21.8014
SSRD00393	3	(+.0468 -0)	23.7384
SSRD00098	3.125	(+.0468 -0)	25.7578
SSRD00619	3.25	(+.0468 -0)	27.8596
SSRD00941	3.375	(+.0468 -0)	30.0439
SSRD00724	3.5	(+.0468 -0)	32.3106
SSRD01128	3.625	(+.0625 -0)	34.6597
SSRD00475	3.75	(+.0625 -0)	37.0912
SSRD00474	4	(+.0625 -0)	42.2016
SSRD00225	4.25	(+.0625 -0)	47.6416
SSRD00725	4.5	(+.0625 -0)	53.4114
SSRD00099	4.75	(+.0781 -0)	59.5108
SSRD00410	5	(+.0781 -0)	65.94
SSRD00131	5.25	(+.0781 -0)	72.6988
SSRD00549	5.5	(+.0781 -0)	79.7874
SSRD00407	5.75	(+.125 -0)	87.2056
SSRD00500	6	(+.125 -0)	94.9536
SSRD00509	6.25	(+.125 -0)	103.031
SSRD01491	6.375	(+.125 -0)	111.022
SSRD00137	6.5	(+.125 -0)	111.439
SSRD00113	6.75	(+.1562 -0)	120.176
SSRD00423	7	(+.1562 -0)	129.242
SSRD00687	7.25	(+.1562 -0)	138.639
SSRD00136	7.5	(+.1562 -0)	148.365
SSRD01144	7.75	(+.1562 -0)	158.421
SSRD01585	8	(+.1562 -0)	168.806
SSRD00670	8.5	(+.1875 -0)	190.567
SSRD00971	8.75	(+.250 -0)	201.941
SSRD01639	9	(+.250 -0)	213.646
SSRD01787	9.25	(+.1875 -0)	225.68
SSRD00858	9.5	(+.250 -0)	238.043
SSRD00846	10	(+.250 -0)	263.76
SSRD00948	11	(+.187 -0)	319.15
SSRD01076	12	(+.187 -0)	379.814
SSRD00886	13	(+.219 -0)	445.754

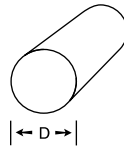




**17-4 AccuMAXX®  
Round Stainless Steel Bar**

Centerless Ground  
Random 12 Foot Mill Lengths  
AMS 5643, ASTM A 564

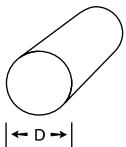
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD02179	0.1875	(±.0005)	0.0938
SSRD00310	0.25	(±.0005)	0.1669
SSRD00207	0.3125	(±.0005)	0.2608
SSRD00307	0.375	(±.0005)	0.3756
SSRD00338	0.4375	(±.0005)	0.5111
SSRD01640	0.5	(±.0005)	0.6676
SSRD00756	0.5625	(±.0005)	0.8449
SSRD00541	0.625	(±.0005)	1.043
SSRD01584	0.6875	(±.0005)	1.262
SSRD00543	0.75	(±.0005)	1.502
SSRD00620	0.8125	(±.0005)	1.763
SSRD00195	0.875	(±.0005)	2.044
SSRD00893	1	(±.0005)	2.670
SSRD01500	1.25	(±.0005)	4.173



**17-4 MAXX®  
Round Stainless Steel Bar**

Cold Finished, Condition A  
Random 12 Foot Mill Lengths  
AMS 5643, ASTM A 564

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01839	0.256	(±.001)	0.1729
SSRD01831	0.319	(±.0015)	0.2684
SSRD01815	0.381	(±.001)	0.3829
SSRD01848	0.444	(±.0015)	0.52
SSRD01845	0.508	(±.002)	0.6807
SSRD01430	0.755	(±.002)	1.5035
SSRD01825	0.884	(±.002)	2.0612
SSRD01567	1.005	(±.0025)	2.664
SSRD01336	1.0625	(±.0025)	2.9776
SSRD01859	1.2575	(±.0015)	4.1709

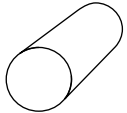


**303  
Round Stainless Steel Bar**

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582, ASTM A 484

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01747	0.0625	(±.001)	0.0104
SSRD00004	0.0937	(±.001)	0.0234
SSRD00135	0.125	(±.001)	0.0416
SSRD00439	0.1562	(±.001)	0.065
SSRD00146	0.1875	(±.001)	0.0937
SSRD00904	0.218	(±.001)	0.1268
SSRD01070	0.25	(±.001)	0.1666
SSRD00228	0.255	(±.001)	0.1733
SSRD00989	0.2812	(±.001)	0.2108
SSRD01278	0.3125	(±.0015)	0.2603
SSRD00212	0.3175	(±.0015)	0.2687
SSRD01553	0.3437	(±.0015)	0.3149
SSRD01529	0.375	(±.0015)	0.3748
SSRD01366	0.4375	(±.0015)	0.5102
SSRD01538	0.5	(±.002)	0.6665
SSRD01284	0.5625	(±.002)	0.8435
SSRD00638	0.5685	(±.002)	0.8615
SSRD01493	0.625	(±.002)	1.0414
SSRD00411	0.633	(±.002)	1.0681
SSRD01519	0.6875	(±.002)	1.26
SSRD00076	0.75	(±.002)	1.4995
SSRD01203	0.8125	(±.002)	1.7599
SSRD01069	0.875	(±.002)	2.041
SSRD00623	0.9375	(±.002)	2.343
SSRD01534	1	(±.0025)	2.6659

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01542	1.008	(±.0025)	2.7086
SSRD00903	1.0625	(±.0025)	3.0095
SSRD01091	1.125	(±.0025)	3.374
SSRD01151	1.1875	(±.0025)	3.7593
SSRD01494	1.25	(±.0025)	4.1654
SSRD01363	1.3125	(±.0025)	4.5924
SSRD01539	1.375	(±.0025)	5.0401
SSRD01086	1.4375	(±.0025)	5.5087
SSRD01367	1.5	(±.003)	5.9982
SSRD00843	1.5625	(±.003)	6.5084
SSRD01286	1.625	(±.003)	7.0395
SSRD01090	1.6875	(±.003)	7.5915
SSRD01396	1.75	(±.003)	8.1642
SSRD01346	1.8125	(±.003)	8.7578
SSRD00973	1.875	(±.003)	9.3722
SSRD01384	1.9375	(±.003)	10.0074
SSRD01348	2	(±.003)	10.6634
SSRD01165	2.125	(±.003)	12.038
SSRD01387	2.1875	(±.003)	12.7566
SSRD00924	2.25	(±.003)	13.4959
SSRD01041	2.375	(±.003)	15.0371
SSRD01099	2.5	(±.003)	16.6616
SSRD00055	2.625	(±.003)	18.3694
SSRD00865	2.75	(±.003)	20.1606
SSRD01107	3	(±.003)	23.9927

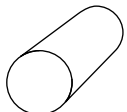


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### 303 Round Stainless Steel Bar

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582, ASTM A 484

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00521	3	(+.0468 -0)	23.9927
SSRD00661	3.125	(+.0468 -0)	26.0337
SSRD01552	3.25	(+.0468 -0)	28.1581
SSRD00653	3.375	(+.0468 -0)	30.3658
SSRD00159	3.5	(+.0468 -0)	32.6567
SSRD00864	3.625	(+.0625 -0)	35.031
SSRD00449	3.75	(+.0625 -0)	37.4886
SSRD00349	3.875	(+.0625 -0)	40.0295
SSRD00192	4	(+.0625 -0)	42.6537
SSRD01550	4.25	(+.0625 -0)	48.152
SSRD00463	4.5	(+.0625 -0)	53.9836
SSRD00612	4.75	(+.0781 -0)	60.1484
SSRD00153	5	(+.0781 -0)	66.6465
SSRD00361	5.25	(+.0781 -0)	73.4777
SSRD00385	5.5	(+.0781 -0)	80.6422
SSRD00143	5.75	(+.125 -0)	88.1399
SSRD00374	6	(+.125 -0)	95.9709
SSRD00285	6.25	(+.125 -0)	104.135
SSRD00780	6.5	(+.125 -0)	112.632
SSRD00600	6.75	(+.156 -0)	121.463



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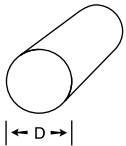
### 303 MAXX® Round Stainless Steel Bar

Centerless Ground  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00616	0.25	(±.001)	Cold Drawn	0.1666
SSRD01826	0.256	(±.001)	Cold Drawn	0.1747
SSRD00253	0.2812	(±.001)	Cold Drawn	0.2107
SSRD00267	0.3125	(±.0015)	Cold Drawn	0.2603
SSRD00869	0.375	(±.0015)	Cold Drawn	0.3709
SSRD01725	0.4062	(±.0015)	Cold Drawn	0.4398
SSRD00520	0.4375	(±.0015)	Cold Drawn	0.5102
SSRD00331	0.5	(±.002)	Cold Drawn	0.6664
SSRD01852	0.508	(±.002)	Cold Drawn	0.688
SSRD00345	0.5625	(±.002)	Cold Drawn	0.8434
SSRD00553	0.625	(±.002)	Cold Drawn	1.0413
SSRD00353	0.6875	(±.002)	Cold Drawn	1.26
SSRD00546	0.75	(±.002)	Cold Finished	1.4995
SSRD01352	0.755	(±.002)	Cold Finished	1.5196
SSRD00165	0.8125	(±.002)	Cold Finished	1.7598
SSRD00316	0.875	(±.002)	Cold Finished	2.041
SSRD00133	0.9375	(±.002)	Cold Finished	2.343
SSRD00346	1	(±.0025)	Cold Finished	2.6658
SSRD00451	1.0625	(±.0025)	Cold Finished	3.0095
SSRD00489	1.125	(±.0025)	Cold Finished	3.3739

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00769	7	(+.1562 -0)	130.627
SSRD00876	7.5	(+.1562 -0)	149.955
SSRD00270	8	(+.1562 -0)	170.615
SSRD01724	8.5	(+.1875 -0)	192.608
SSRD01731	9	(+.1875 -0)	215.935
SSRD01734	9.5	(+.1875 -0)	240.594
SSRD00464	10	(+.1875 -0)	266.586
SSRD00801	10.5	(+.1875 -0)	293.911
SSRD01635	11	(+.1875 -0)	322.569
SSRD00883	11.5	(+.1875 -0)	352.56
SSRD00758	12	(+.1875 -0)	383.884
SSRD01637	12.5	(+.1875 -0)	416.541
SSRD00514	13	(+.2187 -0)	450.53
SSRD00892	13.5	(+.1875 -0)	485.853
SSRD00566	14	(+.2187 -0)	522.509
SSRD01034	14.5	(+.1875 -0)	560.497
SSRD00790	15	(+.2187 -0)	599.818
SSRD00789	15.5	(+.2187 -0)	640.473
SSRD00286	16	(+.250 -0)	682.46

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00336	1.1875	(±.0025)	Cold Finished	3.7592
SSRD00378	1.25	(±.0025)	Cold Finished	4.1654
SSRD00235	1.3125	(±.0025)	Cold Finished	4.5923
SSRD01748	1.375	(±.0025)	Cold Finished	5.0401
SSRD00319	1.4375	(±.0025)	Cold Finished	5.5087
SSRD00388	1.5	(±.003)	Cold Finished	5.9981
SSRD01749	1.5625	(±.003)	Cold Finished	6.5084
SSRD00236	1.625	(±.003)	Cold Finished	7.0395
SSRD00237	1.6875	(±.003)	Cold Finished	7.5914
SSRD00396	1.75	(±.003)	Cold Finished	8.1641
SSRD01716	1.8125	(±.003)	Cold Finished	8.7577
SSRD00238	1.875	(±.003)	Cold Finished	9.3721
SSRD00134	2	(±.003)	Cold Finished	10.6634
SSRD00494	2.125	(±.003)	Cold Finished	12.038
SSRD00329	2.25	(±.003)	Cold Finished	13.4959
SSRD00446	2.375	(±.003)	Cold Finished	15.0371
SSRD00311	2.5	(±.003)	Cold Finished	16.6616
SSRD01722	2.625	(±.003)	Cold Finished	18.3694
SSRD00279	2.75	(±.003)	Cold Finished	20.1605
SSRD00239	3	(±.003)	Cold Finished	23.9927

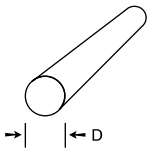


**303 AccuMAXX®  
Round Stainless Steel Bar**

Centerless Ground  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00276	0.25	(±.0005)	0.1666
SSRD00568	0.3125	(±.0005)	0.2603
SSRD00177	0.375	(±.0005)	0.3748
SSRD00242	0.4375	(±.0005)	0.5102
SSRD00583	0.5	(±.0005)	0.6664
SSRD00266	0.5625	(±.0005)	0.8434

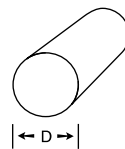
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01733	0.625	(±.0005)	1.0413
SSRD01691	0.6875	(±.0005)	1.26
SSRD01643	0.75	(±.0005)	1.4995
SSRD01752	0.8125	(±.0005)	1.7598
SSRD00654	0.875	(±.0005)	2.041
SSRD00485	1	(±.0005)	2.6658



**302/304  
Round Stainless Steel Wire**

Spring Temper, Cold Drawn  
Random 12 Foot Mill Lengths  
ASTM A 313, ASTM A 580

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00197	0.0625	(±.001)	0.0105
SSRD00592	0.093	(±.001)	0.0233
SSRD00544	0.125	(±.001)	0.0421
SSRD00097	0.156	(±.001)	0.0656
SSRD00110	0.1875	(±.001)	0.0947

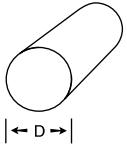


**304/304L  
Round Stainless Steel Bar**

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5639, AMS 5647, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00413	3.25	(+.0468 -0)	28.3571
SSRD00617	3.375	(+.0468 -0)	30.5804
SSRD00129	3.5	(+.0468 -0)	32.8875
SSRD00505	3.625	(+.0625 -0)	35.2786
SSRD01750	3.75	(+.0625 -0)	37.7535
SSRD00477	4	(+.0625 -0)	42.9552
SSRD00368	4.25	(+.0625 -0)	48.4923
SSRD00556	4.5	(+.0625 -0)	54.3651
SSRD00487	4.75	(+.0781 -0)	60.5735
SSRD00260	5	(+.0781 -0)	67.1175
SSRD00628	5.25	(+.0781 -0)	73.997
SSRD00483	5.5	(+.0781 -0)	81.2121
SSRD00501	5.75	(+.125 -0)	88.7628
SSRD00300	6	(+.125 -0)	96.6492
SSRD00605	6.5	(+.125 -0)	113.429
SSRD00498	6.75	(+.1562 -0)	122.322
SSRD00424	7	(+.1562 -0)	131.55
SSRD00288	7.5	(+.1562 -0)	151.014
SSRD00275	8	(+.1562 -0)	171.821
SSRD00364	8.5	(+.1875 -0)	193.97
SSRD00496	9	(+.1875 -0)	217.461
SSRD01624	9.5	(+.1875 -0)	242.294
SSRD00655	10	(+.1875 -0)	268.47
SSRD01692	10.5	(+.1875 -0)	295.988
SSRD00402	11	(+.1875 -0)	324.849
SSRD00987	11.5	(+.1875 -0)	355.052
SSRD00090	12	(+.1875 -0)	386.597
SSRD01622	12.5	(+.1875 -0)	419.484
SSRD00060	13	(+.1875 -0)	453.714
SSRD01357	14	(+.1875 -0)	526.201
SSRD01303	15	(+.1875 -0)	604.058
SSRD01121	16	(+.250 -0)	687.283

303 AccuMAXX®

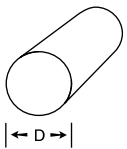


## 304/304L Round Stainless Steel Bar

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5639, AMS 5647, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01634	0.125	(±.001)	0.0419
SSRD00618	0.1875	(±.001)	0.0943
SSRD00824	0.2187	(±.001)	0.1284
SSRD00951	0.25	(±.001)	0.1678
SSRD00003	0.256	(±.0015)	0.1759
SSRD01015	0.3125	(±.0015)	0.2622
SSRD01006	0.375	(±.0015)	0.3775
SSRD01081	0.4375	(±.0015)	0.5139
SSRD00762	0.5	(±.002)	0.6712
SSRD00254	0.506	(±.002)	0.6873
SSRD00740	0.5625	(±.002)	0.8495
SSRD00122	0.625	(±.002)	1.0487
SSRD00442	0.633	(±.002)	1.0757
SSRD00836	0.6875	(±.002)	1.2689
SSRD00730	0.75	(±.002)	1.5101
SSRD01008	0.8125	(±.002)	1.7723
SSRD00877	0.875	(±.002)	2.0555
SSRD00826	0.9375	(±.002)	2.3596
SSRD00736	1	(±.0025)	2.6847
SSRD00890	1.0625	(±.0025)	3.0308
SSRD00722	1.125	(±.0025)	3.3978
SSRD01064	1.1875	(±.0025)	3.7858
SSRD00928	1.25	(±.0025)	4.1948

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00744	1.3125	(±.0025)	4.6248
SSRD00873	1.375	(±.0025)	5.0758
SSRD01621	1.4375	(±.0025)	5.5477
SSRD00120	1.5	(±.003)	6.0406
SSRD01329	1.52	(±.003)	6.2027
SSRD00949	1.625	(±.003)	7.0893
SSRD01353	1.75	(±.003)	8.2219
SSRD00728	1.8125	(±.003)	8.8197
SSRD00874	1.875	(±.003)	9.4384
SSRD00835	1.9375	(±.003)	10.0781
SSRD01361	2	(±.003)	10.7388
SSRD00879	2.125	(±.003)	12.1231
SSRD00767	2.1875	(±.003)	12.8467
SSRD01665	2.25	(±.003)	13.5913
SSRD00712	2.375	(±.003)	15.1434
SSRD01573	2.5	(±.003)	16.7794
SSRD00747	2.625	(±.003)	18.4993
SSRD00123	2.75	(±.003)	20.303
SSRD00050	2.875	(±.003)	22.1907
SSRD01669	3	(±.003)	24.1623
SSRD00942	3.125	(±.003)	26.2178
SSRD01057	3.25	(±.003)	28.3571

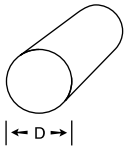


## 316/316L Round Stainless Steel Bar

Cold Finished  
Random 12 Foot Mill Lengths  
ASMS 5648, AMS 5653, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00700	0.1875	(±.001)	0.095
SSRD00939	0.2187	(±.001)	0.1293
SSRD01019	0.25	(±.001)	0.169
SSRD00699	0.3125	(±.001)	0.264
SSRD01661	0.375	(±.0015)	0.3802
SSRD01644	0.4375	(±.0015)	0.5175
SSRD00684	0.5	(±.0015)	0.6759
SSRD01052	0.5625	(±.002)	0.8554
SSRD00046	0.625	(±.002)	1.0561
SSRD00956	0.6875	(±.002)	1.2778
SSRD01615	0.75	(±.002)	1.5207
SSRD01977	0.755	(±.002)	1.5572
SSRD01631	0.8125	(±.002)	1.7848
SSRD00985	0.875	(±.002)	2.0698
SSRD00775	0.9375	(±.002)	2.3762
SSRD01509	1	(±.0025)	2.7035
SSRD01051	1.0625	(±.0025)	3.052
SSRD01050	1.125	(±.0025)	3.4217
SSRD00754	1.1875	(±.0025)	3.8124

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00778	1.25	(±.0025)	4.2243
SSRD00708	1.3125	(±.0025)	4.6573
SSRD00290	1.375	(±.0025)	5.1113
SSRD00913	1.4375	(±.0025)	5.5866
SSRD01032	1.5	(±.003)	6.083
SSRD00757	1.5625	(±.003)	6.6004
SSRD00940	1.625	(±.003)	7.139
SSRD01043	1.75	(±.003)	8.2796
SSRD00992	1.875	(±.003)	9.5046
SSRD01265	2	(±.003)	10.8142
SSRD01987	2.0625	(±.003)	11.6208
SSRD00832	2.125	(±.003)	12.2082
SSRD00937	2.25	(±.003)	13.6867
SSRD00977	2.375	(±.003)	15.2497
SSRD01022	2.5	(±.003)	16.8971
SSRD00127	2.625	(±.003)	18.6291
SSRD01030	2.75	(±.003)	20.4455
SSRD00741	2.875	(±.003)	22.3464
SSRD00677	3	(±.003)	24.3319

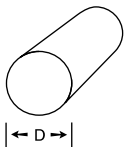


### 316/316L Round Stainless Steel Bar

Rough Turned  
Random 12 Foot Mill Lengths  
ASMS 5648, AMS 5653, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00523	3	(+.0468 -0)	24.3318
SSRD01551	3.125	(+.0468 -0)	26.4017
SSRD00086	3.25	(+.0468 -0)	28.5561
SSRD00421	3.375	(+.0625 -0)	30.795
SSRD00083	3.5	(+.0468 -0)	33.1183
SSRD00350	3.625	(+.0625 -0)	35.5262
SSRD00268	3.75	(+.0625 -0)	38.0185
SSRD01323	4	(+.0625 -0)	43.2566
SSRD01737	4.25	(+.0625 -0)	48.8326
SSRD00525	4.5	(+.0625 -0)	54.7466
SSRD00088	4.75	(+.0781 -0)	60.9986
SSRD00696	5	(+.0781 -0)	67.5885
SSRD00447	5.25	(+.0781 -0)	74.5163
SSRD00265	5.5	(+.0781 -0)	81.782
SSRD00577	5.75	(+.125 -0)	89.3857
SSRD00330	6	(+.125 -0)	97.3274
SSRD00372	6.25	(+.125 -0)	105.607

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00614	6.5	(+.125 -0)	114.225
SSRD00417	6.75	(+.1562 -0)	123.18
SSRD00652	7	(+.1562 -0)	132.473
SSRD00675	7.5	(+.1562 -0)	152.074
SSRD01678	7.75	(+.152 -0)	162.381
SSRD00445	8	(+.1562 -0)	173.027
SSRD00147	8.5	(+.1875 -0)	195.331
SSRD00462	9	(+.1875 -0)	218.987
SSRD00247	9.5	(+.1875 -0)	243.994
SSRD00376	10	(+.1875 -0)	270.354
SSRD01092	10.5	(+.1875 -0)	298.065
SSRD00244	11	(+.1875 -0)	327.128
SSRD00084	12	(+.1875 -0)	389.31
SSRD01751	13	(+.2187 -0)	456.898
SSRD01102	14	(+.2187 -0)	529.894
SSRD01246	15	(+.2187 -0)	608.297
SSRD01610	16	(+.250 -0)	692.106



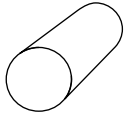
### 316/316L MAXX® Round Stainless Steel Bar

Random 12 Foot Mill Lengths  
AMS 5648, AMS 5653, AMS-QQ-S-763,  
ASTM A 276, ASTM A 479, ASTM A 182

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00149	0.25	(±.001)	Cold Drawn	0.1689
SSRD00639	0.3125	(±.001)	Cold Drawn	0.264
SSRD00563	0.375	(±.0015)	Cold Drawn	0.3801
SSRD00560	0.4375	(±.0015)	Cold Drawn	0.5174
SSRD00299	0.5	(±.0015)	Cold Drawn	0.6758
SSRD01732	0.5625	(±.002)	Cold Drawn	0.8554
SSRD00596	0.625	(±.002)	Cold Drawn	1.056
SSRD00603	0.6875	(±.002)	Cold Drawn	1.2778
SSRD00155	0.75	(±.002)	Cold Finished	1.5207
SSRD00168	0.8125	(±.002)	Cold Finished	1.7847
SSRD00476	0.875	(±.002)	Cold Finished	2.0698
SSRD00409	0.9375	(±.002)	Cold Finished	2.3761
SSRD00584	1	(±.0025)	Cold Finished	2.7035
SSRD00185	1.0625	(±.0025)	Cold Finished	3.052
SSRD01744	1.125	(±.0025)	Cold Finished	3.4216
SSRD00401	1.1875	(±.0025)	Cold Finished	3.8124
SSRD00178	1.25	(±.0025)	Cold Finished	4.2242
SSRD00683	1.3125	(±.0025)	Cold Finished	4.6572
SSRD00690	1.375	(±.0025)	Cold Finished	5.1113

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00391	1.4375	(±.0025)	Cold Finished	5.5866
SSRD00365	1.5	(±.003)	Cold Finished	6.0829
SSRD00436	1.5625	(±.003)	Cold Finished	6.6004
SSRD00070	1.625	(±.003)	Cold Finished	7.139
SSRD00399	1.75	(±.003)	Cold Finished	8.2795
SSRD00406	1.875	(±.003)	Cold Finished	9.5046
SSRD00191	2	(±.003)	Cold Finished	10.8141
SSRD00634	2.125	(±.003)	Cold Finished	12.2081
SSRD00252	2.25	(±.003)	Cold Finished	13.6866
SSRD01705	2.375	(±.003)	Cold Finished	15.2496
SSRD01697	2.5	(±.003)	Cold Finished	16.8971
SSRD00692	2.625	(±.003)	Cold Finished	18.629
SSRD00240	2.75	(±.003)	Cold Finished	20.4455
SSRD00392	2.875	(±.003)	Cold Finished	22.3464
SSRD00456	3	(±.003)	Cold Finished	24.3318
SSRD00591	3.125	(±.003)	Cold Finished	26.4017
SSRD00422	3.25	(±.003)	Cold Finished	28.5561
SSRD00807	3.375	(±.003)	Cold Finished	30.795
SSRD00017	3.5	(±.003)	Cold Finished	33.1184

316/316L MAXX®

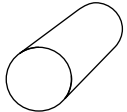


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### 321 Round Stainless Steel Bar

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5645, AMS-QQ-S-63, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00024	0.375	(±.0015)	0.3762
SSRD01359	0.4375	(±.0015)	0.5121
SSRD01453	0.5	(±.0015)	0.6688
SSRD01466	0.5625	(±.002)	0.8465
SSRD01454	0.625	(±.002)	1.045
SSRD00012	0.6875	(±.002)	1.2645
SSRD01485	0.75	(±.002)	1.5048
SSRD01409	0.8125	(±.002)	1.7661
SSRD01477	0.875	(±.002)	2.0483
SSRD01489	0.9375	(±.002)	2.3513
SSRD01317	1	(±.0025)	2.6753
SSRD01456	1.125	(±.0025)	3.3859
SSRD01457	1.25	(±.0025)	4.1801
SSRD01484	1.375	(±.0025)	5.058
SSRD00011	1.5	(±.003)	6.0194
SSRD01351	1.625	(±.003)	7.0644
SSRD01411	1.75	(±.003)	8.193
SSRD01385	2	(±.003)	10.7011

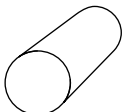


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### 321 Round Stainless Steel Bar

Rough Turned  
Random 12 Foot Mill Lengths  
ASTM A 479, AMS 5645

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01917	2.5	(+.047 -0)	16.7205
SSRD01918	3	(+.047 -0)	24.0775
SSRD01919	4.5	(+.078 -0)	54.1744
SSRD01920	5.5	(+.125 -0)	80.9272
SSRD01921	6	(+.125 -0)	96.3101

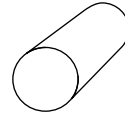


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### 410 Round Stainless Steel Bar

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5613, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Pounds Per Foot
SSRD01082	2.5	16.485
SSRD00010	2.75	19.9469
SSRD01209	3	23.7384
SSRD01067	3.25	27.8597
SSRD01238	3.75	37.0913
SSRD01214	4.5	53.4114
SSRD01171	5	65.94
SSRD01380	5.5	79.7874

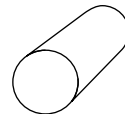


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### 410 Round Stainless Steel Bar

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5613, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00220	0.375	(±.0015)	0.3709
SSRD01974	0.625	(±.002)	1.0303
SSRD01812	0.6875	(±.002)	1.2912
SSRD00304	0.75	(±.002)	1.4836
SSRD00837	0.875	(±.002)	2.0194
SSRD01063	1	(±.0025)	2.6376
SSRD01027	1.125	(±.0025)	3.3382
SSRD01066	1.25	(±.0025)	4.1213
SSRD00888	1.3125	(±.0025)	4.5437
SSRD01061	1.375	(±.0025)	4.9867
SSRD01340	1.5	(±.003)	5.9346
SSRD00833	1.625	(±.003)	6.9649
SSRD01059	1.75	(±.003)	8.0777
SSRD00898	2	(±.003)	10.5504
SSRD00896	2.125	(±.003)	11.9104
SSRD00337	2.25	(±.003)	13.3528

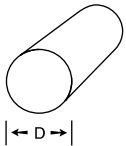


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### 416 Round Stainless Steel Bar

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5610, ASTM A 582

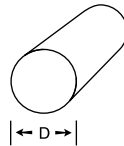
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01666	3.125	(+.0468 -0)	25.7578
SSRD00119	3.25	(+.0468 -0)	27.8596
SSRD00715	3.375	(+.0468 -0)	30.0439
SSRD00256	3.75	(+.0625 -0)	37.0912
SSRD00001	4	(+.0625 -0)	42.2016
SSRD00002	4.25	(+.0625 -0)	47.6416
SSRD00257	4.5	(+.0625 -0)	53.4114
SSRD00324	4.75	(+.0781 -0)	59.5108
SSRD00511	5	(+.0781 -0)	65.94
SSRD00175	5.25	(+.0781 -0)	72.6988
SSRD00180	5.5	(+.0781 -0)	79.7874
SSRD00326	6	(+.125 -0)	94.9536
SSRD00658	6.5	(+.125 -0)	111.439
SSRD00246	7	(+.1562 -0)	129.242
SSRD00526	8	(+.1562 -0)	168.806
SSRD00695	9	(+.1875 -0)	213.646



**416**  
**Round Stainless Steel Bar**

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5610, ASTM A 582

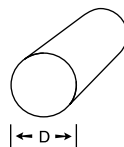
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01394	0.125	(±.001)	0.0412
SSRD01727	0.1875	(±.001)	0.0927
SSRD00484	0.25	(±.001)	0.1648
SSRD00093	0.2812	(±.001)	0.2085
SSRD00274	0.3125	(±.0015)	0.2575
SSRD01506	0.318	(±.0015)	0.2667
SSRD00218	0.375	(±.0015)	0.3709
SSRD00184	0.4062	(±.0015)	0.4351
SSRD00608	0.4375	(±.0015)	0.5048
SSRD00182	0.5	(±.002)	0.6594
SSRD00164	0.5625	(±.002)	0.8345
SSRD00604	0.625	(±.002)	1.0303
SSRD01651	0.6875	(±.002)	1.2467
SSRD00532	0.75	(±.002)	1.4836
SSRD01993	0.8125	(±.002)	1.7412
SSRD00534	0.875	(±.002)	2.0194
SSRD01702	0.9375	(±.002)	2.3182
SSRD00347	1	(±.0025)	2.6376
SSRD00043	1.0625	(±.0025)	2.9776
SSRD00348	1.125	(±.0025)	3.3382
SSRD00383	1.1875	(±.0025)	3.7194
SSRD00369	1.25	(±.0025)	4.1212
SSRD00580	1.3125	(±.0025)	4.5436
SSRD00005	1.375	(±.0025)	4.9867
SSRD01285	1.4375	(±.0025)	5.4504
SSRD01126	1.5	(±.003)	5.9346
SSRD01561	1.5625	(±.003)	6.4395
SSRD01655	1.625	(±.003)	6.9649
SSRD00174	1.75	(±.003)	8.0776
SSRD00370	1.875	(±.003)	9.2728
SSRD00518	2	(±.003)	10.5504
SSRD01562	2.125	(±.003)	11.9104
SSRD01726	2.25	(±.003)	13.3528
SSRD00176	2.375	(±.003)	14.8777
SSRD00524	2.5	(±.003)	16.485
SSRD01684	2.5625	(±.003)	17.3195
SSRD00154	2.75	(±.003)	19.9468
SSRD00866	2.875	(±.003)	21.8014
SSRD00673	3	(±.003)	23.7384
SSRD00662	3.5	(±.003)	32.3106



**440C**  
**Round Stainless Steel Bar**

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5630, AMS-QQ-S-763, ASTM A 276

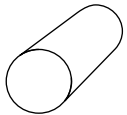
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00234	0.3125	(±.0015)	0.2576
SSRD01381	0.375	(±.0015)	0.3656
SSRD00023	0.4375	(±.0015)	0.4976
SSRD00723	0.5	(±.002)	0.65
SSRD00797	0.5625	(±.002)	0.8226
SSRD00037	0.625	(±.002)	1.0156
SSRD01681	0.6875	(±.002)	1.2289
SSRD00094	0.75	(±.002)	1.4625
SSRD00036	0.8125	(±.002)	1.7164
SSRD01017	0.875	(±.002)	1.9906
SSRD00537	0.9375	(±.002)	2.3679
SSRD00490	1	(±.002)	2.5999
SSRD01682	1.0625	(±.002)	2.9323
SSRD00030	1.125	(±.0025)	3.2905
SSRD00126	1.187	(±.0025)	3.6632
SSRD00479	1.25	(±.0025)	4.0624
SSRD01668	1.3125	(±.0025)	4.4788
SSRD00536	1.375	(±.0025)	4.9155
SSRD00950	1.4375	(±.0025)	5.3725
SSRD00721	1.5	(±.003)	5.8498
SSRD01104	1.5625	(±.003)	6.3475
SSRD00467	1.625	(±.003)	6.8654
SSRD00742	1.6875	(±.003)	7.4037
SSRD00332	1.75	(±.003)	7.9623
SSRD01452	1.8125	(±.003)	8.5411
SSRD01745	1.875	(±.003)	9.1403
SSRD00067	1.875	(±.003)	9.1403
SSRD00713	1.9375	(±.003)	9.7599
SSRD00788	2	(±.003)	10.3997
SSRD01339	2.1875	(±.003)	12.441
SSRD00179	2.25	(±.003)	13.1621
SSRD00095	2.375	(±.003)	14.6652
SSRD01738	2.5	(±.003)	16.2495
SSRD01424	2.625	(±.003)	17.9151
SSRD00272	2.75	(±.003)	19.6619
SSRD00739	2.875	(±.003)	21.49
SSRD00116	3	(±.003)	23.3993
SSRD00280	3.25	(±.003)	27.4617
SSRD01467	3.375	(±.003)	29.6147



**440C**  
**Round Stainless Steel Bar**

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5630, AMS-QQ-S-763, ASTM A 276

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00313	3.5	(+.062 -0)	32.3106
SSRD00706	3.625	(+.062 -0)	34.1646
SSRD00367	4.5	(+.062 -0)	52.6484
SSRD01628	5	(+.062 -0)	64.998
SSRD00121	5.25	(+.062 -0)	71.6603
SSRD00834	5.75	(+.062 -0)	85.9599
SSRD01511	6.5	(+.062 -0)	109.847
SSRD01386	8.5	(+.062 -0)	187.844

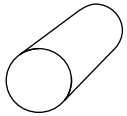


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### 455 Round Stainless Steel Bar

Cold Finished, Solution Annealed  
Random 12 Foot Mill Lengths  
AMS 5617, ASTM A 564

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD02241	0.1875	(±.0005)	0.0938
SSRD02242	0.250	(±.0005)	0.1669
SSRD02243	0.3125	(±.0005)	0.2608
SSRD02244	0.375	(±.0005)	0.3756
SSRD02245	0.500	(±.0005)	0.6676
SSRD02246	0.625	(±.0005)	1.043
SSRD02247	0.750	(±.0005)	1.502
SSRD02248	0.875	(±.0005)	2.044
SSRD02249	1	(±.0006)	2.670

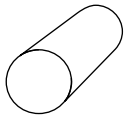


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### Nitronic® 50 Round Stainless Steel Bar

Cold Finished — Annealed  
Random 12 Foot Mill Lengths  
AMS 5764, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01397	0.75	(±.002)	1.5366
SSRD01420	1	(±.0025)	2.7318
SSRD01371	1.25	(±.0025)	4.2684
SSRD01419	1.5	(±.003)	6.1466
SSRD01372	1.75	(±.003)	8.3661
SSRD01429	1.875	(±.003)	9.604
SSRD01432	2	(±.003)	10.9272
SSRD01427	2.25	(±.003)	13.8297
SSRD01433	2.5	(±.003)	17.0738
SSRD01392	3	(±.003)	24.5862
SSRD01403	3.25	(±.003)	28.8546
SSRD01404	3.5	(±.003)	33.4646
SSRD01393	4	(±.003)	43.7088

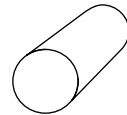


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### Nitronic® 50 Round Stainless Steel Bar

Round Turned — Annealed  
Random 12 Foot Mill Lengths  
AMS 5764, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01431	5	(+.078 -0)	68.295
SSRD01426	6	(+.125 -0)	98.3448

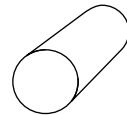


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### Nitronic® 60 Round Stainless Steel Bar

Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5848, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01533	0.75	(±.002)	1.5366
SSRD01600	1	(±.0025)	2.7318
SSRD01525	1.25	(±.0025)	4.2684
SSRD01368	1.5	(±.003)	6.1466
SSRD01555	1.625	(±.003)	7.2137
SSRD01556	1.75	(±.003)	8.3661
SSRD01264	2	(±.003)	10.93
SSRD01192	2.25	(±.003)	13.83
SSRD01256	2.5	(±.003)	17.07
SSRD01159	2.75	(±.003)	20.6592
SSRD00962	3	(±.003)	24.5862
SSRD01257	3.25	(±.003)	28.86
SSRD00079	3.5	(±.003)	33.47
SSRD00921	3.75	(±.003)	38.4159



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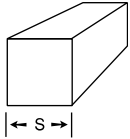
### Nitronic® 60 Round Stainless Steel Bar

Rough Turned  
Random 12 Foot Mill Lengths  
AMS 5848, ASTM A 276, ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD01345	5	(+.0781 -0)	68.295
SSRD01283	6.75	(+.1562 -0)	124.468
SSRD01271	7	(+.1562 -0)	133.858
SSRD01613	7.5	(+.1562 -0)	153.74



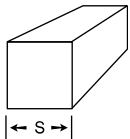
# Square Bar



## 17-4 Square Stainless Steel Bar

Hot Rolled, Annealed and Pickled  
Random 12 Foot Mill Lengths  
AMS 2303, AMS 5643, ASTM A 564

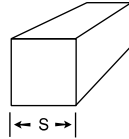
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSSQ00005	1	(±.010)	3.36
SSSQ00023	1.25	(±.011)	5.25
SSSQ00016	1.5	(±.014)	7.56
SSSQ00053	1.75	(±.0156)	10.29
SSSQ00015	2	(±.0312)	13.44
SSSQ00031	2.25	(+.0312 -0)	17.01
SSSQ00001	2.5	(+.0312 -0)	21
SSSQ00014	2.75	(+.0312 -0)	25.41
SSSQ00024	3	(+.0468 -0)	30.24
SSSQ00006	3.5	(+.0625 -0)	41.16



## 303 Square Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582

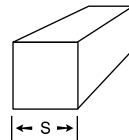
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSSQ00041	0.1875	(+0 -.002)	0.1194
SSSQ00040	0.25	(+0 -.002)	0.2122
SSSQ00007	0.3125	(+0 -.003)	0.3316
SSSQ00032	0.375	(+0 -.003)	0.4775
SSSQ00049	0.4375	(+0 -.003)	0.65
SSSQ00020	0.5	(+0 -.004)	0.849
SSSQ00026	0.625	(+0 -.004)	1.3265
SSSQ00055	0.6875	(+0 -.004)	1.6448
SSSQ00010	0.75	(+0 -.004)	1.9102
SSSQ00033	0.875	(+0 -.004)	2.6
SSSQ00047	1	(+0 -.004)	3.396
SSSQ00037	1.25	(+0 -.004)	5.3062
SSSQ00029	1.375	(+0 -.006)	6.4205
SSSQ00039	1.5	(+0 -.006)	7.641
SSSQ00048	1.625	(+0 -.006)	8.9675
SSSQ00038	1.75	(+0 -.006)	10.4002
SSSQ00028	2	(+0 -.006)	13.584



## 304/304L Square Stainless Steel Bar

Hot Rolled, Annealed and Pickled  
Random 12 Foot Mill Lengths  
AMS 5639, AMS-QQ-S-763, ASTM A 276, ASTM A 479,  
ASTM A 484

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSSQ00022	0.75	(±.009)	1.9237
SSSQ00002	1	(±.009)	3.42
SSSQ00009	1.5	(±.014)	7.695
SSSQ00034	2	(±.0156)	13.68
SSSQ00011	2.5	(+.0312 -0)	21.375
SSSQ00050	3	(+.0468 -0)	30.78
SSSQ00027	3.5	(+.125 -0)	41.895

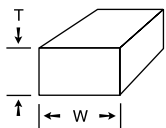


## 316/316L Square Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5648, ASTM A 276, ASTM A 479

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSSQ00013	0.5	(+0 -.004)	0.861
SSSQ00004	0.75	(+0 -.004)	1.9372
SSSQ00046	1	(+0 -.004)	3.444
SSSQ00044	1.375	(+0 -.006)	6.5113
SSSQ00012	1.5	(+0 -.006)	7.749
SSSQ00045	1.75	(+0 -.006)	10.5472
SSSQ00051	2	(+0 -.006)	13.776

# Rectangular Bar



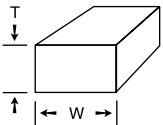
## 17-4

### Rectangular Stainless Steel Bar

Hot Rolled, Annealed and Pickled, Condition A  
Random 12 Foot Mill Lengths  
AMS 2303, AMS 5643, ASTM A 484, ASTM A 564

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00062	0.25	(±.008)	0.75	(±.015)	0.63
SSREC00001	0.25	(±.008)	1	(±.015)	0.84
SSREC00002	0.25	(±.012)	1.25	(±.031)	1.05
SSREC00189	0.25	(±.012)	1.5	(±.031)	1.26
SSREC00069	0.25	(±.012)	2	(±.031)	1.68
SSREC00351	0.25	(±.015)	2.5	(+.062 -.031)	2.1
SSREC00036	0.25	(±.015)	3	(+.062 -.031)	2.52
SSREC00205	0.3125	(±.010)	0.75	(±.015)	0.7875
SSREC00338	0.3125	(±.010)	1	(±.015)	1.05
SSREC00160	0.3125	(±.015)	2	(±.031)	2.1
SSREC00148	0.3125	(±.020)	2.5	(+.060 -.031)	2.625
SSREC00123	0.3125	(±.020)	3	(+.062 -.031)	3.15
SSREC00270	0.375	(±.008)	0.75	(±.015)	0.945
SSREC00127	0.375	(±.008)	1	(±.015)	1.26
SSREC00017	0.375	(±.012)	1.25	(±.031)	1.575
SSREC00128	0.375	(±.012)	1.5	(±.031)	1.89
SSREC00249	0.375	(±.012)	2	(±.031)	2.52
SSREC00119	0.375	(±.015)	2.5	(+.062 -.031)	3.15
SSREC00284	0.375	(±.015)	3	(+.062 -.031)	3.78
SSREC00315	0.5	(±.008)	0.75	(±.015)	1.26
SSREC00025	0.5	(±.008)	1	(±.015)	1.68
SSREC00116	0.5	(±.012)	1.25	(±.031)	2.1
SSREC00007	0.5	(±.012)	1.5	(±.031)	2.52
SSREC00130	0.5	(±.012)	1.75	(±.031)	2.94
SSREC00132	0.5	(±.012)	2	(±.031)	3.36
SSREC00048	0.5	(±.015)	2.25	(±.051)	3.78
SSREC00362	0.5	(+.03 -0)	2.25	(±.051)	3.78
SSREC00232	0.5	(±.015)	2.5	(+.062 -.031)	4.2
SSREC00147	0.5	(±.015)	3	(+.062 -.031)	5.04
SSREC00354	0.625	(±.010)	0.75	(±.015)	1.575
SSREC00021	0.625	(±.010)	1	(±.015)	2.1
SSREC00088	0.625	(±.015)	1.25	(±.031)	2.625
SSREC00044	0.625	(±.015)	1.5	(±.031)	3.15
SSREC00332	0.625	(±.015)	2	(±.031)	4.2
SSREC00190	0.625	(±.020)	2.25	(+.060 -.031)	4.725
SSREC00326	0.625	(±.020)	2.5	(+.062 -.031)	5.25
SSREC00084	0.625	(±.020)	3	(+.062 -.031)	6.3
SSREC00063	0.625	(±.020)	4	(+.062 -.031)	8.4
SSREC00206	0.75	(±.010)	1	(±.015)	2.52
SSREC00060	0.75	(±.015)	1.25	(±.031)	3.15
SSREC00153	0.75	(±.015)	1.5	(±.031)	3.78
SSREC00254	0.75	(±.015)	1.75	(±.031)	4.41
SSREC00266	0.75	(±.015)	2	(+.062 -.031)	5.04
SSREC00212	0.75	(±.020)	2.5	(±.031)	6.3
SSREC00234	0.75	(±.020)	2.75	(±.031)	6.93
SSREC00165	0.75	(±.020)	3	(+.062 -.031)	7.56
SSREC00363	0.75	(±.02)	3.25	(+.062 -.031)	8.19
SSREC00197	0.75	(±.020)	3.5	(+.062 -.031)	8.82

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00081	0.75	(±.020)	4	(+.062 -.031)	10.08
SSREC00252	0.75	(±.020)	5	(+.093 -.062)	12.6
SSREC00015	0.875	(±.015)	1.5	(±.031)	4.41
SSREC00329	0.875	(±.015)	1.75	(±.031)	5.145
SSREC00192	0.875	(±.015)	2	(±.031)	5.88
SSREC00324	0.875	(±.020)	2.25	(+.062 -.031)	6.615
SSREC00251	0.875	(±.020)	2.5	(+.062 -.031)	7.35
SSREC00356	1	(±.020)	1.25	(+.062 -.031)	4.2
SSREC00047	1	(±.020)	1.5	(+.062 -.031)	5.04
SSREC00066	1	(±.020)	1.75	(+.062 -.031)	5.88
SSREC00207	1	(±.020)	2	(+.062 -.031)	6.72
SSREC00233	1	(±.020)	2.25	(+.062 -.031)	7.56
SSREC00065	1	(±.020)	2.5	(+.062 -.031)	8.4
SSREC00305	1	(±.020)	2.75	(+.062 -.031)	7.98
SSREC00022	1	(±.031)	3	(+.062 -.031)	10.08
SSREC00080	1	(±.020)	3.5	(+.062 -.031)	11.76
SSREC00320	1	(±.020)	4	(+.062 -.031)	13.44
SSREC00277	1	(±.020)	5	(+.093 -.062)	16.8
SSREC00156	1.25	(±.031)	1.5	(+.062 -.031)	6.3
SSREC00071	1.25	(±.031)	1.75	(+.062 -.031)	7.35
SSREC00073	1.25	(±.031)	2	(+.062 -.031)	8.4
SSREC00111	1.25	(±.031)	2.25	(+.062 -.031)	9.45
SSREC00358	1.25	(±.031)	2.5	(+.062 -.031)	10.5
SSREC00042	1.25	(±.031)	3	(+.062 -.031)	12.6
SSREC00355	1.25	(±.031)	3.5	(+.062 -.031)	14.7
SSREC00376	1.25	(±.031)	4	(+.062 -.031)	17.4
SSREC00275	1.25	(±.031)	4.5	(+.062 -.031)	18.9
SSREC00307	1.375	(±.031)	3.25	(+.062 -.031)	15.015
SSREC00070	1.5	(±.031)	2	(+.062 -.031)	10.08
SSREC00193	1.5	(±.031)	2.25	(+.062 -.031)	11.34
SSREC00163	1.5	(±.031)	2.5	(+.062 -.031)	12.6
SSREC00026	1.5	(±.031)	2.75	(+.062 -.031)	13.86
SSREC00314	1.5	(±.031)	3	(+.062 -.031)	15.12
SSREC00082	1.5	(±.031)	4	(+.062 -.031)	20.16
SSREC00248	1.75	(±.031)	2	(+.062 -.031)	11.76
SSREC00247	1.75	(±.031)	2.5	(+.062 -.031)	14.7
SSREC00008	1.75	(±.031)	3	(+.062 -.031)	17.64
SSREC00009	1.75	(±.031)	3.5	(+.062 -.031)	20.58
SSREC00089	2	(±.031)	2.25	(+.062 -.031)	15.12
SSREC00341	2	(±.031)	2.5	(+.062 -.031)	16.8
SSREC00162	2	(±.031)	3	(+.062 -.031)	20.16
SSREC00373	2	(±.031)	3.25	(+.062 -.031)	22.62
SSREC00068	2	(±.031)	4	(+.062 -.031)	26.88
SSREC00246	2.5	(±.031)	3	(+.062 -.031)	25.2
SSREC00245	2.5	(±.031)	3.5	(+.062 -.031)	29.4
SSREC00327	2.5	(±.031)	4	(+.062 -.031)	33.6
SSREC00131	3	(±.031)	6	(+.093 -.062)	60.48

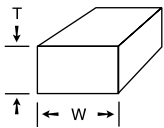


**303**  
**Rectangular Stainless Steel Bar**

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 320, ASTM A 484, ASTM A 582

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00029	0.125	(±.002)	1	(±.004)	0.4245
SSREC00020	0.125	(±.002)	2	(±.006)	0.849
SSREC00177	0.1875	(±.002)	0.5	(±.004)	0.3183
SSREC00171	0.1875	(±.002)	0.75	(±.004)	0.4775
SSREC00343	0.1875	(±.002)	1	(±.015)	0.6367
SSREC00181	0.1875	(±.002)	1.5	(±.006)	0.9551
SSREC00216	0.1875	(±.002)	2	(±.006)	1.2735
SSREC00259	0.25	(±.002)	0.5	(±.004)	0.4245
SSREC00344	0.25	(±.002)	0.75	(±.004)	0.6367
SSREC00133	0.25	(±.002)	1	(±.004)	0.849
SSREC00074	0.25	(±.002)	1.25	(±.006)	1.0612
SSREC00342	0.25	(±.002)	1.5	(±.006)	1.2735
SSREC00240	0.25	(±.002)	1.75	(±.006)	1.4857
SSREC00099	0.25	(±.002)	2	(±.006)	1.698
SSREC00279	0.25	(±.002)	2.5	(±.008)	2.1225
SSREC00258	0.25	(±.002)	3	(±.008)	2.547
SSREC00046	0.25	(±.002)	4	(±.010)	3.396
SSREC00187	0.3125	(±.002)	2	(±.004)	2.1225
SSREC00075	0.375	(±.002)	0.5	(±.004)	0.6367
SSREC00079	0.375	(±.002)	0.75	(±.004)	0.9551
SSREC00157	0.375	(±.002)	1	(±.004)	1.2735
SSREC00159	0.375	(±.002)	1.25	(±.004)	1.5918
SSREC00154	0.375	(±.002)	1.5	(±.004)	1.9102
SSREC00106	0.375	(±.002)	1.75	(±.004)	2.2286
SSREC00155	0.375	(±.002)	2	(±.004)	2.547
SSREC00357	0.375	(±.002)	2.5	(±.004)	3.1837
SSREC00220	0.375	(±.002)	3	(±.004)	3.8205
SSREC00091	0.375	(±.002)	3.5	(±.005)	4.4572
SSREC00005	0.375	(±.002)	4	(±.005)	5.094
SSREC00144	0.5	(±.002)	0.75	(±.004)	1.2735
SSREC00019	0.5	(±.002)	1	(±.004)	1.698
SSREC00183	0.5	(±.002)	1.25	(±.004)	2.1225
SSREC00179	0.5	(±.002)	1.5	(±.004)	2.547
SSREC00078	0.5	(±.002)	1.75	(±.004)	2.9715

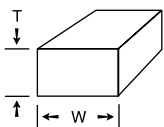
CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00236	0.5	(±.002)	2	(±.004)	3.396
SSREC00055	0.5	(±.002)	2.5	(±.004)	4.245
SSREC00237	0.5	(±.002)	3	(±.005)	5.094
SSREC00186	0.5	(±.002)	4	(±.005)	6.792
SSREC00172	0.625	(±.002)	0.75	(±.004)	1.5918
SSREC00043	0.625	(±.002)	1	(±.004)	2.1225
SSREC00097	0.625	(±.002)	1.25	(±.004)	2.6531
SSREC00257	0.625	(±.002)	1.5	(±.004)	3.1837
SSREC00138	0.625	(±.002)	2	(±.004)	4.245
SSREC00180	0.625	(±.002)	2.5	(±.004)	5.3062
SSREC00214	0.625	(±.002)	3	(±.004)	6.3675
SSREC00134	0.75	(±.002)	1	(±.004)	2.547
SSREC00175	0.75	(±.002)	1.5	(±.004)	3.8205
SSREC00028	0.75	(±.002)	1.75	(±.004)	4.4572
SSREC00185	0.75	(±.002)	2	(±.004)	5.094
SSREC00053	0.75	(±.002)	2.5	(±.004)	6.3675
SSREC00217	0.75	(±.002)	4	(±.005)	10.188
SSREC00056	1	(±.002)	1.5	(±.004)	5.094
SSREC00113	1	(±.002)	1.75	(±.004)	5.943
SSREC00346	1	(±.002)	2	(±.004)	6.792
SSREC00057	1	(±.002)	2.5	(±.004)	8.49
SSREC00034	1	(±.002)	3	(±.004)	10.188
SSREC00041	1	(±.002)	4	(±.005)	13.584
SSREC00182	1.125	(±.002)	1.75	(±.004)	6.6858
SSREC00105	1.25	(±.003)	1.5	(±.004)	6.3675
SSREC00114	1.25	(±.003)	2	(±.004)	8.49
SSREC00353	1.25	(±.003)	2.5	(±.004)	10.6125
SSREC00100	1.25	(±.003)	3	(±.004)	12.735
SSREC00139	1.5	(±.003)	2	(±.004)	10.188
SSREC00076	1.5	(±.003)	2.5	(±.004)	12.735
SSREC00108	1.5	(±.003)	3	(±.004)	15.282
SSREC00039	2	(±.003)	2.5	(±.004)	16.98
SSREC00094	2	(±.003)	3	(±.004)	20.376
SSREC00093	2	(±.003)	4	(±.005)	27.168



## 304/304L Rectangular Stainless Steel Bar

Hot Rolled, Annealed and Pickled  
Random 12 Foot Mill Lengths  
AMS 5639, AMS-QQ-S-763, ASTM A 276, ASTM A 479

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00004	0.25	(±.008)	0.5	(±.015)	0.4275
SSREC00037	0.25	(±.008)	0.75	(±.015)	0.6412
SSREC00285	0.25	(±.008)	1	(±.015)	0.855
SSREC00256	0.25	(±.012)	1.25	(±.031)	1.0687
SSREC00112	0.25	(±.012)	1.5	(±.031)	1.2825
SSREC00312	0.25	(±.012)	1.75	(±.031)	1.4963
SSREC00349	0.25	(±.012)	2	(±.031)	1.71
SSREC00294	0.25	(±.012)	2	(±.063)	1.71
SSREC00126	0.25	(±.150)	2.5	(+.062 -.031)	2.1375
SSREC00222	0.25	(±.015)	3	(+.062 -.031)	2.565
SSREC00104	0.25	(±.015)	4	(+.062 -.031)	3.42
SSREC00061	0.3125	(±.015)	2.5	(+.062 -.031)	2.6718
SSREC00350	0.375	(±.012)	0.5	(±.015)	0.6412
SSREC00122	0.375	(±.012)	0.75	(±.015)	0.9618
SSREC00030	0.375	(±.012)	1	(±.015)	1.2825
SSREC00092	0.375	(±.012)	1.25	(±.031)	1.6031
SSREC00261	0.375	(±.012)	1.5	(±.031)	1.9237
SSREC00146	0.375	(±.012)	2	(±.031)	2.565
SSREC00077	0.375	(±.015)	2.5	(+.062 -.031)	3.2062
SSREC00238	0.375	(±.015)	3	(+.062 -.031)	3.8475
SSREC00145	0.375	(±.015)	4	(+.062 -.031)	5.13
SSREC00050	0.375	(±.015)	5	(+.093 -.062)	6.4125
SSREC00051	0.375	(±.015)	6	(+.093 -.062)	7.695
SSREC00221	0.5	(±.008)	0.75	(±.015)	1.2825
SSREC00135	0.5	(±.008)	1	(±.015)	1.71
SSREC00098	0.5	(±.012)	1.25	(±.031)	2.1375
SSREC00110	0.5	(±.012)	1.5	(±.031)	2.565
SSREC00125	0.5	(±.012)	2	(±.031)	3.42
SSREC00223	0.5	(±.015)	2.5	(+.062 -.031)	4.275
SSREC00103	0.5	(±.015)	3	(+.062 -.031)	5.13
SSREC00115	0.5	(±.015)	4	(+.062 -.031)	6.84
SSREC00352	0.5	(±.015)	5	(+.093 -.062)	8.55
SSREC00121	0.5	(±.015)	6	(+.093 -.062)	10.26



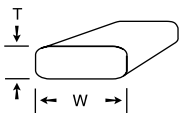
## 440C Rectangular Stainless Steel Bar

Hot Rolled, Annealed and Pickled  
Random 12 Foot Mill Lengths  
AMS 5630, ASTM A 276

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00032	0.1875	(±.008)	1	(±.015)	0.621
SSREC00031	0.1875	(±.012)	1.5	(±.031)	0.932
SSREC00168	0.1875	(±.012)	2	(±.031)	1.242
SSREC00242	0.1875	(±.015)	3	(+.062 -.031)	1.863
SSREC00150	0.25	(±.008)	1	(±.015)	0.828
SSREC00347	0.25	(±.012)	1.5	(±.031)	1.242
SSREC00142	0.25	(±.012)	2	(±.031)	1.656
SSREC00095	0.25	(±.015)	3	(+.062 -.031)	2.484
SSREC00090	0.25	(±.015)	4	(+.062 -.031)	3.312
SSREC00228	0.375	(±.012)	1	(±.031)	1.242
SSREC00003	0.375	(±.012)	1.5	(±.031)	1.863
SSREC00331	0.375	(±.012)	2	(±.031)	2.484
SSREC00255	0.375	(±.015)	3	(+.062 -.031)	3.726
SSREC00010	0.375	(±.015)	4	(+.062 -.031)	4.968

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00140	0.625	(±.01)	0.75	(±.015)	1.6031
SSREC00213	0.625	(±.010)	1	(±.015)	2.1375
SSREC00170	0.625	(±.015)	2	(±.031)	4.275
SSREC00045	0.625	(±.015)	3	(+.062 -.031)	6.4125
SSREC00102	0.625	(±.015)	4	(+.062 -.031)	8.55
SSREC00024	0.625	(±.020)	5	(+.093 -.062)	10.6875
SSREC00348	0.75	(±.010)	1	(±.015)	2.565
SSREC00038	0.75	(±.015)	1.25	(±.031)	3.2062
SSREC00117	0.75	(±.015)	1.5	(±.031)	3.8475
SSREC00040	0.75	(±.015)	2	(±.031)	5.13
SSREC00297	0.75	(±.015)	2.25	(+.0625)	5.7713
SSREC00023	0.75	(±.015)	2.5	(±.031)	6.4125
SSREC00109	0.75	(±.020)	3	(+.062 -.051)	7.695
SSREC00101	0.75	(±.020)	4	(+.062 -.031)	10.26
SSREC00239	0.75	(±.020)	5	(+.093 -.062)	12.825
SSREC00178	0.75	(±.020)	6	(+.093 -.062)	15.39
SSREC00174	1	(±.015)	1.25	(±.031)	4.275
SSREC00035	1	(±.015)	1.5	(±.031)	5.13
SSREC00229	1	(±.015)	2	(±.031)	6.84
SSREC00173	1	(±.020)	3	(+.062 -.031)	10.26
SSREC00141	1	(±.020)	4	(+.062 -.031)	13.68
SSREC00058	1	(±.020)	5	(+.093 -.062)	17.1
SSREC00167	1	(±.020)	6	(+.093 -.062)	20.52
SSREC00345	1.25	(±.031)	2	(±.031)	8.55
SSREC00176	1.25	(±.031)	3	(+.062 -.031)	12.825
SSREC00211	1.25	(±.031)	4	(+.062 -.031)	17.1
SSREC00158	1.5	(±.031)	2	(±.031)	10.26
SSREC00016	1.5	(±.031)	2.5	(+.062 -.031)	12.825
SSREC00184	1.5	(±.031)	3	(+.062 -.031)	15.39
SSREC00231	1.5	(±.031)	4	(+.062 -.031)	20.52
SSREC00143	1.5	(±.031)	6	(+.093 -.062)	30.78
SSREC00262	2	(±.031)	2.5	(+.062 -.031)	17.1
SSREC00267	2	(±.031)	4	(+.062 -.031)	27.36

# Plating Rack Stock



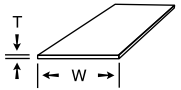
## 301 Stainless Steel Plating Rack Stock

3/4 Hard, Rounded Edge  
Random 12 Foot Mill Lengths  
ASTM A 240

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00194	0.037	(±.020)	0.75	(±.010)	0.0956
SSREC00195	0.05	(±.003)	0.375	(±.010)	0.0646
SSREC00052	0.05	(±.003)	0.5	(±.010)	0.0861
SSREC00072	0.062	(±.003)	0.375	(±.010)	0.0801
SSREC00265	0.062	(±.003)	0.5	(±.010)	0.1068
SSREC00166	0.062	(±.003)	0.625	(±.010)	0.1335
SSREC00264	0.062	(±.003)	0.75	(±.010)	0.1601

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00224	0.062	(±.003)	1	(±.010)	0.2135
SSREC00209	0.093	(±.003)	0.5	(±.010)	0.1601
SSREC00129	0.093	(±.003)	0.625	(±.010)	0.2002
SSREC00201	0.093	(±.003)	0.75	(±.010)	0.2402
SSREC00225	0.093	(±.003)	1	(±.010)	0.3203
SSREC00335	0.125	(±.004)	1	(±.01)	0.4305

# Rectangular Strip



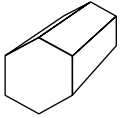
## 304/304L Rectangular Stainless Steel Strip

Edge Conditioned  
Random 12 Foot Mill Lengths  
ASTM A 276, ASTM A 479

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00087	0.125	(+.005 -.010)	0.5	(+.094 -.031)	0.2137
SSREC00006	0.125	(+.005 -.010)	0.75	(+.094 -.031)	0.3206
SSREC00120	0.125	(+.005 -.010)	1	(+.094 -.031)	0.4275
SSREC00096	0.125	(+.005 -.010)	1.25	(+.094 -.031)	0.5343
SSREC00124	0.125	(+.005 -.010)	1.5	(+.094 -.031)	0.6412
SSREC00253	0.125	(+.005 -.010)	1.75	(+.094 -.031)	0.7481
SSREC00083	0.125	(+.005 -.010)	2	(+.094 -.031)	0.855
SSREC00067	0.125	(+.005 -.010)	3	(+.094 -.031)	1.2825
SSREC00027	0.125	(+.005 -.010)	4	(+.094 -.031)	1.71
SSREC00274	0.125	(+.005 -.010)	6	(+.094 -.031)	2.565
SSREC00250	0.1875	(+.020 -.010)	0.75	(+.094 -.031)	0.4809
SSREC00064	0.1875	(+.020 -.010)	1	(+.094 -.031)	0.6412
SSREC00086	0.1875	(+.020 -.010)	1.25	(+.094 -.031)	0.8015
SSREC00334	0.1875	(+.020 -.010)	1.5	(+.094 -.031)	0.9618
SSREC00269	0.1875	(+.020 -.010)	2	(+.094 -.031)	1.2825
SSREC00164	0.1875	(+.020 -.010)	2.5	(+.094 -.031)	1.6031
SSREC00203	0.1875	(+.020 -.010)	3	(+.094 -.031)	1.9237
SSREC00014	0.25	(+.020 -.010)	0.5	(+.094 -.031)	0.4275
SSREC00085	0.25	(+.020 -.010)	0.75	(+.094 -.031)	0.6412
SSREC00316	0.25	(+.020 -.010)	1	(+.094 -.031)	0.855

CBS Part No.	Thickness (Inches)	Thickness Tolerance	Width (Inches)	Width Tolerance	Pounds Per Foot
SSREC00054	0.25	(+.020 -.010)	1.5	(+.094 -.031)	1.2825
SSREC00313	0.25	(+.020 -.010)	1.98	(+.094 -.031)	1.6929
SSREC00208	0.25	(+.020 -.010)	2	(+.094 -.031)	1.71
SSREC00325	0.25	(+.020 -.010)	2.5	(+.094 -.031)	2.1375
SSREC00059	0.25	(+.020 -.010)	3	(+.094 -.031)	2.565
SSREC00151	0.25	(+.020 -.010)	4	(+.094 -.031)	3.42
SSREC00137	0.25	(+.020 -.010)	5	(+.093 -.062)	4.275
SSREC00340	0.25	(+.020 -.010)	6	(+.093 -.062)	5.13
SSREC00295	0.25	(+.020 -.010)	8	(+.093 -.062)	6.84
SSREC00308	0.3125	(+.025 -.010)	2	(+.094 -.031)	2.1375
SSREC00152	0.375	(+.060 -.010)	1.25	(+.094 -.031)	1.6031
SSREC00191	0.375	(+.060 -.010)	2	(+.094 -.031)	2.565
SSREC00299	0.375	(+.060 -.010)	2.25	(+.062 -.031)	2.8856
SSREC00286	0.375	(+.060 -.010)	2.5	(+.094 -.031)	3.2063
SSREC00243	0.375	(+.060 -.010)	3	(+.094 -.031)	3.8475
SSREC00333	0.375	(+.060 -.010)	6	(+.094 -.031)	7.695
SSREC00118	0.5	(+.060 -.010)	1	(+.094 -.031)	1.71
SSREC00196	0.5	(+.060 -.010)	2	(+.094 -.031)	3.42
SSREC00244	0.5	(+.060 -.010)	4	(+.094 -.031)	6.84
SSREC00328	0.5	(+.060 -.010)	6	(+.093 -.062)	10.26

# Hexagon Bar

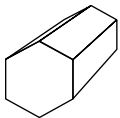


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## 303 Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00263	0.1875	(+0 -.002)	0.1034
SSHEX00060	0.25	(+0 -.002)	0.1839
SSHEX00049	0.3125	(+0 -.003)	0.2874
SSHEX00040	0.375	(+0 -.003)	0.4138
SSHEX00109	0.4375	(+0 -.003)	0.5633
SSHEX00138	0.5	(+0 -.004)	0.7358
SSHEX00192	0.5625	(+0 -.004)	0.9312
SSHEX00110	0.625	(+0 -.004)	1.1496
SSHEX00114	0.6875	(+0 -.004)	1.3911
SSHEX00191	0.75	(+0 -.004)	1.6556
SSHEX00047	0.8125	(+0 -.004)	1.9429
SSHEX00281	0.875	(+0 -.004)	2.2533
SSHEX00044	0.9375	(+0 -.004)	2.5867
SSHEX00088	1	(+0 -.004)	2.9432
SSHEX00042	1.0625	(+0 -.006)	3.3225
SSHEX00139	1.125	(+0 -.006)	3.7249
SSHEX00045	1.1875	(+0 -.006)	4.1503
SSHEX00275	1.25	(+0 -.006)	4.5987
SSHEX00267	1.3125	(+0 -.006)	5.0701
SSHEX00052	1.375	(+0 -.006)	5.5644
SSHEX00108	1.4375	(+0 -.006)	6.0818
SSHEX00111	1.5	(+0 -.006)	6.6222
SSHEX00299	1.5625	(+0 -.006)	7.3633
SSHEX00072	1.625	(+0 -.006)	7.7718
SSHEX00079	1.75	(+0 -.006)	9.0135
SSHEX00089	1.875	(+0 -.006)	10.3471
SSHEX00112	2	(+0 -.006)	11.7728
SSHEX00300	2.0625	(+0 -.006)	12.8298
SSHEX00057	2.25	(+0 -.008)	14.8999
SSHEX00123	2.5	(+0 -.008)	18.395
SSHEX00039	3	(+0 -.008)	26.4888

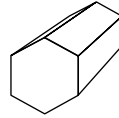


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## 303 MAXX® Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00006	0.375	(+0 -.003)	0.4138
SSHEX00141	0.4375	(+0 -.003)	0.5633
SSHEX00179	0.5	(+0 -.004)	0.7358
SSHEX00162	0.5625	(+0 -.004)	0.9312
SSHEX00258	0.625	(+0 -.004)	1.1496
SSHEX00163	0.6875	(+0 -.004)	1.3911
SSHEX00269	0.75	(+0 -.004)	1.6555
SSHEX00145	0.8125	(+0 -.004)	1.9429
SSHEX00150	0.875	(+0 -.004)	2.2533
SSHEX00178	0.9375	(+0 -.004)	2.5867
SSHEX00144	1	(+0 -.004)	2.9432
SSHEX00219	1.125	(+0 -.004)	3.725
SSHEX00199	1.5	(+0 -.004)	6.6222

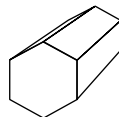


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## 304/304L Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5639, AMS 5647, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00043	0.375	(+0 -.003)	0.4168
SSHEX00264	0.4375	(+0 -.003)	0.5673
SSHEX00037	0.5	(+0 -.004)	0.741
SSHEX00273	0.5625	(+0 -.004)	0.9378
SSHEX00292	0.625	(+0 -.004)	1.1578
SSHEX00146	0.6875	(+0 -.004)	1.4009
SSHEX00054	0.75	(+0 -.004)	1.6672
SSHEX00294	0.8125	(+0 -.004)	1.9567
SSHEX00103	0.875	(+0 -.004)	2.2693
SSHEX00086	0.9375	(+0 -.004)	2.605
SSHEX00100	1	(+0 -.004)	2.964
SSHEX00272	1.0625	(+0 -.006)	3.346
SSHEX00013	1.125	(+0 -.006)	3.7513
SSHEX00030	1.25	(+0 -.006)	4.6312
SSHEX00119	1.3125	(+0 -.006)	5.1059
SSHEX00196	1.375	(+0 -.006)	5.6038
SSHEX00128	1.5	(+0 -.006)	6.669
SSHEX00017	1.625	(+0 -.006)	7.8268
SSHEX00120	1.75	(+0 -.006)	9.0772
SSHEX00289	1.875	(+0 -.006)	10.4203
SSHEX00014	2	(+0 -.006)	11.856
SSHEX00036	2.25	(+0 -.008)	15.0052

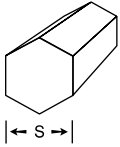


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## 304/304L MAXX® Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5639, AMS 5647, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

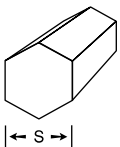
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00152	0.375	(+0 -.003)	0.4168
SSHEX00027	0.4375	(+0 -.003)	0.5673
SSHEX00266	0.5	(+0 -.004)	0.741
SSHEX00262	0.625	(+0 -.004)	1.1578
SSHEX00002	0.6875	(+0 -.004)	1.4009
SSHEX00151	0.75	(+0 -.004)	1.6672
SSHEX00160	0.875	(+0 -.004)	2.2693
SSHEX00177	0.9375	(+0 -.004)	2.605
SSHEX00270	1	(+0 -.004)	2.964



### 316/316L Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5648, AMS 5663, ASTM A 276, ASTM A 479

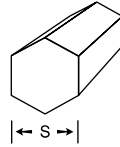
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00225	0.25	(+0 -.002)	0.1866
SSHEX00073	0.3125	(+0 -.003)	0.2914
SSHEX00268	0.375	(+0 -.003)	0.4197
SSHEX00084	0.4375	(+0 -.003)	0.5713
SSHEX00118	0.5	(+0 -.004)	0.7462
SSHEX00022	0.5625	(+0 -.004)	0.9444
SSHEX00125	0.625	(+0 -.004)	1.1659
SSHEX00035	0.6875	(+0 -.004)	1.4107
SSHEX00158	0.75	(+0 -.004)	1.6789
SSHEX00038	0.8125	(+0 -.004)	1.9704
SSHEX00265	0.875	(+0 -.004)	2.2852
SSHEX00101	0.9375	(+0 -.004)	2.6233
SSHEX00282	1	(+0 -.004)	2.9848
SSHEX00221	1.0625	(+0 -.006)	3.3695
SSHEX00065	1.125	(+0 -.006)	3.7776
SSHEX00066	1.25	(+0 -.006)	4.6637
SSHEX00055	1.3125	(+0 -.006)	5.1417
SSHEX00193	1.375	(+0 -.006)	5.6431
SSHEX00067	1.4375	(+0 -.006)	6.1678
SSHEX00290	1.5	(+0 -.006)	6.7158
SSHEX00284	1.625	(+0 -.006)	7.8817
SSHEX00171	1.6875	(+0 -.006)	8.4996
SSHEX00129	1.75	(+0 -.006)	9.1409
SSHEX00092	1.875	(+0 -.006)	10.4934
SSHEX00197	2	(+0 -.006)	11.9392
SSHEX00170	2.125	(+0 -.008)	13.4782
SSHEX00149	2.25	(+0 -.008)	15.1105
SSHEX00198	2.375	(+0 -.008)	16.8361
SSHEX00048	2.5	(+0 -.008)	18.655
SSHEX00077	2.625	(+0 -.008)	20.5671
SSHEX00102	2.75	(+0 -.008)	22.5725
SSHEX00274	3	(+0 -.008)	26.8632



### 316/316L MAXX® Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5648, AMS 5653, ASTM A 276, ASTM A 479

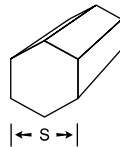
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00161	0.375	(+0 -.003)	0.4197
SSHEX00181	0.4375	(+0 -.003)	0.5713
SSHEX00188	0.5	(+0 -.004)	0.7462
SSHEX00169	0.5625	(+0 -.004)	0.9444
SSHEX00180	0.625	(+0 -.004)	1.1659
SSHEX00182	0.6875	(+0 -.004)	1.4107
SSHEX00249	0.75	(+0 -.004)	1.6789
SSHEX00250	0.8125	(+0 -.004)	1.9704
SSHEX00183	0.875	(+0 -.004)	2.2852
SSHEX00189	0.9375	(+0 -.004)	2.6233
SSHEX00190	1	(+0 -.004)	2.9848
SSHEX00252	1.375	(+0 -.004)	5.6431



### 321 Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5645, AMS-QQ-S-763, ASTM A 276, ASTM A 479

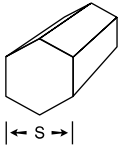
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00212	0.375	(+0 -.002)	0.4154
SSHEX00213	0.4375	(+0 -.004)	0.5653
SSHEX00220	0.5	(+0 -.004)	0.7384
SSHEX00230	0.5625	(+0 -.004)	0.9345
SSHEX00218	0.625	(+0 -.004)	1.1538
SSHEX00222	0.6875	(+0 -.004)	1.396
SSHEX00214	0.75	(+0 -.004)	1.6614
SSHEX00216	0.8125	(+0 -.004)	1.9498
SSHEX00243	0.875	(+0 -.004)	2.2614
SSHEX00251	0.9375	(+0 -.004)	2.5959
SSHEX00024	1	(+0 -.004)	2.9536
SSHEX00224	1.125	(+0 -.004)	3.7382
SSHEX00215	1.25	(+0 -.006)	4.615
SSHEX00223	1.375	(+0 -.006)	5.5842
SSHEX00244	1.5	(+0 -.006)	6.6456
SSHEX00245	1.625	(+0 -.006)	7.7994
SSHEX00246	1.75	(+0 -.006)	9.0454
SSHEX00217	2	(+0 -.006)	11.8144



### 347 Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5645, ASTM A 276, ASTM A 320, ASTM A 479, A STM B 193

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00254	0.4375	(+0 -.003)	0.5693
SSHEX00253	0.5	(+0 -.004)	0.7436
SSHEX00234	0.5625	(+0 -.004)	0.9411
SSHEX00004	0.625	(+0 -.004)	1.1619
SSHEX00233	0.6875	(+0 -.004)	1.4059
SSHEX00226	0.75	(+0 -.004)	1.6731
SSHEX00227	0.8125	(+0 -.004)	1.9636
SSHEX00229	0.875	(+0 -.004)	2.2614
SSHEX00235	0.9375	(+0 -.004)	2.6142
SSHEX00003	1	(+0 -.004)	2.9744
SSHEX00231	1.25	(+0 -.006)	4.6475
SSHEX00232	1.375	(+0 -.006)	5.6235
SSHEX00228	1.5	(+0 -.006)	6.6924



## 416 Hexagon Stainless Steel Bar

Cold Drawn  
Random 12 Foot Mill Lengths  
AMS 5610, ASTM A 582

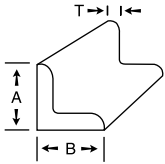
CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00287	0.25	(+0 -.002)	0.182
SSHEX00068	0.3125	(+0 -.003)	0.2843
SSHEX00062	0.375	(+0 -.003)	0.4095
SSHEX00025	0.4375	(+0 -.003)	0.5573
SSHEX00078	0.5	(+0 -.004)	0.728
SSHEX00107	0.5625	(+0 -.004)	0.9213
SSHEX00135	0.625	(+0 -.004)	1.1375
SSHEX00164	0.6875	(+0 -.004)	1.3764
SSHEX00127	0.75	(+0 -.004)	1.638
SSHEX00082	0.8125	(+0 -.004)	1.9223
SSHEX00029	0.875	(+0 -.004)	2.2295

CBS Part No.	Size (Inches)	Size Tolerance	Pounds Per Foot
SSHEX00061	0.9375	(+0 -.004)	2.5593
SSHEX00175	0.9449	(+0 -.004)	2.6453
SSHEX00070	1	(+0 -.004)	2.912
SSHEX00056	1.125	(+0 -.006)	3.6855
SSHEX00007	1.1875	(+0 -.006)	4.1064
SSHEX00285	1.25	(+0 -.006)	4.55
SSHEX00203	1.3125	(+0 -.006)	5.0164
SSHEX00081	1.375	(+0 -.006)	5.5055
SSHEX00099	1.5	(+0 -.006)	6.552
SSHEX00090	1.75	(+0 -.006)	8.918
SSHEX00028	2	(+0 -.006)	11.648





# Equal Angle

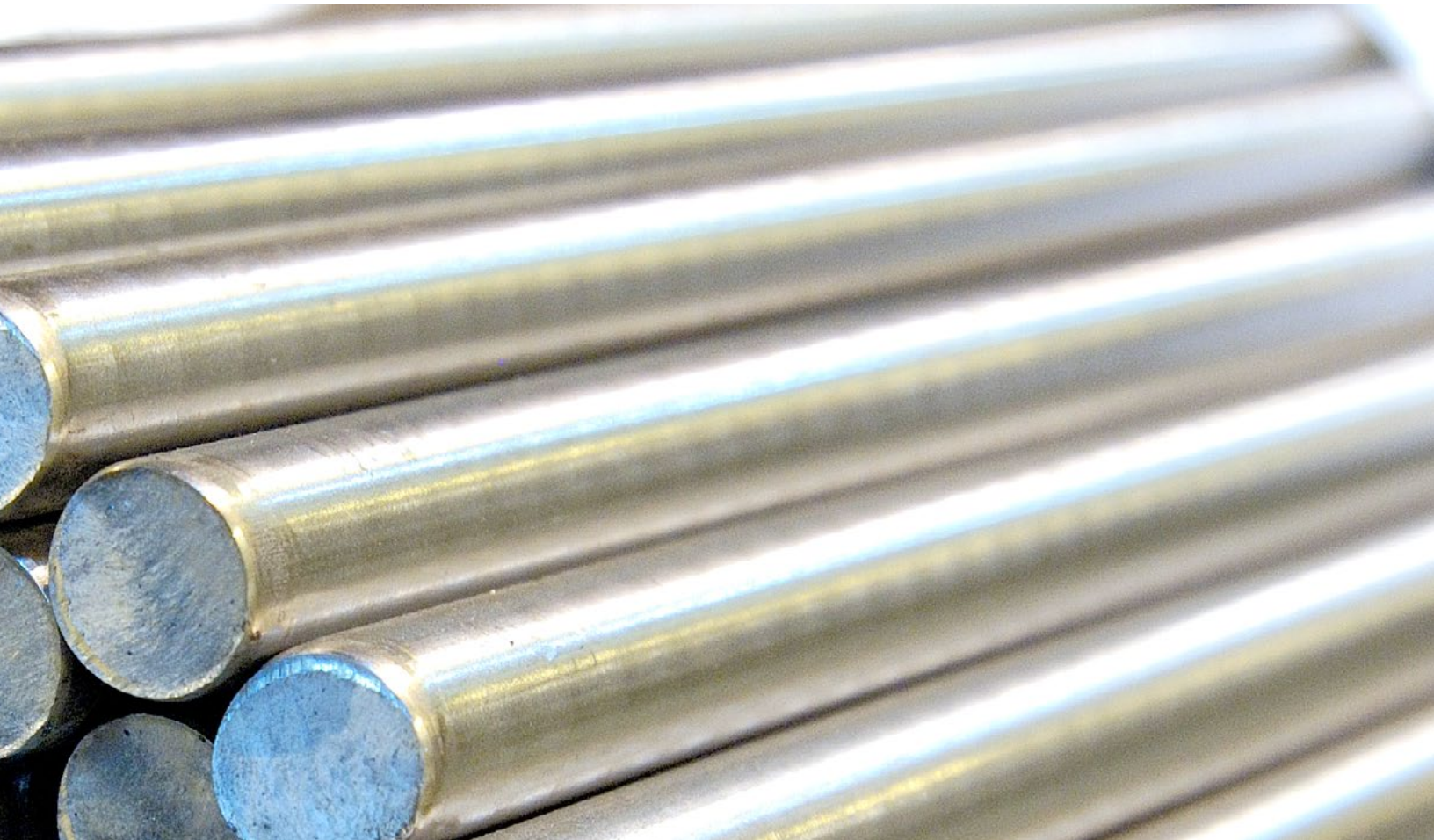


## 304/304L Stainless Steel Equal Angle

Random 12 Foot Mill Lengths  
ASTM A 554

CBS Part No.	Leg A (Inches)	Leg B (Inches)	Thickness (Inches)	Pounds Per Foot
SSANG00013	0.75	0.75	0.125	0.6
SSANG00006	1	1	0.125	0.8
SSANG00011	1.25	1.25	0.125	1.01
SSANG00014	1.5	1.5	0.125	1.23
SSANG00005	2	2	0.125	1.65
SSANG00009	1	1	0.1875	1.16
SSANG00010	1.5	1.5	0.1875	1.8
SSANG00012	2	2	0.1875	2.44
SSANG00002	2.5	2.5	0.1875	3.07
SSANG00001	1	1	0.25	1.49

CBS Part No.	Leg A (Inches)	Leg B (Inches)	Thickness (Inches)	Pounds Per Foot
SSANG00021	1.5	1.5	0.25	2.34
SSANG00004	2	2	0.25	3.19
SSANG00020	2.5	2.5	0.25	4.1
SSANG00007	3	3	0.25	4.9
SSANG00016	3.5	3.5	0.25	5.8
SSANG00015	4	4	0.25	6.626
SSANG00003	2	2	0.375	4.7
SSANG00017	2.5	2.5	0.375	5.9
SSANG00008	3	3	0.375	7.2



# Screw Machine Products

## MAXX<sup>®</sup> Stainless Steel

Consistency • Machinability • Reliability

MAXX-imize consistency, machinability, and reliability, in production screw machine applications.

### MAXX<sup>®</sup> Stainless Steel Bar

MAXX<sup>®</sup> Stainless Steel, only from Copper and Brass Sales, is optimized for chemistry, physical properties, and supply chain availability to MAXX-imize consistency, machinability, and reliability, in production screw machine applications. The result is a superior product that allows quality-focused customers to MAXX-imize their profits.

### AccuMAXX<sup>®</sup> Bar for Swiss Machines

Next we took all of the high-quality attributes of our MAXX Stainless Steel Bar and customized it to meet the stringent requirements of the Swiss quality screw machine market.

AccuMAXX<sup>®</sup> offers:

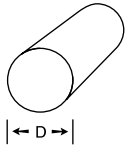
- OD tolerance of  $\pm 0.0005$
- Tight concentricity
- .006/.008 total indicator reading (TIR)
- RMS finish of 25 max.
- 12 foot (+2, -0 inch) bar length
- Chamfered ends to reduce wear and tear on your collets
- $\frac{1}{2}$  commercial straightness

All of these attributes allow you to run your high-quality, tight tolerance Swiss machines to the MAXX.

### Carpenter Project 70+<sup>®</sup>

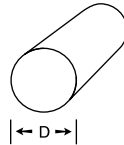
The advanced chemistry, mechanical properties, and production practices offered by Carpenter Project 70+<sup>®</sup> satisfy the ultimate in difficult high-quality machining jobs. And Copper and Brass Sales is your exclusive source for this exceptional product.

# Project 70+®



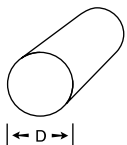
**17-4 Project 70+®  
Round Stainless Steel Bar**  
Cold Finished  
Random 12 Foot Mill Lengths  
AMS 5643

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Pounds Per Foot
SSRD00255	0.125	(±.001)	0.0412
SSRD00262	0.5	(±.002)	0.6594
SSRD00459	0.5625	(±.002)	0.8345
SSRD01718	0.625	(±.002)	1.0303
SSRD01701	0.6875	(±.002)	1.2466
SSRD00303	0.75	(±.002)	1.4836
SSRD00466	0.8125	(±.002)	1.7412
SSRD00312	0.875	(±.002)	2.0194
SSRD00709	1	(±.0025)	2.6376
SSRD00115	1.0625	(±.0025)	2.9776
SSRD00602	1.125	(±.0025)	3.3382
SSRD00101	1.25	(±.0025)	4.1212
SSRD00538	1.375	(±.0025)	4.9867
SSRD00222	1.5	(±.0025)	5.9346
SSRD00161	1.75	(±.003)	8.0776
SSRD01963	2.5	(±.003)	16.485



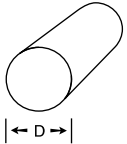
**303 Project 70+®  
Round Stainless Steel Bar**  
Random 12 Foot Mill Lengths  
AMS 5640, ASTM A 582

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00771	0.1875	(±.001)	Cold Drawn	0.0937
SSRD00006	0.25	(±.001)	Cold Drawn	0.1666
SSRD00269	0.3125	(±.0015)	Cold Drawn	0.2603
SSRD00141	0.375	(±.0015)	Cold Drawn	0.3748
SSRD00565	0.4375	(±.0015)	Cold Drawn	0.5102
SSRD00847	0.5	(±.002)	Cold Drawn	0.6664
SSRD00167	0.5625	(±.002)	Cold Drawn	0.8434
SSRD01541	0.625	(±.002)	Cold Drawn	1.0413
SSRD00321	0.6875	(±.002)	Cold Drawn	1.26
SSRD00761	0.75	(±.002)	Cold Drawn	1.4995
SSRD00216	0.8125	(±.002)	Cold Drawn	1.7598
SSRD00441	0.875	(±.002)	Cold Drawn	2.041
SSRD00435	0.9375	(±.002)	Cold Drawn	2.343
SSRD00561	1	(±.0025)	Cold Drawn	2.6658
SSRD00760	1.0625	(±.0025)	Cold Finished	3.0095
SSRD01251	1.125	(±.0025)	Cold Finished	3.374
SSRD01544	1.1875	(±.0025)	Cold Finished	3.7592
SSRD00284	1.25	(±.0025)	Cold Finished	4.1654
SSRD00849	1.375	(±.0025)	Cold Finished	5.0401
SSRD00646	1.5	(±.003)	Cold Finished	5.9981
SSRD01545	1.625	(±.003)	Cold Finished	7.0395
SSRD00816	1.75	(±.003)	Cold Finished	8.1641
SSRD00785	1.875	(±.003)	Cold Finished	9.3721
SSRD00640	2	(±.003)	Cold Finished	10.6634
SSRD00765	2.125	(±.003)	Cold Finished	12.038
SSRD00335	2.25	(±.003)	Cold Finished	13.4959
SSRD00516	2.5	(±.003)	Cold Finished	16.6616
SSRD00287	2.625	(±.003)	Cold Finished	18.3694
SSRD00564	2.75	(±.003)	Cold Finished	20.1605
SSRD00515	2.875	(±.003)	Cold Finished	22.0349
SSRD00503	3	(±.003)	Cold Finished	23.9927
SSRD00647	3.25	(±.003)	Cold Finished	28.1581



**304/304L Project 70+®  
Round Stainless Steel Bar**  
Random 12 Foot Mill Lengths  
AMS 5639, AMS 5647, AMS-QQ-S-763,  
ASTM A 276, ASTM A 479

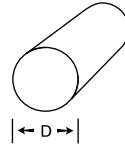
CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD01547	0.25	(±.001)	Cold Drawn	0.1677
SSRD00471	0.3125	(±.0015)	Cold Drawn	0.2621
SSRD00486	0.375	(±.0015)	Cold Drawn	0.3775
SSRD01088	0.4375	(±.0015)	Cold Drawn	0.5138
SSRD00470	0.5	(±.002)	Cold Drawn	0.6711
SSRD01658	0.5625	(±.002)	Cold Drawn	0.8494
SSRD00504	0.625	(±.002)	Cold Drawn	1.0487
SSRD00512	0.6875	(±.002)	Cold Drawn	1.2689
SSRD00148	0.75	(±.002)	Cold Drawn	1.5101
SSRD00291	0.8125	(±.002)	Cold Drawn	1.7723
SSRD00323	0.875	(±.002)	Cold Drawn	2.0554
SSRD00510	1	(±.0025)	Cold Drawn	2.6847
SSRD01249	1.0625	(±.0025)	Cold Finished	3.0308
SSRD00800	1.125	(±.0025)	Cold Finished	3.3978
SSRD00986	1.1875	(±.0025)	Cold Finished	3.7858
SSRD00815	1.25	(±.0025)	Cold Finished	4.1948
SSRD01632	1.3125	(±.0025)	Cold Finished	4.6248
SSRD00204	1.375	(±.0025)	Cold Finished	5.0757
SSRD00562	1.5	(±.003)	Cold Finished	6.0405
SSRD01730	1.625	(±.003)	Cold Finished	7.0892
SSRD00768	1.75	(±.003)	Cold Finished	8.2218
SSRD01479	1.875	(±.003)	Cold Finished	9.4384
SSRD01577	1.9375	(±.003)	Cold Finished	10.0781
SSRD00848	2	(±.003)	Cold Finished	10.7388



### 316/316L Project 70+® Round Stainless Steel Bar

Random 12 Foot Mill Lengths  
AMS 5648, AMS 5653, AMS-QQ-S-763, ASTM A 276,  
ASTM A 479

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00117	0.1875	(±.001)	Cold Drawn	0.095
SSRD00341	0.25	(±.001)	Cold Drawn	0.1689
SSRD00450	0.3125	(±.0015)	Cold Drawn	0.264
SSRD00480	0.375	(±.0015)	Cold Drawn	0.3801
SSRD01706	0.4375	(±.0015)	Cold Drawn	0.5174
SSRD00145	0.5	(±.002)	Cold Drawn	0.6758
SSRD00499	0.5625	(±.002)	Cold Drawn	0.8554
SSRD00468	0.625	(±.002)	Cold Drawn	1.056
SSRD00481	0.6875	(±.002)	Cold Drawn	1.2778
SSRD00394	0.75	(±.002)	Cold Drawn	1.5207
SSRD00333	0.875	(±.002)	Cold Drawn	2.0698
SSRD00389	1	(±.0025)	Cold Drawn	2.7035
SSRD00559	1.0625	(±.0025)	Cold Finished	3.052
SSRD00707	1.125	(±.0025)	Cold Finished	3.4216
SSRD00340	1.25	(±.0025)	Cold Finished	4.2242
SSRD00539	1.375	(±.0025)	Cold Finished	5.1113
SSRD00189	1.4375	(±.0025)	Cold Finished	5.5866
SSRD00325	1.5	(±.003)	Cold Finished	6.0829
SSRD00714	1.625	(±.003)	Cold Finished	7.139
SSRD00317	1.75	(±.003)	Cold Finished	8.2795
SSRD01746	1.875	(±.003)	Cold Finished	9.5046
SSRD00651	2	(±.003)	Cold Finished	10.8141
SSRD00698	2.25	(±.003)	Cold Finished	13.6866
SSRD00140	2.375	(±.003)	Cold Finished	15.2496
SSRD00156	2.5	(±.003)	Cold Finished	16.8971
SSRD00460	2.625	(±.003)	Cold Finished	18.629
SSRD00278	3	(±.003)	Cold Finished	24.3318



### 416 Project 70+® Round Stainless Steel Bar

Random 12 Foot Mill Lengths  
AMS 5610, ASTM A 555, ASTM A 581, ASTM A 582

CBS Part No.	Diameter (Inches)	Diameter Tolerance	Description	Pounds Per Foot
SSRD00102	0.25	(±.001)	Cold Drawn	0.1648
SSRD00187	0.3125	(±.0015)	Cold Drawn	0.2575
SSRD00230	0.375	(±.0015)	Cold Drawn	0.3709
SSRD01711	0.5	(±.002)	Cold Drawn	0.6594
SSRD00589	0.508	(±.002)	Cold Drawn	0.6806
SSRD00558	0.5625	(±.002)	Cold Drawn	0.8345
SSRD01739	0.625	(±.002)	Cold Drawn	1.0303
SSRD01715	0.6875	(±.002)	Cold Drawn	1.2466
SSRD00186	0.75	(±.002)	Cold Drawn	1.4836
SSRD00103	0.875	(±.002)	Cold Drawn	2.0194
SSRD00264	1	(±.0025)	Cold Drawn	2.6376
SSRD00457	1.125	(±.0025)	Cold Finished	3.3382
SSRD00294	1.1875	(±.0025)	Cold Finished	3.7194
SSRD00425	1.25	(±.0025)	Cold Finished	4.1212
SSRD01753	1.625	(±.003)	Cold Finished	6.9649
SSRD00431	1.75	(±.003)	Cold Finished	8.0776
SSRD00426	1.875	(±.003)	Cold Finished	9.2728
SSRD00281	2	(±.003)	Cold Finished	10.5504

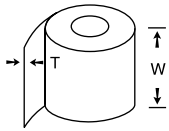
# Sheet Finishes

Distinctions are made in the finishes of stainless steel sheet by a system of numbers — the unpolished finishes being No. 1, No. 2D, and No. 2B; and the polished finishes being No. 3, No. 4, No. 6, No. 7, and No. 8.

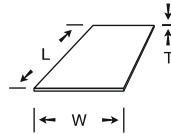
Sheets can be produced with one or two sides polished. When polished on one side only, the other side may be rough ground in order to obtain the necessary flatness.

No. 1 Finish	Hot-rolled, annealed, and descaled. Produced by hot rolling to specified thickness followed by annealing and descaling. Generally used in industrial applications, such as for heat or corrosion resistance, where smoothness of finish is not important.
No. 2D Finish	A dull, cold-rolled finish produced by cold rolling to the specified thickness, annealing, and descaling. The dull finish may be produced as a result of descaling or pickling operations or may be developed by a final, light cold-roll pass on dull rolls. This finish is favorable for the retention of oil on the surface in deep-drawing operations. This finish is generally used when forming deep-drawn articles which may be polished after fabrication.
No. 2B Finish	A bright, cold-rolled finish commonly produced in the same way as No. 2D except that the annealed and descaled sheet receives a final, light cold-roll pass on polished rolls. It is commonly used for all but exceptionally difficult deep-drawing applications and is more readily polished than a No. 1 or a No. 2D finish.
Bright Annealed Finish	A bright cold rolled highly reflective finish retained by final annealing in a controlled atmosphere furnace. The purpose of the atmosphere is to prevent scaling or oxidation during annealing. The atmosphere is usually comprised of either dry hydrogen or a mixture of dry hydrogen and dry nitrogen (sometime known as dissociated ammonia).
No. 3 Finish	This is a polished finish obtained with abrasives of approximately 100 grit. It is suitable for further polishing during fabrication operations.
No. 4 Finish	This is a general purpose finish widely used for restaurant and kitchen equipment, store fronts, etc. After initial grinding with coarse abrasives, sheets are further polished with abrasives of 120 to 150 grit.
No. 6 Finish	This is a dull satin finish having a lower reflectivity than that of No. 4 finish. It is produced by Tampico brushing of a No. 4 finish sheet in a medium of abrasive and oil. Its chief use is in architectural and ornamental applications where a high luster is not desirable.
No. 7 Finish	This finish has a high degree of reflectivity. It is produced by buffing an already finely ground surface, but the grit lines are left intact. It is also used for architectural and ornamental purposes.
No. 8 Finish	The most highly reflective finish that is commonly produced. It is obtained by polishing with successively finer abrasives and buffing extensively with very fine buffing rouges. This surface is free of grit lines from preliminary grinding operations. It is ideal for use as pressure plates, mirrors and reflectors, ferotyping plates, etc. These sheets can be produced with one or both sides polished. In the case where only one side need be polished, the other side can be rough ground to obtain greater flatness.
TR Finish	The finish resulting from cold-working an annealed and descaled or bright-annealed product sufficiently to obtain mechanical properties higher than that normally obtained. Appearance will vary depending upon the amount of cold work required and the alloy ordered.

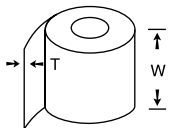
# Sheet



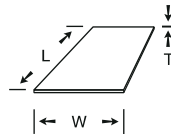
## 304 #2B Stainless Steel Coil & Sheet



Master Coil (gauge) T x W	Master Coil Part No.	48" x 96" W x L	48" x 120" W x L	48" x 144" W x L	Pounds Per Square Foot
(26 ga) .018 x 48	SSFLR00703	SSFLR00733	SSFLR00732	—	0.7543
(24 ga) .024 x 48	SSFLR00704	SSFLR00737	SSFLR00738	—	1.0057
(22 ga) .030 x 48	SSFLR00706	SSFLR00741	SSFLR00742	—	1.2571
(20 ga) .036 x 48	SSFLR00709	SSFLR00734	SSFLR01202	SSFLR00746	1.5085
(18 ga) .048 x 48	SSFLR00712	SSFLR00750	SSFLR00751	SSFLR00752	2.0114
(18 ga) .048 x 60	SSFLR00713	—	SSFLR00753	—	2.0114
(16 ga) .060 x 48	SSFLR00715	SSFLR01194	SSFLR00757	SSFLR00758	2.5142
(16 ga) .060 x 60	SSFLR00716	SSFLR00760	SSFLR00759	—	2.5142
(14 ga) .075 x 48	SSFLR00720	SSFLR00764	SSFLR00765	SSFLR00766	3.1428
(14 ga) .075 x 60	SSFLR00719	—	SSFLR00767	SSFLR00768	3.1428
(13 ga) .090 x 48	SSFLR00721	SSFLR00770	SSFLR00771	—	3.7714
(12 ga) .105 x 48	SSFLR00722	SSFLR00774	SSFLR00775	SSFLR00776	4.3999
(12 ga) .105 x 60	SSFLR00727	SSFLR00779	SSFLR00777	SSFLR00778	4.3999
(11 ga) .120 x 48	SSFLR00724	SSFLR00781	SSFLR00784	—	5.0285
(11 ga) .120 x 60	SSFLR00725	SSFLR00787	SSFLR00786	SSFLR00788	5.0285
(10 ga) .135 x 48	—	SSFLR00792	SSFLR00789	—	5.657
(8 ga) .164 x 48	—	—	SSFLR00795	—	6.8723
(7 ga) .179 x 48	—	SSFLR00798	SSFLR00796	—	7.5008

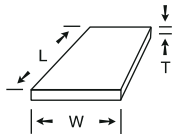


## 316L #2B Stainless Steel Coil & Sheet



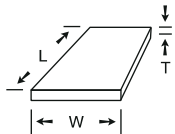
Master Coil (gauge) T x W	Master Coil Part No.	48" x 96" W x L	48" x 120" W x L	48" x 144" W x L	Pounds Per Square Foot
(16 ga) .060 x 48	SSFLR00824	SSFLR00808	SSFLR00809	—	2.5142
(14 ga) .075 x 48	SSFLR00825	—	SSFLR00810	SSFLR01166	3.1428
(12 ga) .105 x 48	SSFLR00828	—	SSFLR00812	—	4.3999
(11 ga) .120 x 60	SSFLR00822	—	SSFLR01207	—	5.0285

# Plate



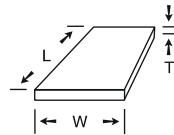
**17-4  
Stainless Steel Plate**  
Hot Rolled, Annealed and Pickled  
48" W x 120" L  
AMS 5604, ASTM A 693

CBS Part No.	Thickness (Inches)	Pounds Per Square Foot
SSFLR00532	0.25	10.476
SSFLR00064	0.3125	13.095
SSFLR00074	0.375	15.714
SSFLR00535	0.5	20.952
SSFLR00536	0.75	31.428
SSFLR00069	0.875	36.666
SSFLR00090	1	41.904
SSFLR00085	1.5	62.856
SSFLR00540	2	83.808



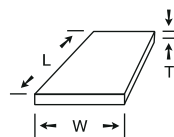
**303  
Stainless Steel Plate**  
Hot Rolled, Annealed and Pickled  
48" W x 120" L  
ASTM A 895

CBS Part No.	Thickness (Inches)	Pounds Per Square Foot
SSFLR00519	0.1875	7.857
SSFLR00520	0.375	15.714
SSFLR00055	0.5	20.952
SSFLR00120	0.625	26.19
SSFLR00097	0.75	31.428
SSFLR00078	1	41.904
SSFLR00065	1.25	52.38
SSFLR00075	1.5	62.856
SSFLR00527	1.75	73.332
SSFLR00528	2	83.808
SSFLR00102	2.25	94.284
SSFLR00096	3	125.712
SSFLR00091	4	167.616



**304L  
Stainless Steel Plate**  
Hot Rolled, Annealed and Pickled  
48" W x 120" L  
AMS 5511, ASTM A 240

CBS Part No.	Thickness (Inches)	Pounds Per Square Foot
SSFLR00184	0.1875	7.857
SSFLR01298	0.25	10.476
SSFLR00502	0.3125	13.095
SSFLR00503	0.375	15.714
SSFLR00615	0.5	20.952
SSFLR01518	0.625	26.19
SSFLR00367	0.75	31.428
SSFLR00237	0.875	36.666
SSFLR01321	1	41.904
SSFLR00486	1.25	52.38
SSFLR00186	1.5	62.856
SSFLR00245	1.75	73.332
SSFLR01278	2	83.808
SSFLR00489	2.25	94.284
SSFLR00490	2.5	104.76
SSFLR00491	2.75	115.236
SSFLR00492	3	125.712
SSFLR00493	3.5	146.664

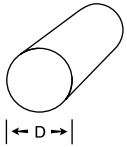


**316L  
Stainless Steel Plate**  
Hot Rolled, Annealed and Pickled  
48" W x 120" L  
AMS 5507, ASTM A 240

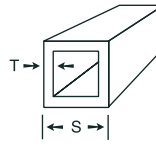
CBS Part No.	Thickness (Inches)	Pounds Per Square Foot
SSFLR00184	0.1875	7.857
SSFLR01298	0.25	10.476
SSFLR00503	0.375	15.714
SSFLR00159	0.375	15.714
SSFLR00158	0.5	20.952
SSFLR00506	0.625	26.19
SSFLR00068	0.75	31.428
SSFLR00507	0.875	36.666
SSFLR01270	1	41.904
SSFLR00508	1.25	52.38
SSFLR00509	1.5	62.856
SSFLR01501	1.625	68.094
SSFLR00510	1.75	73.332
SSFLR00511	2	83.808
SSFLR00512	2.25	94.284
SSFLR00067	2.5	104.76
SSFLR00513	3	125.712
SSFLR00201	3.5	146.664

# Weight Formulas

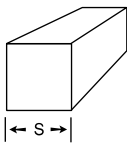
(All dimensions in inches unless otherwise noted. Use Density from table below.)



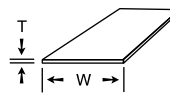
**Round Rod:**  
 $(\text{Diameter})^2 \times 9.42 \times \text{Density} = \text{Weight per Lineal Foot (Pounds)}$



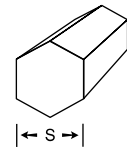
**Square Tube:**  
 $1.27 \times \text{Round Tube of same Thickness and Outside Dimension} = \text{Weight per Lineal Foot (Pounds)}$



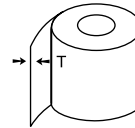
**Square Bar:**  
 $(\text{Size})^2 \times 12 \times \text{Density} = \text{Weight per Lineal Foot (Pounds)}$



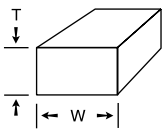
**Sheet:**  
 $\text{Thickness} \times 144 \times \text{Density} = \text{Weight per Square Foot (Pounds)}$



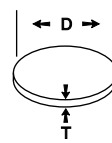
**Hexagon Bar:**  
 $(\text{Size})^2 \times 10.4 \times \text{Density} = \text{Weight per Lineal Foot (Pounds)}$



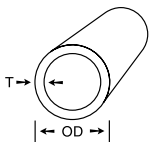
**Coil and Strip:**  
 $\text{Thickness} \times \text{Width} \times 12 \times \text{Density} = \text{Weight per Lineal Foot (Pounds)}$



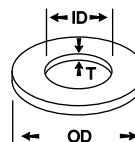
**Rectangular Bar:**  
 $\text{Thickness} \times \text{Width} \times 12 \times \text{Density} = \text{Weight per Lineal Foot (Pounds)}$



**Circles:**  
 $(\text{Diameter})^2 \times \text{Thickness} \times 0.785 \times \text{Density} = \text{Weight (Pounds)}$



**Round Tube:**  
 $(\text{Outside Diameter} - \text{Thickness}) \times \text{Thickness} \times 37.7 \times \text{Density} = \text{Weight per Lineal Foot (Pounds)}$



**Rings:**  
 $(\text{Outside Diameter} + \text{Inside Diameter}) \times (\text{Outside Diameter} - \text{Inside Diameter}) \times \text{Thickness} \times 0.785 \times \text{Density} = \text{Weight (Pounds)}$

Metal	Density (Pounds per Cubic Inch)
Aluminum	0.098
Bearing Bronze (SAE 660)	0.318
Brass	0.306
Copper	0.322
Gold	0.697
Iron	0.284
Lead	0.41
Magnesium	0.061
Muntz Metal	0.303
Naval Brass	0.304

Metal	Density (Pounds per Cubic Inch)
Nickel	0.322
Platinum	0.775
Silver	0.378
Stainless Steel	0.291
Steel	0.284
Tin	0.264
Tobin Bronze	0.304
Zinc	0.258



# Weight of Stainless Steel Bars

per Linear Foot (based on .291 Lb/in<sup>3</sup>)

Diameter/ Size (Inches)	Weight (Pounds/Foot)			Diameter/ Size (Inches)	Weight (Pounds/Foot)			Diameter/ Size (Inches)	Weight (Pounds/Foot)		
	Round	Square	Hexagon		Round	Square	Hexagon		Round	Square	Hexagon
1/32	0.0027	0.0034	0.003	3 3/8	31.2401	39.7761	34.4726	6 3/4	124.9605	159.1043	137.8904
1/16	0.0107	0.0136	0.0118	3 7/16	32.4079	41.2629	35.7612	6 13/16	127.2853	162.0643	140.4557
1/8	0.0429	0.0546	0.0473	3 1/2	33.5971	42.777	37.0734	6 7/8	129.6315	165.0516	143.0447
3/16	0.0964	0.1228	0.1064	3 9/16	34.8077	44.3184	38.4093	6 15/16	131.9991	168.0661	145.6573
1/4	0.1714	0.2183	0.1892	3 5/8	36.0397	45.8871	39.7688	7	134.3882	171.108	148.2936
5/16	0.2678	0.341	0.2955	3 11/16	37.2932	47.483	41.1519	7 1/8	139.2307	177.2736	153.6371
3/8	0.3857	0.4911	0.4256	3 3/4	38.568	49.1063	42.5588	7 1/4	144.1588	183.5483	159.0752
7/16	0.525	0.6684	0.5793	3 13/16	39.8644	50.7568	43.9892	7 3/8	149.1726	189.9321	164.6078
1/2	0.6857	0.873	0.7566	3 7/8	41.1821	52.4346	45.4433	7 1/2	154.2722	196.425	170.235
9/16	0.8678	1.1049	0.9576	3 15/16	42.5213	54.1396	46.921	7 5/8	159.4575	203.0271	175.9568
5/8	1.0713	1.3641	1.1822	4	43.8819	55.872	48.4224	7 3/4	164.7284	209.7383	181.7732
11/16	1.2963	1.6505	1.4304	4 1/16	45.2639	57.6316	49.9474	7 7/8	170.0851	216.5586	187.6841
3/4	1.5427	1.9643	1.7024	4 1/8	46.6673	59.4186	51.4961	8	175.5275	223.488	193.6896
13/16	1.8106	2.3053	1.9979	4 3/16	48.0922	61.2328	53.0684	8 1/8	181.0556	230.5266	199.7897
7/8	2.0998	2.6736	2.3171	4 1/4	49.5385	63.0743	54.6644	8 1/4	186.6694	237.6743	205.9844
15/16	2.4105	3.0691	2.6599	4 5/16	51.0062	64.943	56.2839	8 3/8	192.3689	244.9311	212.2736
1	2.7426	3.492	3.0264	4 3/8	52.4954	66.8391	57.9272	8 1/2	198.1541	252.297	218.6574
1 1/16	3.0962	3.9421	3.4165	4 7/16	54.006	68.7624	59.5941	8 3/4	204.025	259.7721	225.1358
1 1/8	3.4711	4.4196	3.8303	4 1/2	55.538	70.713	61.2846	8 7/8	209.9816	267.3563	231.7088
1 1/4	3.8675	4.9243	4.2677	4 9/16	57.0914	72.6909	62.9988	9	216.0239	275.0496	238.3763
1 1/4	4.2853	5.4563	4.7288	4 5/8	58.6663	74.6961	64.7366	9 1/8	222.152	282.852	245.1384
1 5/16	4.7246	6.0155	5.2134	4 11/16	60.2626	76.7285	66.498	9 1/4	228.3657	290.7636	251.9951
1 3/8	5.1853	6.6021	5.7218	4 3/4	61.8803	78.7883	68.2832	9 1/2	234.6651	298.7843	258.9464
1 7/16	5.6674	7.2159	6.2538	4 13/16	63.5194	80.8753	70.0919	9 3/4	241.0503	306.9141	265.9922
1 1/2	6.1709	7.857	6.8094	4 7/8	65.18	82.9896	71.9243	9 5/8	247.5212	315.153	273.1326
1 9/16	6.6958	8.5254	7.3887	4 15/16	66.862	85.1311	73.7803	9 3/4	254.0777	323.5011	280.3676
1 5/8	7.2422	9.2211	7.9916	5	68.5654	87.3	75.66	9 7/8	260.72	331.9583	287.6972
1 11/16	7.81	9.944	8.6181	5 1/16	70.2903	89.4961	77.5633	10	267.448	340.5246	295.1213
1 3/4	8.3993	10.6943	9.2684	5 1/8	72.0365	91.7196	79.4903	10 1/8	274.2617	349.2	302.64
1 13/16	9.0099	11.4718	9.9422	5 1/4	73.8042	93.9703	81.4409	10 1/4	281.1611	357.9846	310.2533
1 7/8	9.642	12.2766	10.6397	5 3/8	75.5934	96.2483	83.4152	10 3/8	288.1462	366.8783	317.9612
1 15/16	10.2955	13.1086	11.3608	5 1/2	77.4039	98.5535	85.413	10 5/8	295.217	375.8811	325.7636
2	10.9705	13.968	12.1056	5 5/8	79.2359	100.8861	87.4346	10 3/4	302.3735	384.993	333.6606
2 1/16	11.6668	14.8546	12.874	5 7/16	81.0893	103.2459	89.4798	10 7/8	309.6157	394.2141	341.6522
2 1/8	12.3846	15.7686	13.6661	5 1/2	82.9642	105.633	91.5486	11	316.9437	403.5443	349.7384
2 3/16	13.1238	16.7098	14.4818	5 9/16	84.8604	108.0474	93.6411	11 1/8	324.3573	412.9836	357.9191
2 1/4	13.8845	17.6783	15.3212	5 5/8	86.7781	110.4891	95.7572	11 1/4	331.8566	422.532	366.1944
2 5/16	14.6666	18.674	16.1841	5 11/16	88.7172	112.958	97.8969	11 3/8	339.4417	432.1896	374.5643
2 3/8	15.4701	19.6971	17.0708	5 3/4	90.6778	115.4543	100.0604	11 1/2	347.1124	441.9563	383.0288
2 7/16	16.295	20.7474	17.9811	5 13/16	92.6597	117.9778	102.2474	11 5/8	354.8689	451.8321	391.5878
2 1/2	17.1414	21.825	18.915	5 7/8	94.6631	120.5286	104.4581	11 3/4	362.7111	461.817	400.2414
2 9/16	18.0091	22.9299	19.8726	5 15/16	96.688	123.1066	106.6924	12	370.6389	471.9111	408.9896
2 5/8	18.8983	24.0621	20.8538	6	98.7342	125.712	108.9504	12 1/8	378.6525	482.1143	417.8324
2 11/16	19.809	25.2215	21.8586	6 1/16	100.8019	128.3446	111.232	12 1/4	386.7518	492.4266	426.7697
2 3/4	20.741	26.4083	22.8872	6 1/8	102.891	131.0046	113.5373	12 3/8	394.9368	502.848	435.8016
2 13/16	21.6945	27.6223	23.9393	6 3/16	105.0015	133.6918	115.8662	12 1/2	403.2075	513.3786	444.9281
2 7/8	22.6694	28.8636	25.0151	6 1/4	107.1335	136.4063	118.2188	12 5/8	411.5639	524.0183	454.1492
2 15/16	23.6658	30.1321	26.1145	6 5/16	109.2869	139.148	120.5949	12 3/4	420.0061	534.7671	463.4648
3	24.6836	31.428	27.2376	6 3/8	111.4617	141.9171	122.9948	12 7/8	428.5339	545.625	472.875
3 1/16	25.7227	32.7511	28.3843	6 1/2	113.6579	144.7134	125.4183	13	437.1474	556.5921	482.3798
3 1/8	26.7834	34.1016	29.5547	6 3/2	115.8756	147.537	127.8654	13 1/8	445.8466	567.6683	491.9792
3 3/16	27.8654	35.4793	30.7487	6 5/8	118.1146	150.3879	130.3362	13 1/4	454.6316	578.8536	501.6731
3 1/4	28.9689	36.8843	31.9664	6 3/4	120.3752	153.2661	132.8306	13 3/8	463.5022	590.148	511.4616
3 5/16	30.0938	38.3165	33.2076	6 11/16	122.6571	156.1715	135.3486				

# Hardness Conversions

(Approximate)

Rockwell B 100 kg 1/16" Ball	Rockwell C 150 kg Brale	Brinell 3,000 kg 10mm Ball	Approx Tensile Strength (psi)	Rockwell B 100 kg 1/16" Ball	Rockwell C 150 kg Brale	Brinell 3,000 kg 10mm Ball	Approx Tensile Strength (psi)
—	60	654	320,000	91	10	190	93,000
—	59	634	310,000	90	9	185	91,000
—	58	615	300,000	89	8	180	88,000
—	57	595	290,000	88	7	176	86,000
—	56	577	282,000	87	6	172	84,000
120	55	560	274,000	86	5	169	83,000
120	54	543	266,000	85	4	165	81,000
119	53	525	257,000	84	3	162	79,000
119	52	500	245,000	83	2	159	78,000
118	51	487	239,000	82	1	156	76,000
117	50	475	233,000	81	0	153	75,000
117	49	464	227,000	80	—	150	73,000
116	48	451	221,000	79	—	147	—
116	47	442	217,000	78	—	144	—
115	46	432	212,000	77	—	141	—
115	45	421	206,000	76	—	139	—
114	44	409	200,000	75	—	137	—
113	43	400	196,000	74	—	135	—
113	42	390	191,000	73	—	132	—
112	41	381	187,000	72	—	130	—
112	40	371	182,000	71	—	127	—
111	39	362	177,000	70	—	125	—
110	38	353	173,000	69	—	123	—
110	37	344	169,000	68	—	121	—
109	36	336	165,000	67	—	119	—
109	35	327	160,000	66	—	117	—
108	34	319	156,000	65	—	116	—
108	33	311	152,000	64	—	114	—
107	32	301	147,000	63	—	112	—
106	31	294	144,000	62	—	110	—
105	30	286	140,000	61	—	108	—
104	29	279	137,000	60	—	107	—
104	28	271	133,000				
103	27	264	129,000				
103	26	258	126,000				
102	25	253	124,000				
101	24	247	121,000				
100	23	240	118,000				
99	22	234	115,000				
98	21	228	112,000				
97	20	222	109,000				
96	18	216	106,000				
95	16	210	103,000				
94	15	205	100,000				
93	13	200	98,000				
92	12	195	96,000				

# Take it to the MAXX®

When it comes to screw machine and high volume production applications, you can depend on MAXX® Stainless Steel to run better, run smoother, run longer and deliver more "parts to the pan." That's because MAXX® Stainless Steel is specially formulated with a controlled chemistry optimized for mechanical properties, surface finish, and consistent high quality — lot-to-lot, bar-to-bar and part-to-part.

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MAXX® Stainless Steel is available in types 17-4, 303, 304/304L, & 316/316L

Sizes from 1/4" - 3" Round & 1/4" - 1 1/2" Hex

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