

## Glossary

### Material Terminology

**ALLOY** - Substance having metallic properties, composed of two or more chemical elements of which at least one is an elemental metal.

**ANNEALING** - Heating to and holding a suitable temperature and then cooling at a suitable rate. This reduces hardness, improves machinability and facilitates cold working.

**ANODIZING** - Anodizing is a process which forms a particularly structured and dense oxide layer which resists abrasion and thus protects the underlying metal. This layer is colorless, but it's possible to introduce a dye at one stage in the process to permanently color the surface.

**COLD WORKING** - Cold working applies to mechanical working performed at temperatures below the critical range, and results in a strain hardening of the metal. The strength and hardness as well as the elastic limit are increased, but the ductility decreases. There are two primary cold-working processes: cold-rolling and cold-drawing.

**COLD-ROLLING** - Cold rolling usually refers to the working of metal at room temperature. Materials have been hot-rolled to approximate sizes are pickled to remove any scale, then are passed through chilled finished rolls. This gives a smooth surface and also brings the pieces to accurate dimensions. The principal forms of cold-rolled stocks are sheets, bars, and rods.

**COLD-DRAWING** - Cold-drawing is used in the making of bright steel bar in round, square, hexagonal and flat sections, as well as seamless tubing and wire. Rods are drawn at room temperature through a die to achieve their final size and to provide better surface finish, closer tolerances, longer lengths, smaller diameters, or a different combination of mechanical properties from those possible through hot-finishing.

**EXTRUSION** - The extrusion process involves the forcing of metal through an opening in a die, causing the metal to take the shape of the die opening. Some metals sure as lead, tin, and aluminum may be extruded cold, but generally metals are heated before the operation is begun. The principal advantage of the extrusion process is in its flexibility.

**FERROUS/NON-FERROUS METALS** - Ferrous refers to an iron content in the material. In general terms, metals that are not magnetic are considered non-ferrous. Most magnetic steel, steel alloys, and stainless steels contain enough iron to be considered ferrous. Reference to ferrous and non-ferrous metals is made when selecting tooling, grinding wheels, abrasives and saw blades.

**HOT ROLLED** - Hot rolled product is heated and rolled at high temperatures to impart the shape, chemical and mechanical properties required in the finished item.

**TEMPERING** - A process of re-heating hardened steel to a temperature below the transformation range and then cooling at any rate desired. The purpose is to decrease the hardness and increase the toughness.

**ALLOY** - Turning a bar gives it improved size, straightness, and concentricity together with freeing the product from decarburization, seams and other surface imperfections. Bars are then ground for a tighter tolerance and to ensure uniformity in size and finish. Lastly, bars are polished to a brilliant, bright finish. The TG&P process is often required in bars used for shafting and similar applications which need to be free of surface imperfections.

**ALUMINUM** - Aluminum alloys are strong, naturally soft, lightweight, ductile and malleable. Easy to machine, fabricate, join and work. Aluminum is non-toxic and electrically and thermally conductive.

**ALUMINUM 2024** - A high-strength aluminum alloy, 2024 offers high strength and excellent fatigue resistance. Readily machined to a high finish and when annealed can be easily formed and may be heat treated. Because of its normally low corrosion resistance, 2024 with an anodized finish is more popular. Good where a favorable strength to weight ratio is required. Bar conforms to ASTM B211 & QQ-A-225/6. 2024 Plate conforms to ASTM B209 & QQ-A-250/4.

**ALUMINUM 6061** - This extruded aluminum alloy is one of the most versatile heat treatable alloys in the aluminum family. Good mechanical properties, good corrosion resistance and medium strength. Commonly used where welding and brazing is required, and can be fabricated by many of the commonly used techniques. Yield strength is 40 ksi. Hardness is 95 Brinell. Melting range is 1080 deg. to 1205 deg. 6061-T651 Plate and 6061-T6 Sheet conform to ASTM B209, QQ-A-250/11 & AMS 4053.

**ALUMINUM 6063** - Commonly referred to as "architectural alloy", this material has relatively high tensile properties, excellent finishing characteristics and high corrosion resistance. It is the alloy best suited for anodizing applications. It is often found in various interior and exterior architectural applications, such as windows, doors, store fronts, and assorted trim items.

**ALUMINUM 7075** - One of the hardest aluminum alloys, this material has good machinability and fair corrosion resistance.

**BRASS** - Brass resists atmospheric corrosion, water, and many salt water solutions. A high percentage of zinc makes it stronger and more durable than copper and bronze. It is easy to manufacture and maintains higher electrical characteristics.

**BRASS CA360** - Brass grade 360 is a free cutting 1/2 hard brass and is the nonferrous alloy all others are compared to when machinability is questioned. It is an ideal metal for shop use where milling, drilling, tapping, knurling or turning is required. It is corrosion resistant and rustproof. It can also be plated, brazed and soldered. Some applications are use as valve stems, bolts, and marine hardware and pump shafts. Bar conforms to ASTM B16.

**NAVAL BRASS CA464** - Naval Brass Alloy 464 has more corrosion resistance to sea water at elevated temperatures and still maintains good strength and rigidity. It possesses excellent capacity for hot-working and adapts well for hot forging and pressing. Can be drawn, formed bent, headed and upset. 464 can also be welded, brazed or soldered with ease. Some applications are use as valve stems, bolts, and marine hardware and pump shafts. Conforms to ASTM B21.

**BRONZE** - This copper and tin alloy is generally ductile and malleable. Its high copper content makes it more corrosion resistant than brass. It is also harder and stronger than copper.

**PHOSPHOR BRONZE CA544** - Bronze 544 Alloy is a free cutting phosphor bronze material with a machinability of 85%. It has high strength, good corrosion resistance and also high fatigue properties. It has been used for bushings, shafts and bearings, valves, gears, terminals and many varieties of electrical parts. Has a Rockwell B of 80, tensile strength of 68ksi, yield strength of 57ksi and an elongation of 20%.

**SILICON BRONZE CA655** - Silicon Bronze alloy 655 is a 1/2 hard, high strength bronze alloy with excellent corrosion resistance. It is typically used for marine hardware, fasteners and connections. It can be cold worked and hot formed. Ranks rather low on the machinability scale. Tensile strength - 78 ksi, Yield strength - 45 ksi, Elongation - 35%, Rockwell B scale - 85, Shear strength - 52 ksi.

**BEARING BRONZE CA932 (SAE660)** - Bronze 932, know as bearing bronze, has excellent load capacity and antifriction qualities. This alloy has good machining characteristics, resists many chemicals and is recommended for medium speed, medium load applications.

**ALUMINUM BRONZE CA954** - Aluminum Bronze alloy 954 is similar to Ampco 18. It can be heat treated for higher hardness properties and improved tensile, yield, compression strength and fatigue values. Typically used as bearing material because of its resistance to wear, abrasion and fatigue, deformation and corrosion. Also used for wear plates, valve parts, liners, gears and more. Tensile strength - 90,000, yield strength - 35,000, elongation - 12%. Brinell hardness 170/180.

**COPPER** - Copper is corrosion resistant and highly ductile. Great for electrical applications.

**COPPER 110 SHEET & PLATE** - Cold Rolled Sheet Copper, electrolytic tough pitch, 1/8 to 1/4 hard. Rockwell f40-82.

**COPPER CA110** - Copper 110 or 110 Electrolytic Tough Pitch (ETP) Copper has the highest electrical conductivity of any metal except for silver. Its high ductility makes it an excellent choice for drawing, forming or spinning applications. Some of its fabrication capabilities are cold-working, hot-working, soldering and welding. It also has excellent corrosion resistance.

**FOILS** - A flat-rolled product 0.0059 inches or less in thickness, regardless of width. Flat-rolled products thicker than foil (over 0.0059 inches) are classified as sheet or strip in accordance with steel industry terminology.

**KEYSTOCK** - Keystock is solid core bars used as keys to lock shaft components together by being inserted into machined slots. It is used to provide driving torque between shafts and pulleys, gears and sprockets. Often used for machinery, general maintenance and shop repairs. Material for steel is high quality, cold drawn low carbon C1018 steel. All keystone is supplied as oversized to assure a tight fit in keyways.

**METAL BALLS** - Precision balls for use in ball bearing and other roller applications.

### PLASTICS:

**ACETAL** - Acetal (Copolymer) has high strength and low moisture absorption, stiffness with excellent dimensional stability and ease of machining. The resin certifies to ASTM D 4181 POM 211. It also meets ASTM D 6100 S-POM 0211, LP (Low Porosity), FDA CFR21, Section 177.2470 (a), (b), (c) and (d)(2) and is 3-A Dairy approved.

**DELRIN** - Delrin® (Acetal homopolymer) offers slightly higher mechanical properties (but slightly lower chemical resistance) than Acetal copolymer. Thinner cross-sections benefit from the additional strength and rigidity of Delrin®. The resin certifies to ASTM D 4181 POM 111. It also meets ASTM D 6100 S-POM 0111 and FDA CFR 21 Section 177.2480.

**NYLON 101** - Nylon 101 is tough, has a low coefficient of friction and good abrasion resistance. It reduces lubrication requirements and can eliminate galling and corrosion problems. The resin certifies to ASTM D 4066 PA 0114. It also meets LP410A, ASTM D 5989 S-PA 0113, FDA CFR 21 Section 177.1500 and is 3-A Dairy approved.

# GLOSSARY

## Glossary Cont.

**TEFLON** - Virgin Teflon® is essentially chemically inert up to 500°F. It also exhibits exceptionally low friction and retains its flexibility at low temperatures. It offers remarkable electrical stability over a wide range of frequency and environmental conditions. The resin certifies to ASTM D 1710 Type 1, Grade 1, Class A and it meets FDA CFR 21 177.1550. Mechanical Teflon® exhibits many of the same characteristics of Virgin Teflon®, but it is not suitable for use in electrical applications or food contact applications. The resin certifies to ASTM D 1710 Type 3, Grade 2, Class A.

**UHMW** - UHMW has a unique combination of wear and corrosion resistance, low-friction surface and impact strength. It is also resistant to chemical attack and moisture absorption. The resin certifies to ASTM d 4020. It also meets FDA CFR 21 Section 177.1520 2.1, 2.2 and is 3-A Dairy approved.

**REINFORCING BARS (REBAR) - Grade 60.**  
Steel reinforcing bars help maintain integrity of concrete and stop cracking.

**STAINLESS STEEL** - Stainless steels are alloys of iron to which at least 10% chromium has been added to increase corrosion resistance. A 10% chromium steel will not rust when exposed to weather. To obtain greater corrosion resistance, more nickel and chromium are added to the alloy. Along with iron and chromium, all stainless steels contain some carbon. The carbon is added for the same purpose as in ordinary steels, to make steel stronger. Other alloying elements improve corrosion resistance, fabricability and variations in strength. These elements include nickel, molybdenum, copper, titanium, silicone, aluminum, sulfur and many others.

**AUSTENITIC STAINLESS STEEL** - The most common austenitic alloys are iron-chromium-nickel steels and are widely known as the 300 series. The austenitic stainless steels, because of their high chromium and nickel content, are the most corrosion resistant of the stainless group providing unusually fine mechanical properties. They cannot be hardened by heat treatment, but can be hardened significantly by cold-working. They are normally non-magnetic, but become slightly magnetic when cold-worked.

**STAINLESS TYPE 303** - 303 SS has non-galling and non-seizing qualities which allow for easy machining and is better for lighter equipment if welding is not required. When cold worked it can become slightly magnetic. Free machining for heavier cuts in automatic machining operations. Corrosion resistant to atmospheric exposures, sterilizing solutions, most organic and many inorganic chemicals, most dyes, nitric acid and foods. Machinability is 70%.

**STAINLESS TYPE 303 TURNED GROUND AND POLISHED (TGP)** - When very close tolerances are required turning & center-less grinding is used. To achieve close tolerances the amount of metal removed in the final pass is very small. The TG&P process is often required in bars used for shafting & similar applications which need to be free of surface imperfections. To impart a very high polish to the surface, it is not uncommon to finish the bar with a burnishing pass through a two-roll rotary straightening machine. Non magnetic.

**STAINLESS TYPE 304** - Type 304 is a low carbon, chromium - nickel alloy. It requires heavier equipment to machine, but is easier to weld than type 303 making it a very common stainless steel for fabrication. It offers excellent resistance to a wide range of corrosives and atmospheric exposures. Non magnetic.

**STAINLESS TYPE 316** - Highest corrosion and pitting resistance of the standard stainless steels. Used in the paper, photographic and textile industries. Great for marine applications. Has a high temperature strength and is not hardenable by heat treatment. Non-magnetic.

**STAINLESS TYPE 416** - 416 SS is a very free machining grade of heat treatable stainless steel. Useful corrosion resistance to natural food acids, basic salts, water & most atmospheres. Generally difficult to weld. Magnetic.

**STAINLESS TYPE 630 (17-4 PH)** - 17-4 PH provides the superior corrosion resistance of all the austenitic stainless steels, but in addition, is capable of being heat treated to various high strength levels with minimum distortion. It is generally furnished in the annealed condition for ease of machining. It develops high strength properties by aging at selected temperatures. Non magnetic.

**STEEL** - Steel is iron that is combined with other elements such as carbon, manganese and silicon. It falls into one of two families: carbon steel or alloy steel.

**CARBON STEEL** - Carbon steel is ordinary steel with 2% maximum of carbon, and no minimum content is specified or required for aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, vanadium, or zirconium. Carbon steels harden only with surface (case) treatments. A four-numeral series is used to designate gradations of chemical composition of carbon steel. The first two digits indicate the grade of carbon steel. The last two numbers are intended to indicate the approximate middle of the carbon range.

**A36 CARBON STEEL** - Hot Rolled - A36 low carbon steel is a general purpose mild steel with excellent welding and forming capabilities. May be formed hot or cold. Galvanizing increases corrosive resistance. Conforms to ASTM A36.

**1018 CARBON STEEL** - Cold-Drawn - 1018 is a low-carbon steel which has good case hardening properties. An excellent steel when bending or cold forming is required and stresses are not too severe. It has good brazing and welding properties, but has poor corrosion resistance. C1018 has a smooth, clean cold-drawn surface. Yield strength - 50,000 +, with average machinability at 66%.

**1045 CARBON STEEL** - A medium carbon steel that is used in heat treating applications (quenching and tempering). It has an ability to be conventionally quenched, but is often used where the specifications are less stringent. It is also used in induction hardening applications. It is rated fair for brazing and welding, however it can be forged satisfactorily. It is commonly used as shaft material and not normally considered a screw machine steel.

**12L14 CARBON STEEL** - Cold Drawn - 12L14 is a leaded steel with a smooth cold finish (rolled) surface. It has ductility and provides a fine surface quality. Bending and crimping are easily done with 12L14. An excellent machinability makes it the most popular steel for turning on lathes. Has a yield strength of 60,000 psi, while machinability is rated at 195% with 325 surface feet per minute.

**COLD ROLLED SHEET** - Cold Roll Sheet is low carbon and commercial quality. This low cost steel sheet is soft enough to bend flat on itself in any direction without cracking, and is ductile enough for shallow drawing. The carbon is .10 max for improved welding and forming. It has closer thickness tolerances and better surface than pickled and oiled. Conforms to ASTM A1008.

**ALLOY STEEL** - Alloy steels contain added elements that cause the steel to exhibit enhanced properties when heat treated. A four-numeral series is used to designate gradations of chemical composition of alloy steel. The first two digits indicate the grade of alloy. The last two numbers are intended to indicate the approximate middle of the carbon range.

**4140/41L40 ANNEALED ALLOY STEEL** - 4140 and 41L40 are heat treatable, commercial-quality steels. The chromium content makes for deeper hardness penetration, while its molybdenum content allows uniformity of the hardness and strength. It has good wear resistance, along with excellent toughness and ductility while in the quenched and tempered condition. In the annealed condition it machines at 110 sfm. The lead added to the 41L40 raises the machinability to 145, and when annealed provides much the same properties as 4140.

**4140/4142 HEAT TREATED B7 ALLOY STEEL** - Pre-heat treated 4140 offers good hardness, penetration, strength, toughness, ductility and wear resistance. This is a general purpose alloy, normally .95% chromium & .20% molybdenum. Conforms to ASTM A193 Grade B7.

**8620 ALLOY STEEL** - Chromium-nickel-molybdenum steel. Its nickel content imparts good toughness and ductility, while the chromium and molybdenum increase hardness penetration and wear resistance. The alloy content permits hardening to a strong, tough core, with high-case hardness. It machines a 110 sfm and has good welding qualities.

**ETD 150 CF ALLOY** - This alloy steel has high tensile and yield strengths. It is used in car shafts, pinions, fasteners, axles and anyplace that needs heat-treated alloy parts. It has fair weldability.

## Pre-Cut Length's

Pre-cut stocks are supplied in 3' and/or 6' lengths for your convenience. Available in the following materials: Carbon, Stainless Steel, Plastic, Aluminum, Brass, and rebar. Other lengths and materials are available in the "Bar Stock" section on the catalog. Material test reports are not available on these parts. If you need certifications, please use "full bar" part numbers listed earlier in this section.

## Round Stock

### Low Carbon Rounds

Material is an ASTM A108 1018 CRS (cold rolled steel). 1018 has good case hardening properties, easily welded, and bendable. Average tensile is 85,000 psi and Brinell hardness is 167 average.

#### 3' Length

Part No.	Diameter	Price /Ea
47701	1/8"	\$0.97
47702	3/16"	1.86
47703	1/4"	1.88
47704	5/16"	3.06
47705	3/8"	3.23
47706	7/16"	4.88
47707	1/2"	5.04
47709	5/8"	7.72
47710	3/4"	10.79
47711	7/8"	14.56
47712	1"	18.66
0953233	1-1/2"	33.77
0953234	2"	59.28

#### 6' Length

Part No.	Diameter	Price /Ea
0953268	1/4"	\$3.23
0953269	3/8"	5.85
0953270	1/2"	9.38
0953271	5/8"	14.25
0953272	3/4"	20.21
0953273	1"	34.75

## Stainless Steel Rounds

Material is an ASTM A479 304/304L Stainless Steel. Good corrosion resistance, formability and easily welded. 304 is the most commonly used Stainless steel and used in many food, dairy and beverage industries. Supplied in the annealed condition.



#### 3' Length

Part No.	Diameter	Price /Ea
47721	1/8"	\$2.11
47722	3/16"	4.07
47723	1/4"	4.81
47724	5/16"	7.39
47725	3/8"	9.35
47727	1/2"	15.94
47729	5/8"	25.30
47730	3/4"	35.82
47732	1"	63.68

#### 6' Length

Part No.	Diameter	Price /Ea
0953274	1/4"	\$9.73
0953275	3/8"	19.65
0953276	1/2"	28.38
0953277	5/8"	44.78
0953278	3/4"	63.95
0953279	1"	114.76

## Plastic Rounds

Material is an Extruded Nylon 6/6. Supplied in the "natural" color it is the most widely used nylon in industry. Nylon weighs nearly 7 times less than steel in the 1" diameter. Low friction, high strength and good toughness. Many uses including; bearings, rollers, fasteners and gears.



#### 3' Length

Part No.	Diameter	Price /Ea
0953243	1/2"	\$3.70
0953244	3/4"	8.78
0953245	1"	14.00

## Aluminum Rounds

Material is an ASTM B221 6061 Aluminum. Our aluminum rounds are supplied in the T6511 temper and in the standard Mill finish. 6061 is corrosion resistant, weldable and has good strength while weighing nearly 3 times less than steel. Typical Yield strength is 40,000 psi. Typical hardness is 95 Brinell.



#### 3' Length

Part No.	Diameter	Price /Ea
0953235	1/4"	\$2.22
0953236	3/8"	3.88
0953237	1/2"	6.46
0953238	5/8"	9.41
0953239	3/4"	13.33
0953240	1"	18.99
0953241	1-1/2"	40.33
0953242	2"	70.94

#### 6' Length

Part No.	Diameter	Price /Ea
0953280	1/4"	\$3.54
0953281	3/8"	6.80
0953282	1/2"	11.86
0953283	5/8"	16.81
0953284	3/4"	24.50
0953285	1"	35.85

## Round Stock Cont.

### Brass Rounds

Material conforms to ASTM B16 C36000. 360 Brass is considered a "free cutting" brass and is supplied cold finished in the 1/2 hard condition. Typical yield strength is 45,000 psi.



#### 3' Length

Part No.	Diameter	Price /Ea
47743	1/4"	\$6.91
47745	3/8"	13.61
47747	1/2"	23.48
47749	5/8"	36.35
47750	3/4"	52.00
47752	1"	89.87

## Rebar

Material conforms to ASTM A615 Grade 60. Rebar helps to maintain the integrity of concrete and stop cracking. Other materials and sizes available in the "Rebar" section of the catalog.



#### 6' Length

Part No.	Diameter	Size	Price /Ea
0953286	3/8"	#3	\$3.48
0953287	1/2"	#4	5.62
0953288	5/8"	#5	8.54
0953289	3/4"	#6	11.93

## Hexagon Stock

### Low Carbon Hex

Material is an ASTM A108 1018 CRS (cold rolled steel). 1018 has good case hardening properties, easily welded and machinable. Average tensile is 85,000 psi and Brinell is 167 average.



#### 3' Length

Part No.	Diameter	Price /Ea
0953246	1/2"	\$9.04
0953247	5/8"	10.14
0953248	3/4"	13.93
0953249	1"	25.55

## Square Stock

### Low Carbon Squares

Material is an ASTM A108 1018 CRS (cold rolled steel). 1018 has good case hardening properties, easily welded and machinable. Average tensile is 85,000 psi and Brinell hardness is 167 average.



#### 3' Length

Part No.	Diameter	Price /Ea
0953250	1/4"	\$3.17
0953251	1/2"	7.75
0953252	3/4"	15.99
0953253	1"	25.88

# PRE-CUT STOCK

## Flat Stock

### Low Carbon Flats

Material is a low carbon hot rolled steel. A general purpose steel that is easy to form, bend and weld. Parts with a thickness of 1/4" will conform to ASTM A36. Applications include general machinery, agricultural and welded parts.



#### 3' Length

Part No.	Thickness	Width	Price /Ea
0953254	1/8"	1"	\$4.20
0953255	1/8"	2"	6.84
0953256	1/4"	1"	5.98
0953257	1/4"	2"	10.19
0953258	1/4"	4"	17.56

#### 6' Length

Part No.	Thickness	Width	Price /Ea
0953290	1/8"	1"	\$5.52
0953291	1/8"	2"	10.64
0953292	1/4"	1"	8.92
0953293	1/4"	2"	17.04
0953294	1/4"	4"	31.19

### Aluminum Flats

Material is an ASTM B221 6061 Aluminum. Our aluminum flats are supplied in the T6 temper and in the standard Mill finish. 6061 is corrosion resistant, weldable and has good strength while weighing nearly 3 times less than steel. Typical Yield strength is 40,000 psi. Typical hardness is 95 Brinell.



#### 3' Length

Part No.	Thickness	Width	Price /Ea
0953259	1/8"	1"	\$4.88
0953260	1/8"	2"	8.02
0953261	1/4"	1"	8.12
0953262	1/4"	2"	14.36
0953263	1/4"	4"	27.56

#### 6' Length

Part No.	Thickness	Width	Price /Ea
0953295	1/8"	1"	\$8.29
0953296	1/8"	2"	14.68
0953297	1/4"	1"	14.89
0953298	1/4"	2"	27.58
0953299	1/4"	4"	54.46

### Stainless Steel Flats

Material is an ASTM A276 304 Stainless Steel. Good corrosion resistance, formability and easily welded. 304 is the most commonly used stainless steel and used in many food, dairy and beverage industries. Supplied in annealed condition.



#### 3' Length

Part No.	Thickness	Width	Price /Ea
0953264	1/8"	1"	\$10.53
0953265	1/8"	2"	20.57
0953266	1/4"	1"	19.76
0953267	1/4"	2"	37.57

#### 6' Length

Part No.	Thickness	Width	Price /Ea
0953300	1/8"	1"	\$19.41
0953301	1/8"	2"	39.21
0953302	1/4"	1"	37.58
0953303	1/4"	2"	72.63

## Angle Stock

### Low Carbon Angles

Material conforms to ASTM A36. These parts are structural steel and are considered Bar shape angles. Typical uses are in bolted, riveted and welded applications. 36,000 psi min yield. Other sizes and finishes are available in the "Angle" section of the catalog.



#### 6' Length

Part No.	Leg A	Leg B	Thickness	Price /Ea
0953304	1"	1"	1/8"	\$8.41
0953305	1-1/2"	1-1/2"	1/8"	12.38
0953306	2"	2"	1/8"	15.69
0953307	1"	1"	1/4"	15.29
0953308	1-1/2"	1-1/2"	1/4"	23.74
0953309	2"	2"	1/4"	28.68
0953310	3"	3"	1/4"	36.76

## Tubing Stock

### Round Tubes

Material conforms to ASTM A513. Considered ERW (electric resistance welded) low carbon mechanical tubing, it has great forming qualities and good surface quality. OD flash has been removed, some ID flash remains. Tubing 1-1/4" OD and over has a max flash height of .010". ERW has the lowest cost of all mechanical tubing.



#### 6' Length

Part No.	O.D.	I.D.	Thickness	Gauge	Price /Ea
0953320	1/2"	.402"	.049"	18	\$7.25
0953321	1"	.760"	.120"	11	25.31
0953322	1-1/2"	1.282"	.109"	12	21.52
0953323	2"	1.782"	.109"	12	29.51
0953324	3"	2.760"	.120"	11	48.88

## Square Tubes

Material conforms to ASTM A513 Type 1. Considered ERW (electronic resistance welded) low carbon mechanical tubing, it has great forming qualities and good surface quality. OD flash has been removed, some ID flash remains. ERW has the lowest cost of all mechanical tubing.



#### 6' Length

Part No.	O.D.	Thickness	Gauge	Price /Ea
0953325	1"	.120"	11	16.92
0953326	1-1/2"	.120"	11	25.45
0953327	2"	.120"	11	33.25

## Rectangular Tubes

Material conforms to ASTM A500 Grade B. Considered ERW (electric resistance welded). Structural tubing, it has a high strength-to-weight ratio. OD flash has been removed, some ID flash remains. ERW has the lowest cost of all mechanical tubing.



#### 6' Length

Part No.	O.D.	Thickness	Gauge	Price /Ea
0953328	2" x 1"	.120"	11	26.17
0953329	4" x 2"	.120"	11	51.50

## Channel Stock

### Low Carbon Channel

Material conforms to ASTM A36. These parts are structural steel and are considered C-Channels or Standard Channel. Typical uses are in bolted, riveted and welded applications. 36,000 psi min yield. Other sizes and finishes are available in the "Channel" section of the catalog.



#### 6' Length

Part No.	Leg Length	Width	Thickness	Price /Ea
0953317	3"	1.41"	.17"	\$38.68
0953318	4"	1.584"	.184"	50.49
0953319	5"	1.75"	.19"	64.69

## Round Bars

### Round Bars - Steel

- Hot Rolled Material - A36 and 4140 B7 - Standard bar lengths are 20' (240") Random Lengths, or have it "cut to length".
- Cold Drawn Material - 1018, 1045, 12L14, 4140, ETD 150 and Stressproof - Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.
- Note: Stressproof and ETD 150 are a registered Trademark of the LaSalle Steel Co.



BAR STOCK

Diameter	A36 HR Steel UOM /In	1018 Steel UOM /In	1045 Steel UOM /In	12L14 Steel UOM /In	4140 Steel UOM /In	4140 B7 Steel UOM /In	Stressproof™ UOM /In	ETD 150 UOM /In	Diameter	
	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.	Part No.		
1/8"		0950077	~		0950149	~			1/8"	
5/32"				0952051	—				5/32"	
3/16"	0999834	~	0950078	—	0950150	—			3/16"	
1/4"	0999833	—	0987113	—	0987165	~	0987333	—	1/4"	
5/16"	0999832	—	0950079	—	0950151	—			5/16"	
3/8"	0999831	—	0987114	—	0987166	—	0987334	—	3/8"	
7/16"	0999830	—	0950080	—	0950152	—			7/16"	
1/2"	0999816	—	0987115	—	0987167	—	0987335	—	1/2"	
9/16"	0999815	—	0950081	—	0950153	—			9/16"	
5/8"	0999814	—	0987116	—	0987168	—	0987336	—	5/8"	
11/16"		0950110	—		0950154	—			11/16"	
3/4"	0999813	—	0987117	—	0987169	—	0987337	—	3/4"	
13/16"		0950111	—		0950155	—			13/16"	
7/8"	0999812	—	0987118	—	0987170	—	0987338	—	7/8"	
15/16"		0950112	—		0950156	—			15/16"	
1"	0999811	—	0987119	—	0987171	—	0987339	—	1"	
1-1/16"		0950113	—		0950157	—			1-1/16"	
1-1/8"	0999810	—	0987120	—	0987172	—	0987340	—	1-1/8"	
1-3/16"		0950114	—		0950158	—			1-3/16"	
1-1/4"	0999809	—	0987121	—	0987173	—	0987341	—	1-1/4"	
1-5/16"		0950115	—		0950159	—			1-5/16"	
1-3/8"	0999808	—	0987122	—	0987174	—	0987342	—	1-3/8"	
1-7/16"		0950116	—		0950160	—			1-7/16"	
1-1/2"	0999807	—	0987123	—	0987175	—	0987343	—	1-1/2"	
1-9/16"		0950117	—						1-9/16"	
1-5/8"		0987124	—	0987176	—	0987344	—	0987445	—	1-5/8"
1-11/16"		0950118	—						1-11/16"	
1-3/4"	0999806	—	0987125	—	0987177	—	0987345	—	1-3/4"	
1-13/16"		0950119	—						1-13/16"	
1-7/8"		0987126	—	0987178	—	0987346	—	0987447	—	1-7/8"
1-15/16"		0950120	—						1-15/16"	
2"	0999805	—	0987127	—	0987179	—	0987347	—	2"	
2-1/16"		0950121	—						2-1/16"	
2-1/8"		0987128	—	0987180	—	0987348	—	0987449	—	2-1/8"
2-3/16"		0950122	—						2-3/16"	
2-1/4"	0999804	—	0987129	—	0987181	—	0987349	—	2-1/4"	
2-5/16"		0950123	—						2-5/16"	
2-3/8"		0987130	—	0987182	—	0987350	—	0987451	—	2-3/8"
2-7/16"		0950124	—						2-7/16"	
2-1/2"	0999803	—	0987131	—	0987183	—	0987351	—	2-1/2"	
2-5/8"		0987132	—	0987184	—	0987352	—	0987453	—	2-5/8"
2-3/4"		0987133	—	0987185	—	0987353	—	0987454	—	2-3/4"
2-7/8"		0987134	—	0987186	—	0987354	—	0987455	—	2-7/8"
3"	0999802	—	0987135	—	0987187	—	0987355	—	3"	
3-1/8"		0987136	—	0987188	—	0987356	—	0987457	—	3-1/8"
3-1/4"		0987137	—	0987189	—	0987357	—	0987458	—	3-1/4"
3-3/8"		0987138	—			0987358	—	0987459	—	3-3/8"
3-1/2"		0987139	—	0987190	—	0987359	—	0987460	—	3-1/2"
3-5/8"		0987140	—	0987191	—	0987360	—	0987461	—	3-5/8"
3-3/4"		0987141	—	0987192	—	0987361	—	0987462	—	3-3/4"
3-7/8"		0987142	—			0987362	—	0987463	—	3-7/8"
4"	0987143	—	0987193	—	0987363	—	0987464	—	4"	
4-1/4"		0950125	—	0950142	—	0950161	—			4-1/4"
4-1/2"		0950126	—	0950143	—	0950162	—	0950167	—	4-1/2"
4-3/4"		0950127	—	0950144	—	0950163	—			4-3/4"
5"		0950128	—	0950145	—	0950164	—	0950168	—	5"
5-1/4"		0950129	—							5-1/4"
5-1/2"		0950130	—	0950146	—	0950165	—	0950169	—	5-1/2"
5-3/4"		0950131	—							5-3/4"
6"		0950132	—	0950147	—	0950166	—	0950170	—	6"
6-1/2"		0950133	—							6-1/2"
7"		0950134	—							7"
7-1/2"		0950135	—							7-1/2"
8"		0950136	—							8"
8-1/2"		0950137	—							8-1/2"
9"		0950138	—							9"
10"		0950139	—							10"
11"		0950140	—							11"
12"		0950141	—							12"

# ROUND BARS

## Round Bars Cont.

### Round Bars - Stainless Steel

- Standard bar lengths for all grades are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



Diameter	303 SS Part No.	UOM /In	304 SS Part No.	UOM /In	316 SS Part No.	UOM /In	17-4 PH SS Part No.	UOM /In	17-4 SS H1150 Part No.	UOM /In	416 SS Part No.	UOM /In	Diameter
3/32"	0992262	^—			0992669	^—					0992913	^—	3/32"
1/8"	0992263	—	0992443	^—							0992914	—	1/8"
5/32"	0992264	—			0992670	—					0992915	—	5/32"
3/16"	0992265	—	0992444	—							0992917	—	3/16"
7/32"	0992266	—			0992674	—					0993098	^—	7/32"
1/4"	0992267	—	0992445	—	0992671	—	0950214	^—	0993099	—	0992916	—	1/4"
5/16"	0992268	—	0992446	—	0992672	—			0993100	—	0992918	—	5/16"
3/8"	0992269	—	0992447	—	0992673	—	0950215	—	0993101	—	0992919	—	3/8"
7/16"	0992270	—	0992448	—	0992674	—			0993102	—	0992920	—	7/16"
1/2"	0992271	—	0992449	—	0992675	—	0993182	—	0993103	—	0992921	—	1/2"
9/16"	0992272	—	0992450	—	0992676	—			0993104	—	0992922	—	9/16"
5/8"	0992273	—	0992451	—	0992677	—			0993105	—	0992923	—	5/8"
11/16"	0992274	—	0992452	—	0992678	—			0993106	—	0992924	—	11/16"
3/4"	0992275	—	0992453	—	0992679	—	0993183	—	0993107	—	0992925	—	3/4"
13/16"	0992276	—	0992454	—	0992680	—			0993108	—	0992926	—	13/16"
7/8"	0992277	—	0992455	—	0992681	—	0993184	—	0993109	—	0992927	—	7/8"
15/16"	0992278	—	0992456	—	0992682	—			0993110	—	0992928	—	15/16"
1"	0992279	—	0992457	—	0992683	—	0993185	—	0993111	—	0992929	—	1"
1-1/16"	0992280	—	0992458	—	0992684	—					0992930	—	1-1/16"
1-1/8"	0992281	—	0992459	—	0992685	—	0993186	—	0993113	—	0992931	—	1-1/8"
1-3/16"	0992282	—	0992460	—	0992686	—					0992932	—	1-3/16"
1-1/4"	0992283	—	0992461	—	0992687	—	0993187	—	0993115	—	0992933	—	1-1/4"
1-5/16"	0992284	—	0992462	—	0992688	—					0992934	—	1-5/16"
1-3/8"	0992285	—	0992463	—	0992689	—	0993188	—	0993117	—	0992935	—	1-3/8"
1-7/16"	0992286	—	0992464	—	0992690	—					0992936	—	1-7/16"
1-1/2"	0992287	—	0992465	—	0992691	—	0993189	—	0993119	—	0992937	—	1-1/2"
1-9/16"	0992288	—	0992466	—	0992692	—					0992938	—	1-9/16"
1-5/8"	0992289	—	0992467	—	0992693	—	0993190	—	0993121	—	0992939	—	1-5/8"
1-11/16"	0992290	—	0992468	—	0992694	—					0992940	—	1-11/16"
1-3/4"	0992291	—	0992469	—	0992695	—	0993191	—	0993123	—	0992941	—	1-3/4"
1-13/16"	0992292	—											1-13/16"
1-7/8"	0992293	—	0992470	—	0992696	—	0993192	—	0993125	—	0992943	—	1-7/8"
1-15/16"	0992294	—	0992471	—	0992697	—					0992944	—	1-15/16"
2"	0992295	—	0992472	—	0992698	—	0993193	—	0993127	—	0992945	—	2"
2-1/8"	0992296	—	0992473	—	0992699	—	0993194	—	0993128	—	0992946	—	2-1/8"
2-1/4"	0992297	—	0992474	—	0992700	—	0993195	—	0993129	—	0992947	—	2-1/4"
2-3/8"	0992298	—	0992475	—	0992701	—			0993130	—	0992948	—	2-3/8"
2-1/2"	0992299	—	0992476	—	0992702	—	0993196	—	0993131	—	0992949	—	2-1/2"
2-5/8"	0992300	—	0992477	—	0992703	—					0992950	—	2-5/8"
2-3/4"	0992301	—	0992478	—	0992704	—	0993197	—	0993133	—	0992951	—	2-3/4"
2-7/8"	0992302	—	0992479	—	0992705	—			0993134	—	0992952	—	2-7/8"
3"	0992303	—	0992480	—	0992706	—	0993198	—	0993135	—	0992953	—	3"
3-1/8"	0992304	—	0992481	—	0992707	—					0992954	—	3-1/8"
3-1/4"	0992305	—	0992482	—	0992708	—	0993199	—	0993137	—	0992955	—	3-1/4"
3-3/8"	0992306	—	0950179	—	0992709	—							3-3/8"
3-1/2"	0992307	—	0992483	—	0992710	—	0993200	—	0993139	—	0992956	—	3-1/2"
3-5/8"	0992308	—	0992484	—	0992711	—							3-5/8"
3-3/4"	0950172	—	0992485	—	0992712	—			0993141	—	0992957	—	3-3/4"
3-7/8"	0992309	—			0992713	—							3-7/8"
4"	0992310	—	0992486	—	0992714	—	0993201	—	0993143	—	0992958	—	4"
4-1/4"	0950173	—	0950180	—	0950197	—							4-1/4"
4-1/2"	0950174	—	0950181	—	0950082	—							4-1/2"
4-3/4"	0950175	—	0950182	—	0950199	—							4-3/4"
5"	0950176	—	0950183	—	0950200	—					0950216	—	5"
5-1/4"			0950184	—	0950201	—							5-1/4"
5-1/2"	0950177	—	0950185	—	0950202	—							5-1/2"
5-3/4"			0950186	—	0950203	—							5-3/4"
6"	0950178	—	0950187	—	0950204	—					0950217	—	6"
6-1/2"			0950188	—	0950205	—							6-1/2"
7"			0950189	—	0950206	—							7"
7-1/2"			0950190	—	0950207	—							7-1/2"
8"			0950191	—	0950208	—							8"
8-1/2"			0950192	—	0950209	—							8-1/2"
9"			0950193	—	0950210	—							9"
9-1/2"			0950194	—	0950211	—							9-1/2"
10"			0950195	—	0950212	—							10"
12"			0950196	—	0950213	—							12"

## Round Bars Cont.

### Round Bars - Aluminum, Brass, & Copper

- Standard bar lengths for all grades are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



Diameter	2024 Alum Part No.	UOM /In	6061 Alum Part No.	UOM /In	7075 Alum Part No.	UOM /In	360 Brass Part No.	UOM /In	464 Naval Brass Part No.	UOM /In	110 Copper Part No.	UOM /In	Diameter
1/8"			0984268	—			0986696	—			0952069	—	1/8"
5/32"							0986697	—					5/32"
3/16"			0984269	—			0986698	—	0986845	—	0952070	—	3/16"
7/32"							0986699	—					7/32"
1/4"	0984047	—	0984270	—			0986700	—	0986846	—	0952071	—	1/4"
9/32"							0986701	—					9/32"
5/16"	0950218	—	0984271	—			0986702	—	0986847	—	0952072	—	5/16"
11/32"							0986703	—					11/32"
3/8"	0984048	—	0984272	—			0986704	—	0986848	—	0952073	—	3/8"
13/32"							0986705	—					13/32"
7/16"			0984273	—			0986706	—	0986849	—	0952074	—	7/16"
15/32"							0986707	—					15/32"
1/2"	0984049	—	0984274	—			0986708	—	0986850	—	0952075	—	1/2"
17/32"							0986709	—					17/32"
9/16"							0986710	—	0986851	—	0952076	—	9/16"
5/8"	0984050	—	0984275	—	0984561	—	0986711	—	0986852	—	0952077	—	5/8"
21/32"							0986712	—					21/32"
23/32"							0986713	—					23/32"
3/4"	0984051	—	0984276	—	0984562	—	0986714	—	0986853	—	0952078	—	3/4"
25/32"							0986715	—					25/32"
7/8"	0984052	—	0984277	—	0984563	—	0986716	—	0986854	—	0952079	—	7/8"
1"	0984053	—	0984278	—	0984564	—	0986717	—	0986855	—	0952080	—	1"
1-1/8"	0984054	—	0984279	—	0984565	—	0986718	—			0952081	—	1-1/8"
1-1/4"	0984055	—	0984280	—	0984566	—	0986719	—	0986856	—	0952082	—	1-1/4"
1-3/8"	0984056	—	0984281	—	0984567	—	0986720	—			0952083	—	1-3/8"
1-1/2"	0984057	—	0984282	—	0984568	—	0986721	—	0986857	—	0952084	—	1-1/2"
1-5/8"	0984058	—	0984283	—	0984569	—	0986722	—			0952085	—	1-5/8"
1-3/4"	0984059	—	0984284	—	0984570	—	0986723	—			0952086	—	1-3/4"
1-7/8"	0984060	—	0950225	—	0984571	—					0952087	—	1-7/8"
2"	0984061	—	0984285	—	0984572	—	0986724	—	0986858	—	0952088	—	2"
2-1/8"	0984062	—	0984286	—	0984573	—							2-1/8"
2-1/4"	0984063	—	0984287	—	0984574	—	0950240	—			0952089	—	2-1/4"
2-3/8"	0984064	—			0984575	—							2-3/8"
2-1/2"	0984065	—	0984288	—	0984576	—	0950241	—			0952090	—	2-1/2"
2-5/8"	0984066	—			0984577	—							2-5/8"
2-3/4"	0984067	—	0984289	—	0984578	—	0950242	—			0952091	—	2-3/4"
2-7/8"	0984068	—											2-7/8"
3"	0984069	—	0984290	—	0984579	—	0986726	—			0952092	—	3"
3-1/8"	0984070	—	0984291	—									3-1/8"
3-1/4"	0984071	—	0984292	—	0984580	—							3-1/4"
3-3/8"	0984072	—											3-3/8"
3-1/2"	0984073	—	0984293	—	0984581	—	0950243	—					3-1/2"
3-3/4"	0950219	—	0984294	—	0984582	—							3-3/4"
4"	0950220	—	0984295	—	0984583	—	0986727	—					4"
4-1/4"			0999854	—									4-1/4"
4-1/2"	0950221	—	0950226	—			0950244	—					4-1/2"
4-3/4"			0950227	—									4-3/4"
5"	0950222	—	0950228	—			0950245	—					5"
5-1/4"			0950229	—									5-1/4"
5-1/2"	0950223	—	0950230	—									5-1/2"
5-3/4"			0950231	—									5-3/4"
6"	0950224	—	0950232	—			0986728	—					6"
6-1/2"			0950233	—									6-1/2"
7"			0950234	—									7"
7-1/2"			0950235	—									7-1/2"
8"			0950236	—									8"
9"			0950237	—									9"
10"			0950238	—									10"
12"			0950239	—									12"

# ROUND BARS, REBAR

## Round Bars Cont.

### Plastic Rods

- Nylon 101 and Delrin - Standard stock lengths are 8-10' Random, or have it "cut to length".
- Virgin Teflon - Standard stock lengths are 6' (72"), or have it "cut to length".
- UHMW - Standard stock lengths are 10' (120"), or have it "cut to length".



Diameter	Nylon 101		Delrin		Virgin Teflon		UHMW		
Diameter	Part No.	UOM /In	Part No.	UOM /In	Part No.	UOM /In	Part No.	UOM /In	Diameter
1/4"	0951211	^—	0951229	^—	0951238	^—	0951256	^—	1/4"
3/8"	0951212	—	0951230	—	0951239	—	0951257	—	3/8"
1/2"	0951213	—	0951231	—	0951240	—	0951258	—	1/2"
5/8"	0951214	—	0951232	—	0951241	—			5/8"
3/4"	0951215	—	0951233	—	0951242	—	0951259	—	3/4"
1"	0951216	—	0951234	—	0951243	—	0951260	—	1"
1-1/4"							0951261	—	1-1/4"
1-1/2"	0951217	—	0951235	—	0951244	—	0951262	—	1-1/2"
2"	0951218	—	0951236	—	0951245	—	0951263	—	2"
2-1/2"							0951264	—	2-1/2"
3"	0951219	—	0951237	—	0951246	—	0951265	—	3"

Other plastic shapes and materials available upon request.

### Rebar

#### Grade 60

Steel reinforcing bars help maintain integrity of concrete and stop cracking. Conforms to ASTM A615. Steel Rebar comes in 20' Random Lengths, or have it "cut to length".



Part No.	Diameter	Size	UOM /In
0999868	3/8"	#3	^—
0999867	1/2"	#4	—
0999866	5/8"	#5	—
0999865	3/4"	#6	—
0999864	7/8"	#7	—
0999863	1"	#8	—
0999862	1-1/8"	#9	—
0999861	1-1/4"	#10	—
0999860	1-1/2"	#11	—

#### 316 LN Stainless Steel

A non-magnetic stainless steel that is non-corrosive and doesn't need coatings or treatments. Meets ASTM A955M specifications. Sold per Inch so you can order only what you need.

Part No.	Diameter	Size	UOM /In
0952033	3/8"	#3	^—
0952034	1/2"	#4	—
0952035	5/8"	#5	—
0952036	3/4"	#6	—
0952037	7/8"	#7	—
0952038	1"	#8	—
0952039	1-1/8"	#9	—
0952040	1-1/4"	#10	—
0952041	1-1/2"	#11	—

#### 2205 Stainless Steel

Stainless steel Rebar used in decks, retaining walls, piers and sidewalks. Non-corrosive and sold per inch.

Part No.	Diameter	Size	UOM /In
0952042	3/8"	#3	^—
0952043	1/2"	#4	—
0952044	5/8"	#5	—
0952045	3/4"	#6	—
0952046	7/8"	#7	—
0952047	1"	#8	—
0952048	1-1/8"	#9	—
0952049	1-1/4"	#10	—
0952050	1-1/2"	#11	—

# HEXAGONAL BARS

## Hexagonal Bars

### Hexagonal Bars - Steel & Stainless Steel

- Cold Drawn Material - 1018 Steel, 12L14 Steel and 4140 Steel - Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Stainless Steel - Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



BAR STOCK

Diameter	1018 Steel Part No.	UOM /In	12L14 Steel Part No.	UOM /In	4140 Steel Part No.	UOM /In	303 SS Part No.	UOM /In	304 SS Part No.	UOM /In	316 SS Part No.	UOM /In	Diameter
1/8"							0950246	^—					1/8"
3/16"			0987144	^—	0987381	—	0992323	—					3/16"
1/4"	0987144	^—	0987382	—			0992324	—					1/4"
5/16"	0987145	—	0987382	—			0992325	—					5/16"
3/8"	0987146	—	0987383	—			0992326	—	0992525	^—			3/8"
7/16"	0951718	—	0987384	—	0987602	^—	0992327	—	0992526	—	0992738	^—	7/16"
1/2"	0987147	—	0987385	—	0987603	—	0992328	—	0992527	—	0992739	—	1/2"
9/16"							0992329	—	0992528	—	0992740	—	9/16"
5/8"	0987148	—	0987386	—	0987604	—	0992330	—	0992529	—	0992741	—	5/8"
11/16"							0992331	—	0992530	—	0992742	—	11/16"
3/4"	0987149	—	0987387	—	0987605	—	0992332	—	0992531	—	0992743	—	3/4"
13/16"							0992333	—	0992532	—	0992744	—	13/16"
7/8"	0987150	—	0987388	—	0987606	—	0992334	—	0992533	—	0992745	—	7/8"
15/16"							0992335	—	0992534	—	0992746	—	15/16"
1"	0987151	—	0987389	—	0987607	—	0992336	—	0992535	—	0992747	—	1"
1-1/16"							0992337	—	0950247	—	0992748	—	1-1/16"
1-1/8"					0987608	—	0992338	—	0992536	—	0992749	—	1-1/8"
1-1/4"	0987152	—	0987390	—	0987609	—	0992339	—	0992537	—	0992750	—	1-1/4"
1-5/16"							0992340	—			0992751	—	1-5/16"
1-3/8"			0987391	—	0987610	—	0992341	—	0992538	—	0992752	—	1-3/8"
1-1/2"	0987153	—	0987392	—	0987611	—	0992342	—	0992539	—	0992753	—	1-1/2"
1-5/8"							0992343	—	0992540	—	0992754	—	1-5/8"
1-3/4"			0987393	—	0987612	—	0992344	—	0992541	—	0992755	—	1-3/4"
2"			0987394	—	0987613	—	0992345	—	0992542	—	0992756	—	2"
2-1/4"							0992346	—	0992543	—	0992757	—	2-1/4"
2-3/8"							0992347	—			0992758	—	2-3/8"
2-1/2"			0950249	—			0992348	—	0992544	—	0992759	—	2-1/2"
2-3/4"							0992349	—					2-3/4"
3"			0950250	—			0992350	—	0992545	—			3"

### Hexagonal Bars - Aluminum & Brass

- Standard bar lengths for all grades are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



Diameter	2024 Alum Part No.	UOM /In	6061 Alum Part No.	UOM /In	360 Brass Part No.	UOM /In	Diameter
1/8"					0950253	^—	1/8"
3/16"					0986675	—	3/16"
1/4"	0984089	^—	0984319	^—	0986676	—	1/4"
5/16"					0986677	—	5/16"
3/8"			0984320	—	0986678	—	3/8"
7/16"					0986679	—	7/16"
1/2"	0984090	—	0950252	—	0986680	—	1/2"
9/16"					0986681	—	9/16"
5/8"	0950251	—	0984321	—	0986682	—	5/8"
3/4"	0984091	—	0984322	—	0986683	—	3/4"
7/8"	0984092	—	0984323	—	0986684	—	7/8"
1"	0984093	—	0984324	—	0986685	—	1"
1-1/8"	0984094	—	0984325	—	0986686	—	1-1/8"
1-1/4"	0984095	—	0984326	—	0986687	—	1-1/4"
1-3/8"	0984096	—			0986688	—	1-3/8"
1-1/2"	0984097	—	0984327	—	0986689	—	1-1/2"
1-5/8"	0984098	—			0986690	—	1-5/8"
1-3/4"	0984099	—	0984328	—	0986691	—	1-3/4"
2"	0984100	—	0984329	—	0986692	—	2"
2-1/4"					0986693	—	2-1/4"
2-1/2"					0986694	—	2-1/2"
3"					0986695	—	3"

# SQUARE BARS

## Square Bars

### Square Bars - Aluminum and Stainless Steel

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



**BAR STOCK**

Size	2024 Alum Part No.	UOM /in	6061 Alum Part No.	UOM /in	303 SS Part No.	UOM /in	304 SS Part No.	UOM /in	316 SS Part No.	UOM /in	Size
3/16"					0992351	^—			0992760	^—	3/16"
1/4"	0984101	^—	0984330	^—	0992352	—	0992546	^—	0992761	—	1/4"
5/16"					0992353	—			0992762	—	5/16"
3/8"	0984102	—	0984331	—	0992354	—	0992547	—	0992763	—	3/8"
7/16"					0992355	—			0992764	—	7/16"
1/2"	0984103	—	0984332	—	0992356	—	0992548	—	0992765	—	1/2"
9/16"					0992357	—			0992766	—	9/16"
5/8"	0984104	—	0984333	—	0992358	—	0992549	—	0992767	—	5/8"
3/4"	0984105	—	0984334	—	0992359	—	0992550	—	0992768	—	3/4"
7/8"			0984335	—	0992360	—	0992551	—	0992769	—	7/8"
1"	0984106	—	0984336	—	0992361	—	0992552	—	0992770	—	1"
1-1/8"					0992362	—			0992771	—	1-1/8"
1-1/4"	0950258	—	0984337	—	0992363	—	0992553	—	0992772	—	1-1/4"
1-3/8"					0992364	—					1-3/8"
1-1/2"	0984108	—	0984338	—	0992365	—	0992554	—	0992773	—	1-1/2"
1-5/8"			0984339	—	0992366	—					1-5/8"
1-3/4"	0984109	—	0984340	—	0992367	—	0950260	—	0992774	—	1-3/4"
2"	0984110	—	0984341	—	0992368	—	0992555	—	0992775	—	2"
2-1/4"			0984342	—							2-1/4"
2-1/2"	0984112	—	0984343	—			0950261	—	0992776	—	2-1/2"
2-3/4"			0984344	—							2-3/4"
3"	0984113	—	0984345	—			0950262	—	0950263	—	3"
3-1/4"			0984346	—							3-1/4"
3-1/2"	0984114	—	0984347	—							3-1/2"
4"	0984115	—	0984348	—							4"
5"			0984349	—							5"
6"			0950259	—							6"

### Square Bars - Steel, Copper and Brass

- Hot Rolled Material - A36 Steel - Standard bar lengths are 20' (240") Random Lengths, or have it "cut to length". Part #0999829 will be just Hot Rolled Bar.
- Cold Drawn Material - 1018 Steel, 1045 Steel and 12L14 Steel - Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Copper and Brass - Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



Size	A36 HR Steel Part No.	UOM /in	1018 Steel Part No.	UOM /in	1045 Steel Part No.	UOM /in	12L14 Steel Part No.	UOM /in	4140 Steel Part No.	UOM /in	110 Copper Part No.	UOM /in	360 Brass Part No.	UOM /in	Size
1/8"			0950255	^—								0986646	^—	1/8"	
5/32"												0986647	—	5/32"	
3/16"			0950256	—								0986648	—	3/16"	
1/4"			0999999	—	0950257	^—	0987364	^—	0987465	^—	0986120	^—	0986649	—	1/4"
5/16"			0999998	—			0987365	—	0987466	—	0986121	—	0986650	—	5/16"
3/8"	0999829	^—	0999997	—			0987366	—	0987467	—	0986122	—	0986651	—	3/8"
7/16"			0999996	—			0987367	—	0987468	—			0986652	—	7/16"
1/2"	0999828	—	0999995	—	0987194	—	0987368	—	0987469	—	0986123	—	0986653	—	1/2"
9/16"			0999994	—			0987369	—	0987470	—			0986654	—	9/16"
5/8"	0999827	—	0999993	—			0987370	—	0987471	—	0986124	—	0986655	—	5/8"
11/16"			0999992	—					0987472	—					11/16"
3/4"	0999826	—	0999991	—	0987195	—	0987371	—	0987473	—	0986125	—	0986656	—	3/4"
7/8"	0999825	—	0999990	—			0987372	—	0987474	—					7/8"
1"	0999824	—	0999989	—	0987196	—	0987373	—	0987475	—	0986126	—	0986657	—	1"
1-1/8"	0999823	—	0999988	—			0987374	—	0987476	—					1-1/8"
1-1/4"	0999822	—	0999987	—	0987197	—	0987375	—	0987477	—	0986127	—	0986658	—	1-1/4"
1-3/8"			0999986	—			0987376	—	0987478	—					1-3/8"
1-1/2"	0999821	—	0999985	—	0987198	—	0987377	—	0987479	—	0986128	—	0986659	—	1-1/2"
1-3/4"			0999984	—	0987199	—	0987378	—	0987480	—			0986660	—	1-3/4"
2"	0999820	—	0999983	—	0987200	—	0987379	—	0987481	—	0986129	—	0986661	—	2"
2-1/4"	0999819	—	0999982	—					0987482	—			0986662	—	2-1/4"
2-1/2"	0999818	—	0999981	—			0987380	—	0987483	—	0986130	—	0986663	—	2-1/2"
2-3/4"			0999980	—					0987484	—					2-3/4"
3"	0999817	—	0999979	—			0950254	—	0987485	—	0986131	—	0986664	—	3"
3-1/4"			0999978	—					0987486	—					3-1/4"
3-1/2"			0999977	—					0987487	—					3-1/2"

# RECTANGULAR BARS

## Rectangular Bars

### Rectangular Bars

#### A36 Steel

- Hot Rolled, Standard bar lengths are 20' (240") Random Lengths, or have it "cut to length".

- Size Tolerances for these parts are found at the end of the section.



Part No.	Thickness	Width	UOM /In
0999801	1/8"	1/2"	^
0999800	1/8"	5/8"	—
0999799	1/8"	3/4"	—
0999798	1/8"	7/8"	—
0999797	1/8"	1"	—
0999796	1/8"	1-1/4"	—
0999795	1/8"	1-1/2"	—
0999794	1/8"	1-3/4"	—
0999793	1/8"	2"	—
0999792	1/8"	2-1/4"	—
0999791	1/8"	2-1/2"	—
0999790	1/8"	2-3/4"	—
0999789	1/8"	3"	—
0999788	1/8"	3-1/2"	—
0999787	1/8"	4"	—
0999786	1/8"	4-1/2"	—
0999785	1/8"	5"	—
0999784	1/8"	5-1/2"	—
0999783	1/8"	6"	—
0999782	3/16"	1/2"	—
0999781	3/16"	5/8"	—
0999780	3/16"	3/4"	—
0999779	3/16"	7/8"	—
0999778	3/16"	1"	—
0999777	3/16"	1-1/4"	—
0999776	3/16"	1-1/2"	—
0999775	3/16"	1-3/4"	—
0999774	3/16"	2"	—
0999773	3/16"	2-1/4"	—
0999772	3/16"	2-1/2"	—
0999771	3/16"	2-3/4"	—
0999770	3/16"	3"	—
0999769	3/16"	3-1/4"	—
0999768	3/16"	3-1/2"	—
0999767	3/16"	4"	—
0999766	3/16"	4-1/2"	—
0999765	3/16"	5"	—
0999764	3/16"	5-1/2"	—
0999763	3/16"	6"	—
0999762	3/16"	8"	—
0999760	1/4"	1/2"	—
0999759	1/4"	5/8"	—
0999758	1/4"	3/4"	—
0999757	1/4"	1"	—
0999756	1/4"	1-1/4"	—
0999755	1/4"	1-3/8"	—
0999754	1/4"	1-1/2"	—
0999753	1/4"	1-3/4"	—
0999752	1/4"	2"	—
0999751	1/4"	2-1/4"	—
0999750	1/4"	2-1/2"	—
0999749	1/4"	2-3/4"	—
0999748	1/4"	3"	—
0999747	1/4"	3-1/4"	—
0999746	1/4"	3-1/2"	—
0999745	1/4"	3-3/4"	—
0999744	1/4"	4"	—
0999743	1/4"	4-1/2"	—
0999742	1/4"	5"	—

Part No.	Thickness	Width	UOM /In
0999741	1/4"	5-1/2"	^
0999740	1/4"	6"	—
0999739	1/4"	7"	—
0999738	1/4"	8"	—
0999737	1/4"	10"	—
0999736	1/4"	11"	—
0999735	1/4"	12"	—
0999734	5/16"	1/2"	—
0999732	5/16"	3/4"	—
0999731	5/16"	1"	—
0999730	5/16"	1-1/4"	—
0999729	5/16"	1-1/2"	—
0999728	5/16"	1-3/4"	—
0999727	5/16"	2"	—
0999726	5/16"	2-1/4"	—
0999725	5/16"	2-1/2"	—
0999724	5/16"	3"	—
0999723	5/16"	3-1/2"	—
0999722	5/16"	4"	—
0999721	5/16"	4-1/2"	—
0999720	5/16"	5"	—
0999719	5/16"	6"	—
0999718	3/8"	1/2"	—
0999717	3/8"	3/4"	—
0999716	3/8"	1"	—
0999715	3/8"	1-1/4"	—
0999714	3/8"	1-3/8"	—
0999713	3/8"	1-1/2"	—
0999712	3/8"	1-5/8"	—
0999711	3/8"	1-3/4"	—
0999710	3/8"	2"	—
0999709	3/8"	2-1/4"	—
0999708	3/8"	2-1/2"	—
0999707	3/8"	2-3/4"	—
0999706	3/8"	3"	—
0999705	3/8"	3-1/4"	—
0999704	3/8"	3-1/2"	—
0999703	3/8"	4"	—
0999702	3/8"	4-1/2"	—
0999701	3/8"	5"	—
0999700	3/8"	5-1/2"	—
0999699	3/8"	6"	—
0999698	3/8"	6-1/2"	—
0999697	3/8"	7"	—
0999696	3/8"	8"	—
0999695	3/8"	10"	—
0999694	3/8"	12"	—
0999693	1/2"	3/4"	—
0999692	1/2"	1"	—
0999691	1/2"	1-1/8"	—
0999690	1/2"	1-1/4"	—
0999689	1/2"	1-1/2"	—
0999688	1/2"	1-3/4"	—
0999687	1/2"	2"	—
0999686	1/2"	2-1/4"	—
0999685	1/2"	2-1/2"	—
0999684	1/2"	2-3/4"	—
0999683	1/2"	3"	—
0999682	1/2"	3-1/4"	—
0999681	1/2"	3-1/2"	—
0999680	1/2"	3-3/4"	—
0999679	1/2"	4"	—
0999678	1/2"	4-1/2"	—
0999677	1/2"	5"	—
0999676	1/2"	5-1/2"	—
0999675	1/2"	6"	—
0999674	1/2"	7"	—
0999673	1/2"	8"	—
0999672	1/2"	9"	—
0999671	1/2"	10"	—
0999670	1/2"	11"	—
0999669	1/2"	12"	—
0999668	5/8"	3/4"	—
0999667	5/8"	1"	—
0999665	5/8"	1-1/4"	—

Part No.	Thickness	Width	UOM /In
0999664	5/8"	1-1/2"	^
0999663	5/8"	1-3/4"	—
0999662	5/8"	2"	—
0999661	5/8"	2-1/2"	—
0999660	5/8"	2-3/4"	—
0999659	5/8"	3"	—
0999658	5/8"	3-1/2"	—
0999657	5/8"	4"	—
0999656	5/8"	4-1/2"	—
0999655	5/8"	5"	—
0999654	5/8"	6"	—
0999653	5/8"	7"	—
0999652	5/8"	8"	—
0999651	5/8"	10"	—
0999649	3/4"	1"	—
0999648	3/4"	1-1/4"	—
0999647	3/4"	1-1/2"	—
0999646	3/4"	1-3/4"	—
0999645	3/4"	2"	—
0999644	3/4"	2-1/4"	—
0999643	3/4"	2-1/2"	—
0999642	3/4"	2-3/4"	—
0999641	3/4"	3"	—
0999640	3/4"	3-1/2"	—
0999639	3/4"	4"	—
0999638	3/4"	4-1/2"	—
0999637	3/4"	5"	—
0999636	3/4"	6"	—
0999635	3/4"	7"	—
0999634	3/4"	8"	—
0999633	3/4"	9"	—
0999632	3/4"	10"	—
0999631	3/4"	12"	—
0999630	1"	1-1/4"	—
0999629	1"	1-1/2"	—
0999628	1"	1-3/4"	—
0999627	1"	2"	—
0999626	1"	2-1/2"	—
0999625	1"	2-3/4"	—
0999624	1"	3"	—
0999623	1"	3-1/2"	—
0999622	1"	4"	—
0999621	1"	4-1/2"	—
0999620	1"	5"	—
0999619	1"	5-1/2"	—
0999618	1"	6"	—
0999617	1"	7"	—
0999616	1"	8"	—
0999615	1"	9"	—
0999614	1"	10"	—
0999613	1"	12"	—
0999612	1-1/4"	2"	—
0999611	1-1/4"	2-1/4"	—
0999610	1-1/4"	2-1/2"	—
0999609	1-1/4"	3"	—
0999608	1-1/4"	4"	—
0999607	1-1/4"	6"	—
0999606	1-1/4"	7"	—
0999605	1-1/4"	8"	—
0999604	1-1/2"	2"	—
0999603	1-1/2"	2-1/2"	—
0999602	1-1/2"	3"	—
0999601	1-1/2"	3-1/2"	—
0999600	1-1/2"	4"	—
0999599	1-1/2"	5"	—
0999598	1-1/2"	6"	—
0999597	2"	2-1/2"	—
0999596	2"	3"	—
0999595	2"	4"	—
0999594	2"	4-1/2"	—
0999593	2"	5"	—
0999592	2"	6"	—

# RECTANGULAR BARS

## Rectangular Bars Cont.

### Rectangular Bars 1018 Steel

- Cold Drawn, Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



**BAR STOCK**

Part No.	Thickness	Width	UOM /In
0986893	1/8"	1/4"	—
0986894	1/8"	3/8"	—
0986895	1/8"	1/2"	—
0986896	1/8"	5/8"	—
0986897	1/8"	3/4"	—
0950264	1/8"	7/8"	—
0986898	1/8"	1"	—
0986899	1/8"	1-1/8"	—
0986900	1/8"	1-1/4"	—
0986901	1/8"	1-1/2"	—
0986902	1/8"	2"	—
0986903	1/8"	2-1/2"	—
0950265	1/8"	3"	—
0950266	1/8"	3-1/2"	—
0950267	1/8"	4"	—
0950268	1/8"	4-1/2"	—
0950269	1/8"	5"	—
0950271	1/8"	6"	—
0950272	3/16"	1/4"	—
0950273	3/16"	3/8"	—
0986904	3/16"	1/2"	—
0986905	3/16"	5/8"	—
0986906	3/16"	3/4"	—
0986907	3/16"	1"	—
0986908	3/16"	1-1/4"	—
0986909	3/16"	1-1/2"	—
0986910	3/16"	1-3/4"	—
0986911	3/16"	2"	—
0986912	3/16"	2-1/4"	—
0986913	3/16"	2-1/2"	—
0986914	3/16"	3"	—
0986915	3/16"	4"	—
0950274	3/16"	5"	—
0950275	3/16"	6"	—
0986916	1/4"	3/8"	—
0986917	1/4"	1/2"	—
0986918	1/4"	5/8"	—
0986919	1/4"	3/4"	—
0986920	1/4"	7/8"	—
0986921	1/4"	1"	—
0986922	1/4"	1-1/4"	—
0986923	1/4"	1-3/8"	—
0986924	1/4"	1-1/2"	—
0986925	1/4"	1-3/4"	—
0986926	1/4"	2"	—
0986927	1/4"	2-1/4"	—
0986928	1/4"	2-1/2"	—
0986929	1/4"	2-3/4"	—
0986930	1/4"	3"	—
0986931	1/4"	3-1/4"	—
0986932	1/4"	3-1/2"	—
0986933	1/4"	3-3/4"	—
0986934	1/4"	4"	—
0986935	1/4"	4-1/2"	—
0986936	1/4"	5"	—
0986937	1/4"	5-1/2"	—
0986938	1/4"	6"	—
0950276	1/4"	7"	—
0950277	1/4"	8"	—
0950278	1/4"	10"	—
0950279	1/4"	12"	—
0986939	5/16"	1/2"	—
0950280	5/16"	5/8"	—

Part No.	Thickness	Width	UOM /In
0986940	5/16"	3/4"	—
0986941	5/16"	1"	—
0986942	5/16"	1-1/4"	—
0986943	5/16"	1-1/2"	—
0986944	5/16"	1-3/4"	—
0986945	5/16"	2"	—
0950281	5/16"	2-1/4"	—
0986946	5/16"	2-1/2"	—
0986947	5/16"	2-3/4"	—
0986948	5/16"	3"	—
0986949	5/16"	3-1/2"	—
0986950	5/16"	4"	—
0950282	5/16"	5"	—
0986951	5/16"	6"	—
0950283	5/16"	7"	—
0950284	5/16"	8"	—
0950285	5/16"	10"	—
0950286	5/16"	12"	—
0986952	3/8"	1/2"	—
0986953	3/8"	5/8"	—
0986954	3/8"	3/4"	—
0950287	3/8"	7/8"	—
0986955	3/8"	1"	—
0986956	3/8"	1-1/4"	—
0986957	3/8"	1-3/8"	—
0986958	3/8"	1-1/2"	—
0986959	3/8"	1-3/4"	—
0986960	3/8"	2"	—
0986961	3/8"	2-1/4"	—
0986962	3/8"	2-1/2"	—
0986963	3/8"	2-3/4"	—
0986964	3/8"	3"	—
0950288	3/8"	3-1/4"	—
0986965	3/8"	3-1/2"	—
0986966	3/8"	3-3/4"	—
0986967	3/8"	4"	—
0986968	3/8"	4-1/2"	—
0986969	3/8"	5"	—
0986970	3/8"	5-1/2"	—
0986971	3/8"	6"	—
0950289	3/8"	7"	—
0950290	3/8"	8"	—
0950291	3/8"	10"	—
0950292	3/8"	12"	—
0986972	1/2"	5/8"	—
0986973	1/2"	3/4"	—
0986974	1/2"	7/8"	—
0986975	1/2"	1"	—
0986976	1/2"	1-1/4"	—
0986977	1/2"	1-3/8"	—
0986978	1/2"	1-1/2"	—
0986979	1/2"	1-5/8"	—
0986980	1/2"	1-3/4"	—
0986981	1/2"	2"	—
0986982	1/2"	2-1/4"	—
0986983	1/2"	2-1/2"	—
0986984	1/2"	2-3/4"	—
0986985	1/2"	3"	—
0986986	1/2"	3-1/4"	—
0986987	1/2"	3-1/2"	—
0950293	1/2"	3-3/4"	—
0986988	1/2"	4"	—
0950294	1/2"	4-1/4"	—
0986989	1/2"	4-1/2"	—
0950295	1/2"	4-3/4"	—
0986990	1/2"	5"	—
0986991	1/2"	5-1/2"	—
0986992	1/2"	6"	—
0950296	1/2"	7"	—
0950297	1/2"	8"	—
0950298	1/2"	9"	—
0950299	1/2"	10"	—
0950300	1/2"	12"	—
0986993	5/8"	3/4"	—

# RECTANGULAR BARS

## Rectangular Bars Cont.

Part No.	Thickness	Width	UOM /In
0987051	1"	4"	^
0950318	1"	4-1/2"	—
0987052	1"	5"	—
0987053	1"	5-1/2"	—
0987054	1"	6"	—
0950319	1"	6-1/2"	—
0950320	1"	7"	—
0950321	1"	8"	—
0950322	1"	9"	—
0950323	1"	10"	—
0950324	1"	12"	—
0987055	1-1/8"	1-1/2"	—
0950325	1-1/8"	1-3/4"	—
0987056	1-1/8"	2"	—
0950326	1-1/8"	2-1/2"	—
0987057	1-1/8"	3"	—
0987058	1-1/8"	4"	—
0987059	1-1/4"	1-1/2"	—
0987060	1-1/4"	1-3/4"	—
0987061	1-1/4"	2"	—
0987062	1-1/4"	2-1/4"	—
0987063	1-1/4"	2-1/2"	—
0950327	1-1/4"	2-3/4"	—
0987064	1-1/4"	3"	—
0987065	1-1/4"	3-1/4"	—
0987066	1-1/4"	3-1/2"	—
0950329	1-1/4"	3-3/4"	—
0987067	1-1/4"	4"	—
0987068	1-1/4"	4-1/2"	—
0987069	1-1/4"	5"	—
0950330	1-1/4"	5-1/2"	—
0987070	1-1/4"	6"	—
0950331	1-1/4"	8"	—
0950332	1-1/4"	10"	—
0950333	1-1/4"	12"	—
0987071	1-1/2"	1-3/4"	—
0987072	1-1/2"	2"	—
0987073	1-1/2"	2-1/4"	—
0987074	1-1/2"	2-1/2"	—
0987075	1-1/2"	2-3/4"	—
0987076	1-1/2"	3"	—
0950334	1-1/2"	3-1/4"	—
0987077	1-1/2"	3-1/2"	—
0987078	1-1/2"	4"	—
0987079	1-1/2"	4-1/2"	—
0987080	1-1/2"	5"	—
0987081	1-1/2"	5-1/2"	—
0987082	1-1/2"	6"	—
0950335	1-1/2"	8"	—
0950336	1-1/2"	10"	—
0950337	1-1/2"	12"	—
0987083	1-3/4"	2"	—
0987084	1-3/4"	2-1/4"	—
0987085	1-3/4"	2-1/2"	—
0950338	1-3/4"	2-3/4"	—
0987086	1-3/4"	3"	—
0987087	1-3/4"	3-1/2"	—
0987088	1-3/4"	4"	—
0950339	1-3/4"	4-1/2"	—
0950340	1-3/4"	5"	—
0950341	1-3/4"	5-1/2"	—
0987089	1-3/4"	6"	—
0987090	2"	2-1/4"	—
0987091	2"	2-1/2"	—
0950342	2"	2-3/4"	—
0987092	2"	3"	—
0987093	2"	3-1/2"	—
0987094	2"	4"	—
0987095	2"	4-1/2"	—
0987096	2"	5"	—
0987097	2"	6"	—
0950343	2"	8"	—

Part No.	Thickness	Width	UOM /In
0950344	2"	10"	^
0950345	2"	12"	—
0950346	2-1/4"	2-1/2"	—
0987098	2-1/4"	3"	—
0987099	2-1/4"	3-1/2"	—
0987100	2-1/4"	4"	—
0950347	2-1/4"	5"	—
0950348	2-1/4"	6"	—
0950349	2-1/2"	2-3/4"	—
0987101	2-1/2"	3"	—
0987102	2-1/2"	3-1/2"	—
0987103	2-1/2"	4"	—
0950350	2-1/2"	4-1/2"	—
0987104	2-1/2"	5"	—
0987105	2-1/2"	6"	—
0950351	2-1/2"	8"	—
0950352	2-1/2"	10"	—
0950353	2-1/2"	12"	—
0987106	3"	3-1/2"	—
0987107	3"	4"	—
0950354	3"	4-1/2"	—
0987108	3"	5"	—
0987109	3"	6"	—
0950355	3"	8"	—
0950356	3"	10"	—
0950357	3"	12"	—
0950358	3-1/2"	4"	—
0987110	3-1/2"	5"	—
0987111	3-1/2"	6"	—
0987112	4"	6"	—
0950359	4-1/2"	5"	—

Part No.	Thickness	Width	UOM /In
0984122	5/8"	3/4"	^
0984127	5/8"	1"	—
0984133	5/8"	1-1/4"	—
0984141	5/8"	1-1/2"	—
0984153	5/8"	2"	—
0984128	3/4"	1"	—
0984134	3/4"	1-1/4"	—
0984142	3/4"	1-1/2"	—
0984147	3/4"	1-3/4"	—
0984154	3/4"	2"	—
0984163	3/4"	2-1/2"	—
0984171	3/4"	3"	—
0984178	3/4"	3-1/2"	—
0984183	3/4"	4"	—
0984191	3/4"	5"	—
0984196	3/4"	6"	—
0984135	1"	1-1/4"	—
0984143	1"	1-1/2"	—
0984148	1"	1-3/4"	—
0984155	1"	2"	—
0984164	1"	2-1/2"	—
0984172	1"	3"	—
0984179	1"	3-1/2"	—
0984184	1"	4"	—
0984192	1"	5"	—
0984197	1"	6"	—
0984144	1-1/4"	1-1/2"	—
0984156	1-1/4"	2"	—
0984165	1-1/4"	2-1/2"	—
0984173	1-1/4"	3"	—
0984185	1-1/4"	4"	—
0984157	1-1/2"	2"	—
0984166	1-1/2"	2-1/2"	—
0984174	1-1/2"	3"	—
0984186	1-1/2"	4"	—
0984198	1-1/2"	6"	—
0984158	1-3/4"	2"	—
0984175	1-3/4"	3"	—
0984187	1-3/4"	4"	—
0984199	1-3/4"	6"	—
0984159	2"	2-1/4"	—
0984167	2"	2-1/2"	—
0984176	2"	3"	—
0984188	2"	4"	—
0984200	2"	6"	—
0984177	2-1/2"	3"	—
0984189	2-1/2"	4"	—
0984201	2-1/2"	6"	—
0984190	3"	4"	—
0984193	3"	5"	—
0984202	3"	6"	—

## Rectangular Bars 2024 Aluminum

- Standard bar lengths are 12'(144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



Part No.	Thickness	Width	UOM /In
0984123	1/8"	1"	^
0950360	1/8"	1-1/2"	—
0984149	1/8"	2"	—
0984116	3/16"	1/2"	—
0950361	3/16"	1"	—
0984129	3/16"	1-1/4"	—
0984136	3/16"	1-1/2"	—
0984117	1/4"	1/2"	—
0984119	1/4"	3/4"	—
0984124	1/4"	1"	—
0984130	1/4"	1-1/4"	—
0984137	1/4"	1-1/2"	—
0984145	1/4"	1-3/4"	—
0984150	1/4"	2"	—
0984160	1/4"	2-1/2"	—
0984168	1/4"	3"	—
0984180	1/4"	4"	—
0984138	5/16"	1-1/2"	—
0984118	3/8"	1/2"	—
0984120	3/8"	3/4"	—
0984125	3/8"	1"	—
0984131	3/8"	1-1/4"	—
0984139	3/8"	1-1/2"	—
0984151	3/8"	2"	—
0984161	3/8"	2-1/2"	—
0984169	3/8"	3"	—
0984181	3/8"	4"	—
0984194	3/8"	6"	—
0984121	1/2"	3/4"	—
0984126	1/2"	1"	—
0984132	1/2"	1-1/4"	—
0984140	1/2"	1-1/2"	—
0984146	1/2"	1-3/4"	—
0984152	1/2"	2"	—
0984162	1/2"	2-1/2"	—
0984170	1/2"	3"	—
0984182	1/2"	4"	—
0984195	1/2"	6"	—

The : symbol after a price denotes that it is a Direct Ship Product (DSP) and shipping, availability & lead times may vary.

Metals, Alloys & Materials

# RECTANGULAR BARS

## Rectangular Bars Cont.

### Rectangular Bars

#### 6061 Aluminum

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.

**BAR STOCK**



Part No.	Thickness	Width	UOM /In
0950362	1/8"	1/2"	^
0950363	1/8"	3/4"	—
0984354	1/8"	1"	—
0950364	1/8"	1-1/4"	—
0950365	1/8"	1-1/2"	—
0984370	1/8"	2"	—
0984382	1/8"	3"	—
0984397	1/8"	4"	—
0984350	3/16"	1/2"	—
0984352	3/16"	3/4"	—
0984355	3/16"	1"	—
0984362	3/16"	1-1/2"	—
0984371	3/16"	2"	—
0950366	3/16"	2-1/2"	—
0984383	3/16"	3"	—
0984398	3/16"	4"	—
0984351	1/4"	1/2"	—
0984353	1/4"	3/4"	—
0984356	1/4"	1"	—
0950367	1/4"	1-1/4"	—
0984363	1/4"	1-1/2"	—
0950368	1/4"	1-3/4"	—
0984372	1/4"	2"	—
0950369	1/4"	2-1/2"	—
0984384	1/4"	3"	—
0950370	1/4"	3-1/2"	—
0984399	1/4"	4"	—
0950371	1/4"	4-1/2"	—
0984411	1/4"	5"	—
0984418	1/4"	6"	—
0984427	1/4"	8"	—
0950372	1/4"	10"	—
0950373	1/4"	12"	—
0984357	5/16"	1"	—
0984364	5/16"	1-1/2"	—
0984373	5/16"	2"	—
0984385	5/16"	3"	—
0950374	3/8"	1/2"	—
0950375	3/8"	3/4"	—
0984358	3/8"	1"	—
0950376	3/8"	1-1/4"	—
0984365	3/8"	1-1/2"	—
0984374	3/8"	2"	—
0950377	3/8"	2-1/2"	—
0984386	3/8"	3"	—
0984400	3/8"	4"	—
0984412	3/8"	5"	—
0984419	3/8"	6"	—
0950378	3/8"	8"	—
0950379	3/8"	10"	—
0950380	3/8"	12"	—
0950381	1/2"	3/4"	—
0984359	1/2"	1"	—
0950382	1/2"	1-1/4"	—
0984366	1/2"	1-1/2"	—
0950383	1/2"	1-3/4"	—
0984375	1/2"	2"	—
0950384	1/2"	2-1/2"	—
0984387	1/2"	3"	—
0950385	1/2"	3-1/2"	—
0984401	1/2"	4"	—
0984413	1/2"	5"	—
0984420	1/2"	6"	—
0984428	1/2"	8"	—
0950386	1/2"	10"	—

Part No.	Thickness	Width	UOM /In
0950387	1/2"	12"	^
0984360	5/8"	1"	—
0950388	5/8"	1-1/4"	—
0984367	5/8"	1-1/2"	—
0984376	5/8"	2"	—
0950389	5/8"	2-1/2"	—
0984388	5/8"	3"	—
0984402	5/8"	4"	—
0984414	5/8"	5"	—
0950390	5/8"	6"	—
0984361	3/4"	1"	—
0950391	3/4"	1-1/4"	—
0984368	3/4"	1-1/2"	—
0984377	3/4"	2"	—
0950392	3/4"	2-1/2"	—
0984389	3/4"	3"	—
0950393	3/4"	3-1/2"	—
0984403	3/4"	4"	—
0950394	3/4"	5"	—
0984421	3/4"	6"	—
0950395	3/4"	8"	—
0950396	3/4"	10"	—
0950397	3/4"	12"	—
0950398	1"	1-1/4"	—
0984369	1"	1-1/2"	—
0950399	1"	1-3/4"	—
0984378	1"	2"	—
0950400	1"	2-1/2"	—
0984390	1"	3"	—
0950401	1"	3-1/2"	—
0984404	1"	4"	—
0950402	1"	5"	—
0984422	1"	6"	—
0950403	1"	8"	—
0950404	1"	10"	—
0950405	1"	12"	—
0950406	1-1/4"	1-1/2"	—
0984379	1-1/4"	2"	—
0950407	1-1/4"	2-1/2"	—
0984391	1-1/4"	3"	—
0984405	1-1/4"	4"	—
0950408	1-1/4"	4-1/2"	—
0950409	1-1/4"	5"	—
0950410	1-1/4"	6"	—
0950411	1-1/4"	8"	—
0950412	1-1/4"	12"	—
0984380	1-1/2"	2"	—
0950413	1-1/2"	2-1/2"	—
0984392	1-1/2"	3"	—
0950414	1-1/2"	3-1/2"	—
0984406	1-1/2"	4"	—
0950415	1-1/2"	5"	—
0984423	1-1/2"	6"	—
0950416	1-1/2"	8"	—
0950417	1-1/2"	10"	—
0950418	1-1/2"	12"	—
0984381	2"	2-1/2"	—
0984393	2"	3"	—
0950419	2"	3-1/2"	—
0984407	2"	4"	—
0950420	2"	5"	—
0984424	2"	6"	—
0950421	2"	8"	—
0950422	2"	10"	—
0950423	2"	12"	—
0984394	2-1/2"	3"	—
0984395	2-1/2"	3-1/2"	—
0984408	2-1/2"	4"	—
0984415	2-1/2"	5"	—
0984396	3"	3-1/2"	—
0984409	3"	4"	—
0984410	3"	4-1/2"	—
0984416	3"	5"	—
0984425	3"	6"	—
0984417	4"	5"	—
0984426	4"	6"	—

## Rectangular Bar 303 Stainless Steel

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



Part No.	Thickness	Width	UOM /In
0992369	1/8"	1/2"	^
0992370	1/8"	5/8"	—
0992371	1/8"	3/4"	—
0992372	1/8"	1"	—
0992373	1/8"	1-1/4"	—
0992374	1/8"	1-1/2"	—
0992375	1/8"	2"	—
0992376	1/8"	3"	—
0992377	1/8"	4"	—
0992378	3/16"	1/2"	—
0950497	3/16"	3/4"	—
0992379	3/16"	1"	—
0992380	3/16"	1-1/4"	—
0992381	3/16"	1-1/2"	—
0992382	3/16"	2"	—
0992383	3/16"	3"	—
0992384	3/16"	4"	—
0992385	1/4"	1/2"	—
0992386	1/4"	3/4"	—
0992387	1/4"	1"	—
0992388	1/4"	1-1/4"	—
0992389	1/4"	1-1/2"	—
0992390	1/4"	1-3/4"	—
0992391	1/4"	2"	—
0992392	1/4"	2-1/2"	—
0992393	1/4"	3"	—
0992394	1/4"	4"	—
0992395	1/4"	5"	—
0992396	1/4"	6"	—
0992397	3/8"	1/2"	—
0992398	3/8"	3/4"	—
0992399	3/8"	1"	—
0992400	3/8"	1-1/4"	—
0992401	3/8"	1-1/2"	—
0992402	3/8"	1-3/4"	—
0992403	3/8"	2"	—
0992404	3/8"	2-1/2"	—
0992405	3/8"	3"	—
0950498	3/8"	3-1/2"	—
0992406	3/8"	4"	—
0992407	3/8"	6"	—
0992408	1/2"	3/4"	—
0992409	1/2"	1"	—
0992410	1/2"	1-1/4"	—
0992411	1/2"	1-1/2"	—
0992412	1/2"	1-3/4"	—
0992413	1/2"	2"	—
0992414	1/2"	2-1/2"	—
0992415	1/2"	3"	—
0992416	1/2"	4"	—
0992417	1/2"	5"	—
0992418	1/2"	6"	—
0992419	5/8"	3/4"	—
0992420	5/8"	1"	—
0992421	5/8"	1-1/4"	—
0992422	5/8"	1-1/2"	—
0992423	5/8"	1-3/4"	—
0992424	5/8"	2"	—
0992425	5/8"	2-1/2"	—
0992426	5/8"	3"	—
0950499	5/8"	4"	—
0992427	3/4"	1"	—
0992428	3/4"	1-1/4"	—
0992429	3/4"	1-1/2"	—
0992430	3/4"	1-3/4"	—
0992431	3/4"	2"	—
0992432	3/4"	2-1/2"	—
0992433	3/4"	3"	—
0992434	3/4"	4"	—
0950500	3/4"	6"	—
0950501	1"	1-1/4"	—
0992435	1"	1-1/2"	—
0950502	1"	1-3/4"	—

# RECTANGULAR BARS

## Rectangular Bars Cont.

Part No.	Thickness	Width	UOM /In
0992436	1"	2"	^
0992437	1"	2-1/2"	—
0992438	1"	3"	—
0992439	1"	4"	—
0950503	1"	6"	—
0992440	1-1/4"	1-1/2"	—
0992441	1-1/4"	2"	—
0992442	1-1/4"	3"	—
0950504	1-1/4"	4"	—
0950505	1-1/2"	2"	—
0950506	1-1/2"	3"	—
0950507	2"	3"	—

## Rectangular Bars

### 304 Stainless

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
  - Size Tolerances for these parts are found at the end of the section.
- 

Part No.	Thickness	Width	UOM /In
0992556	1/8"	1/2"	^
0992557	1/8"	5/8"	—
0992558	1/8"	3/4"	—
0992559	1/8"	1"	—
0992560	1/8"	1-1/4"	—
0992561	1/8"	1-1/2"	—
0992562	1/8"	2"	—
0950446	1/8"	2-1/2"	—
0992563	1/8"	3"	—
0992564	1/8"	4"	—
0992565	3/16"	1/2"	—
0950447	3/16"	3/4"	—
0992566	3/16"	1"	—
0992567	3/16"	1-1/4"	—
0992568	3/16"	1-1/2"	—
0992569	3/16"	2"	—
0992570	3/16"	2-1/2"	—
0992571	3/16"	3"	—
0992572	3/16"	4"	—
0992573	1/4"	1/2"	—
0950448	1/4"	5/8"	—
0992574	1/4"	3/4"	—
0992575	1/4"	1"	—
0992576	1/4"	1-1/8"	—
0992577	1/4"	1-1/4"	—
0992578	1/4"	1-1/2"	—
0992579	1/4"	1-3/4"	—
0992580	1/4"	2"	—
0992581	1/4"	2-1/2"	—
0992582	1/4"	3"	—
0992583	1/4"	3-1/2"	—
0992584	1/4"	4"	—
0992585	1/4"	5"	—
0992586	1/4"	6"	—
0992587	5/16"	1"	—
0992588	5/16"	2"	—
0992589	3/8"	1/2"	—
0992590	3/8"	3/4"	—
0992591	3/8"	1"	—
0992592	3/8"	1-1/4"	—
0992593	3/8"	1-1/2"	—
0992594	3/8"	1-3/4"	—
0992595	3/8"	2"	—
0992596	3/8"	2-1/2"	—
0992597	3/8"	3"	—
0950449	3/8"	3-1/2"	—
0992598	3/8"	4"	—
0992599	3/8"	6"	—
0992600	1/2"	3/4"	—
0992601	1/2"	1"	—
0992602	1/2"	1-1/4"	—
0992603	1/2"	1-1/2"	—
0992604	1/2"	1-3/4"	—
0992605	1/2"	2"	—
0992606	1/2"	2-1/2"	—
0992607	1/2"	3"	—

Part No.	Thickness	Width	UOM /In
0992608	1/2"	3-1/2"	^
0992609	1/2"	4"	—
0992610	1/2"	5"	—
0992611	1/2"	6"	—
0992612	5/8"	1"	—
0950450	5/8"	1-1/4"	—
0992613	5/8"	1-1/2"	—
0992614	5/8"	2"	—
0992615	5/8"	2-1/2"	—
0992616	5/8"	3"	—
0950452	5/8"	4"	—
0992617	3/4"	1"	—
0950453	3/4"	1-1/4"	—
0992618	3/4"	1-1/2"	—
0992619	3/4"	2"	—
0992620	3/4"	2-1/2"	—
0992621	3/4"	3"	—
0992622	3/4"	4"	—
0992623	3/4"	5"	—
0992624	3/4"	6"	—
0992625	1"	1-1/4"	—
0992626	1"	1-1/2"	—
0992627	1"	2"	—
0992628	1"	2-1/2"	—
0992629	1"	3"	—
0992630	1"	4"	—
0950454	1"	5"	—
0950455	1"	6"	—
0950456	1-1/4"	1-1/2"	—
0950457	1-1/4"	2"	—
0950458	1-1/4"	3"	—
0950459	1-1/4"	4"	—
0950460	1-1/2"	2"	—
0950461	1-1/2"	3"	—
0950462	1-1/2"	4"	—
0950463	1-1/2"	6"	—
0950464	2"	3"	—
0950465	2"	4"	—
0950466	2"	6"	—

## Rectangular Bar 316 Stainless Steel

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
  - Size Tolerances for these parts are found at the end of the section.
- 

Part No.	Thickness	Width	UOM /In
0950486	1/8"	1"	^
0950487	1/8"	1-1/2"	—
0992777	1/4"	1"	—
0950489	1/4"	1-1/2"	—
0992778	1/4"	2"	—
0992779	1/4"	3"	—
0950490	3/8"	1"	—
0950491	3/8"	1-1/2"	—
0992780	3/8"	2"	—
0950492	1/2"	1"	—
0950493	1/2"	1-1/2"	—
0992781	1/2"	2"	—
0992782	1/2"	3"	—
0992783	3/4"	1-1/2"	—
0992784	3/4"	2"	—
0950494	3/4"	2-1/2"	—
0992785	3/4"	3"	—
0950495	3/4"	4"	—
0992786	1"	2"	—

## Rectangular Bar 17-4 PH Stainless Steel

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
  - Size Tolerances for these parts are found at the end of the section.
- 

Part No.	Thickness	Width	UOM /In
0991640	1/4"	1"	^
0991641	1/4"	1-1/4"	—
0991642	1/4"	3"	—
0991643	3/8"	1"	—
0991644	3/8"	2"	—
0991645	3/8"	3"	—
0991646	1/2"	1"	—
0991647	1/2"	1-1/2"	—
0991648	1/2"	2"	—
0991649	1/2"	3"	—
0991650	3/4"	1"	—
0991651	3/4"	1-1/2"	—
0991652	3/4"	2"	—
0991653	3/4"	3"	—
0991654	1"	1-1/4"	—
0991655	1"	2"	—
0991656	1"	3"	—
0991657	1-1/4"	1-1/2"	—
0991658	1-1/4"	2-1/4"	—
0991659	1-1/4"	2-1/2"	—

## Rectangular Bar 110 Copper

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
  - Size Tolerances for these parts are found at the end of the section.
- 

Part No.	Thickness	Width	UOM /In
0986132	1/16"	1/2"	^
0986133	1/16"	5/8"	—
0986134	1/16"	3/4"	—
0986135	1/16"	1"	—
0986136	1/8"	1/2"	—
0986137	1/8"	3/4"	—
0986138	1/8"	1"	—
0950467	1/8"	1-1/4"	—
0986139	1/8"	1-1/2"	—
0986140	1/8"	2"	—
0950468	1/8"	3"	—
0986141	1/8"	4"	—
0986142	1/8"	6"	—
0986143	3/16"	3/4"	—
0986144	3/16"	1"	—
0986145	3/16"	1-1/2"	—
0986146	3/16"	2"	—
0986147	3/16"	3"	—
0986148	3/16"	4"	—
0986149	1/4"	1/2"	—
0986150	1/4"	3/4"	—
0986151	1/4"	1"	—
0986152	1/4"	1-1/2"	—
0986266	1/4"	1-3/4"	—
0986153	1/4"	2"	—
0986154	1/4"	3"	—
0986270	1/4"	4"	—
0986271	1/4"	5"	—
0986155	1/4"	6"	—
0950472	3/8"	3/4"	—
0986156	3/8"	1"	—
0950473	3/8"	1-1/4"	—
0986157	3/8"	1-1/2"	—
0986158	3/8"	2"	—
0950474	3/8"	3"	—
0986159	3/8"	4"	—
0986160	3/8"	6"	—
0986161	1/2"	1"	—

# RECTANGULAR BARS, ANGLE

**BAR STOCK**

## Rectangular Bars Cont.

Part No.	Thickness	Width	UOM /In
0986162	1/2"	1-1/2"	—
0986163	1/2"	2"	—
0950475	1/2"	2-1/2"	—
0950476	1/2"	3"	—
0986164	1/2"	4"	—
0986165	1/2"	6"	—
0986166	5/8"	1"	—
0986167	5/8"	1-1/2"	—
0986168	5/8"	2"	—
0950477	5/8"	3"	—
0986169	5/8"	4"	—
0950478	3/4"	1"	—
0986170	3/4"	1-1/2"	—
0986171	3/4"	2"	—
0986172	3/4"	3"	—
0986293	3/4"	4"	—
0986294	3/4"	6"	—
0950480	1"	2"	—
0950481	1"	3"	—
0950482	1"	4"	—
0950483	1"	6"	—

## Rectangular Bars

### 360 Brass

- Standard bar lengths are 12' (144") Random Lengths, or have it "cut to length".
- Size Tolerances for these parts are found at the end of the section.



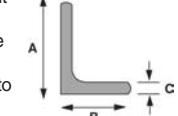
Part No.	Thickness	Width	UOM /In
0950425	3/32"	1"	—
0986732	1/8"	1/4"	—
0986733	1/8"	3/8"	—
0986734	1/8"	1/2"	—
0986735	1/8"	5/8"	—
0986736	1/8"	3/4"	—
0986737	1/8"	1"	—
0986738	1/8"	1-1/4"	—
0986739	1/8"	1-1/2"	—
0986740	1/8"	2"	—
0986741	1/8"	2-1/2"	—
0986742	1/8"	3"	—
0986743	1/8"	4"	—
0986744	3/16"	1/4"	—
0986745	3/16"	3/8"	—
0986746	3/16"	1/2"	—
0986747	3/16"	5/8"	—
0986748	3/16"	3/4"	—
0986749	3/16"	1"	—
0986750	3/16"	1-1/4"	—
0986751	3/16"	1-1/2"	—
0986752	3/16"	2"	—
0986753	3/16"	2-1/2"	—
0986754	3/16"	3"	—
0986755	3/16"	4"	—
0986756	1/4"	5/16"	—
0986757	1/4"	3/8"	—
0986758	1/4"	1/2"	—
0986759	1/4"	5/8"	—
0986760	1/4"	3/4"	—
0986761	1/4"	1"	—
0986762	1/4"	1-1/4"	—
0986763	1/4"	1-1/2"	—
0950427	1/4"	1-3/4"	—
0986764	1/4"	2"	—
0986765	1/4"	2-1/2"	—
0986766	1/4"	3"	—
0986767	1/4"	4"	—

Part No.	Thickness	Width	UOM /In
0986768	5/16"	3/8"	—
0986769	5/16"	1/2"	—
0986770	5/16"	5/8"	—
0986771	5/16"	3/4"	—
0986772	5/16"	1"	—
0986773	5/16"	1-1/2"	—
0986774	5/16"	2"	—
0950430	3/8"	1/2"	—
0950431	3/8"	5/8"	—
0999850	3/8"	3/4"	—
0986775	3/8"	1"	—
0986776	3/8"	1-1/4"	—
0986777	3/8"	1-1/2"	—
0986778	3/8"	2"	—
0986779	3/8"	2-1/2"	—
0986780	3/8"	3"	—
0986781	3/8"	4"	—
0986782	1/2"	5/8"	—
0986783	1/2"	3/4"	—
0986784	1/2"	1"	—
0986785	1/2"	1-1/4"	—
0986786	1/2"	1-1/2"	—
0986787	1/2"	2"	—
0986788	1/2"	2-1/2"	—
0986789	1/2"	3"	—
0986790	1/2"	4"	—
0986791	5/8"	3/4"	—
0986792	5/8"	7/8"	—
0986793	5/8"	1"	—
0986794	5/8"	1-1/4"	—
0950432	5/8"	1-1/2"	—
0986795	5/8"	2"	—
0950433	5/8"	3"	—
0950434	5/8"	4"	—
0986796	3/4"	1"	—
0950435	3/4"	1-1/4"	—
0950436	3/4"	1-1/2"	—
0986797	3/4"	2"	—
0986798	3/4"	2-1/2"	—
0986799	3/4"	3"	—
0950437	3/4"	4"	—
0986800	1"	1-1/4"	—
0986801	1"	1-1/2"	—
0986802	1"	2"	—
0986803	1"	2-1/2"	—
0986804	1"	3"	—
0950438	1"	4"	—
0950439	1-1/4"	2"	—
0950440	1-1/4"	2-1/2"	—
0950441	1-1/2"	2"	—
0950442	1-1/2"	2-1/2"	—
0950443	1-1/2"	3"	—
0950444	1-1/2"	4"	—
0950445	2"	4"	—

## Angle

### A36 Steel Angle

Hot rolled, Standard bar lengths are 20' (240") Random Lengths, or have it "cut to length". A low carbon mild steel. Good for general purpose use with excellent welding and forming capabilities. Conforms to ASTM A36.



### A36 Steel Angle

Part No.	Leg A	Leg B	Thickness	UOM /In
0950000	1/2"	1/2"	1/8"	—
0987323	3/4"	3/4"	1/8"	—
0950001	1"	3/4"	1/8"	—
0987324	1"	1"	1/8"	—
0987325	1-1/4"	1-1/4"	1/8"	—
0987326	1-1/2"	1-1/2"	1/8"	—
0950002	1-3/4"	1-3/4"	1/8"	—
0950003	2"	1-1/2"	1/8"	—
0987327	2"	2"	1/8"	—
0999976	1"	1"	3/16"	—
0950004	1-1/4"	1-1/4"	3/16"	—
0987328	1-1/2"	1-1/2"	3/16"	—
0950005	1-3/4"	1-3/4"	3/16"	—
0950006	2"	1-1/2"	3/16"	—
0999975	2"	2"	3/16"	—
0950007	2-1/2"	1-1/2"	3/16"	—
0950008	2-1/2"	2"	3/16"	—
0950009	2-1/2"	2-1/2"	3/16"	—
0950010	3"	2"	3/16"	—
0950012	3"	3"	3/16"	—
0999974	1"	1"	1/4"	—
0950013	1-1/4"	1-1/4"	1/4"	—
0987329	1-1/2"	1-1/2"	1/4"	—
0950014	1-3/4"	1-3/4"	1/4"	—
0950015	2"	1-1/2"	1/4"	—
0987330	2"	2"	1/4"	—
0950016	2-1/2"	2"	1/4"	—
0987331	2-1/2"	2-1/2"	1/4"	—
0950017	3"	2"	1/4"	—
0950018	3"	2-1/2"	1/4"	—
0987332	3"	3"	1/4"	—
0950019	3-1/2"	2-1/2"	1/4"	—
0950020	3-1/2"	3"	1/4"	—
0950021	3-1/2"	3-1/2"	1/4"	—
0950022	4"	3"	1/4"	—
0950023	4"	3-1/2"	1/4"	—
0950024	4"	4"	1/4"	—
0950025	5"	3"	1/4"	—
0950026	2"	2"	3/8"	—
0950027	2-1/2"	2-1/2"	3/8"	—
0950028	3"	2"	3/8"	—
0950029	3"	2-1/2"	3/8"	—
0950030	3"	3"	3/8"	—
0950031	3-1/2"	2-1/2"	3/8"	—
0950032	3-1/2"	3"	3/8"	—
0950033	3-1/2"	3-1/2"	3/8"	—
0950034	4"	3"	3/8"	—
0950035	4"	4"	3/8"	—
0950036	5"	3"	3/8"	—
0950037	5"	5"	3/8"	—
0950044	6"	4"	3/8"	—
0950039	6"	6"	3/8"	—
0950040	2-1/2"	2-1/2"	1/2"	—
0950041	3"	3"	1/2"	—
0950042	4"	3"	1/2"	—
0950043	4"	4"	1/2"	—
0950038	6"	4"	1/2"	—
0950045	6"	6"	1/2"	—
0950046	4"	4"	3/4"	—
0950047	6"	6"	3/4"	—
0950048	8"	8"	3/4"	—
0950049	6"	6"	1"	—

# ANGLE, PRE-PUNCHED ANGLE, I-BEAMS, STEEL CHANNEL

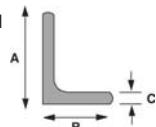
## Angle Cont.

### A36 Galvanized Steel Angle

Hot rolled, standard bar lengths are 20' (240") Random Lengths, or have it "cut to length". A low carbon mild steel

with good corrosion resistance.

Good for general purpose use with excellent welding and forming capabilities. Conforms to ASTM A36.

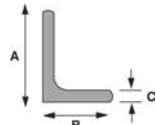


Part No.	Leg A	Leg B	Thickness	UOM /In
0987415	3/4"	3/4"	1/8"	^—
0987416	1"	1"	1/8"	—
0987417	1-1/4"	1-1/4"	1/8"	—
0999973	1-1/2"	1-1/2"	1/8"	—
0999972	2"	2"	1/8"	—
0950050	1-1/2"	1-1/2"	3/16"	—
0987418	2"	2"	3/16"	—
0999971	1"	1"	1/4"	—
0999970	1-1/2"	1-1/2"	1/4"	—
0999969	2"	2"	1/4"	—
0950051	2-1/2"	2-1/2"	1/4"	—
0950052	3"	3"	1/4"	—

### 304 Stainless Steel Angle

Standard bar lengths are 20' (240") Random Lengths, or have it "cut to length".

The most widely used of the stainless steels, 304 is highly corrosion resistant and easily welded. Conforms to ASTM A276/A479 Condition A.



Part No.	Leg A	Leg B	Thickness	UOM /In
0950074	3/4"	3/4"	1/8"	^—
0992651	1"	1"	1/8"	—
0992652	1-1/4"	1-1/4"	1/8"	—
0992653	1-1/2"	1-1/2"	1/8"	—
0992654	2"	2"	1/8"	—
0992655	1"	1"	3/16"	—
0992656	1-1/4"	1-1/4"	3/16"	—
0992657	1-1/2"	1-1/2"	3/16"	—
0992658	2"	2"	3/16"	—
0992659	2-1/2"	2-1/2"	3/16"	—
0992660	1"	1"	1/4"	—
0992661	1-1/4"	1-1/4"	1/4"	—
0992662	1-1/2"	1-1/2"	1/4"	—
0992663	2"	2"	1/4"	—
0992664	2-1/2"	2-1/2"	1/4"	—
0992665	3"	3"	1/4"	—
0950075	4"	4"	1/4"	—
0992666	2"	2"	3/8"	—
0992667	2-1/2"	2-1/2"	3/8"	—
0992668	3"	3"	3/8"	—
0950076	4"	4"	3/8"	—

### 6061-T6 Aluminum Angle

Standard bar lengths are 25' (300") Random Lengths, or have it "cut to length".

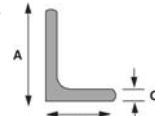
This is the most versatile of the heat treatable aluminum alloys, commonly used where welding and brazing is required. Conforms to ASTM B308.



Part No.	Leg A	Leg B	Thickness	UOM /In
0984452	3/4"	3/4"	1/8"	^—
0984453	1"	1"	1/8"	—
0984454	1-1/4"	1-1/4"	1/8"	—
0984455	1-1/2"	1-1/2"	1/8"	—
0950053	1-3/4"	1-3/4"	1/8"	—
0950054	2"	1-1/2"	1/8"	—
0984456	2"	2"	1/8"	—
0984457	1"	1"	3/16"	—
0984458	1-1/4"	1-1/4"	3/16"	—
0984459	1-1/2"	1-1/2"	3/16"	—
0950055	1-3/4"	1-3/4"	3/16"	—
0984460	2"	2"	3/16"	—
0950056	3"	2"	3/16"	—
0950057	3"	3"	3/16"	—
0984461	1"	1"	1/4"	—
0984462	1-1/4"	1-1/4"	1/4"	—
0984463	1-1/2"	1-1/2"	1/4"	—
0984464	1-3/4"	1-3/4"	1/4"	—
0984465	2"	2"	1/4"	—
0950058	2-1/2"	2"	1/4"	—
0984466	2-1/2"	2-1/2"	1/4"	—
0950059	3"	2"	1/4"	—
0984467	3"	3"	1/4"	—
0950060	4"	3"	1/4"	—
0984468	4"	4"	1/4"	—
0984469	2"	2"	3/8"	—
0984470	2-1/2"	2-1/2"	3/8"	—
0950061	3"	2"	3/8"	—
0984471	3"	3"	3/8"	—
0950062	4"	3"	3/8"	—
0984472	4"	4"	3/8"	—
0950063	5"	3"	3/8"	—
0950064	6"	4"	3/8"	—
0984473	6"	6"	3/8"	—
0984474	3"	3"	1/2"	—
0984475	4"	4"	1/2"	—
0984476	5"	5"	1/2"	—
0950065	6"	6"	1/2"	—

### 6063-T52 Aluminum Angle Square Corners

Standard bar lengths are 16' (192") Random Lengths, or have it "cut to length". Commonly referred to as "architectural alloy", this material has relatively high tensile properties, excellent finishing characteristics and high corrosion resistance.



Part No.	Leg A	Leg B	Thickness	UOM /In
0984526	1/2"	1/2"	1/16"	^—
0984527	3/4"	3/4"	1/16"	—
0984528	1"	1"	1/16"	—
0984529	1/2"	1/2"	1/8"	—
0984530	3/4"	3/4"	1/8"	—
0984531	1"	1"	1/8"	—
0984532	1-1/4"	1-1/4"	1/8"	—
0984533	1-1/2"	1-1/2"	1/8"	—
0984534	1-3/4"	1-3/4"	1/8"	—
0984535	2"	2"	1/8"	—
0984536	1"	1"	3/16"	—
0984537	1-1/4"	1-1/4"	3/16"	—
0984538	1-1/2"	1-1/2"	3/16"	—
0984539	2"	2"	3/16"	—
0950072	1-1/2"	1-1/2"	1/4"	—
0950073	2"	2"	1/4"	—

### Pre-Punched Angle

Pre-Galvanized Stock; Round Holes, 1" centers for 3/8" bolts.

Sold in full length bars only.

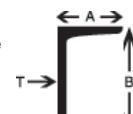


Part No.	Ga.	Lgh.	Leg A	Leg B	Price /Ea
0952094	18	10'	1-1/4"	1-1/4"	\$5.75
48181	16	8'	1-1/4"	1-1/4"	5.20
0952095	16	10'	1-1/4"	1-1/4"	6.50
41182	14	8'	1-1/4"	1-1/4"	5.60
0952096	14	10'	1-1/4"	1-1/4"	7.00
0952100	14	10'	1-1/2"	1-1/2"	11.00
0952104	14	10'	2"	2"	14.00
0952107	14	10'	1-1/2"	2-1/2"	14.00
48180	13	8'	1-1/4"	1-1/4"	6.00
41183	13	10'	1-1/4"	1-1/4"	7.50
0952098	12	10'	1-1/4"	1-1/4"	9.25
0952102	12	10'	1-1/2"	1-1/2"	12.75
41184	12	10'	2"	2"	15.00
0952109	12	10'	1-1/2"	2-1/2"	15.25

### Steel Channel

#### A36 Channel

Hot rolled, standard bar lengths are 20' (240") Random Lengths, or have it "cut to length". A low carbon mild steel good for general purpose use with excellent welding and forming capabilities. Conforms to ASTM A36.



Part No.	Thickness	Leg A	Leg B	UOM /In
0999851	1/8"	1"	2"	^—
0999858	.17"	1.41"	3"	—
0999857	.18"	1.58	4"	—
0999856	.19"	1.75"	5"	—
0999855	.20"	1.92"	6"	—

# ALUMINUM CHANNEL, TEE BAR, TUBE & PIPE, ROUND TUBE

## Aluminum Channel

### 6063-T52 Aluminum Channel

Standard bar lengths are 16' (192") Random Lengths, or have it "cut to length". Commonly referred to as "architectural alloy", this material has relatively high tensile properties, excellent finishing characteristics and high corrosion resistance.



**CHANNEL, TEE BAR & PIPE**

Part No.	Thickness	Leg A	Leg B	UOM /In
0984510	3/32"	1/2"	1/2"	—
0984511	1/8"	3/8"	3/4"	—
0984512	1/8"	1/2"	3/4"	—
0984513	1/8"	1/2"	1-1/2"	—
0984514	1/8"	3/4"	1/2"	—
0984515	1/8"	3/4"	3/4"	—
0984516	1/8"	1"	1"	—
0984517	1/8"	1-1/4"	1-1/4"	—
0984518	1/8"	1-1/2"	1-1/2"	—
0984519	1/8"	1/2"	2"	—
0984520	1/8"	3/4"	1-3/4"	—
0984521	1/8"	1"	1-3/4"	—
0984522	1/8"	1"	2"	—
0984523	1/8"	1"	3"	—
0984524	1/4"	2"	2"	—
0984525	3/16"	2"	5"	—

## Tee Bar (T-Bar)

### Tee Bar

- Standard bar lengths are 20' (240") Random Lengths, or have them "cut to length".
- Hot rolled material: ASTM A36



Part No.	Thickness	Stem Length	Flange	UOM /In
0952145	1/8"	1"	1"	—
0952146	1/8"	1-1/4"	1-1/4"	—
0952147	3/16"	1-1/2"	1-1/2"	—
0952148	1/4"	1-1/2"	1-1/2"	—
0952149	1/4"	2"	2"	—
0952150	1/4"	2-1/2"	2-1/2"	—

## Tube & Pipe Information

- Pipe is generally more rigid than tube, and is usually produced in heavier wall thicknesses.
- Pipe is measured by Inside Diameter (ID), and Tube is measured by Outside Diameter (OD).
- Pipe fittings are sized to meet pipe sizes, but not tube sizes. IE: a 1" schedule 40 nipple will fit correctly on a 1" OD tube.
- All tube gauges are stated in the Birmingham Wire Gauge (BWG) system.

## Round Tube

### D.O.M. Steel Round Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". Electric resistance welded mechanical tube that has been finished by cold drawing through a die and over a mandrel. It has very good machinability, is strong and economical but has poor corrosion resistance. Conforms to ASTM A513, Type 5. Size tolerances for these parts are found at the end of the section.



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0950913	1/4"	0.194"	0.028"	22	—
0950914	1/4"	0.180"	0.035"	20	—
0950915	1/4"	0.152"	0.049"	18	—
0950916	5/16"	0.243"	0.035"	20	—
0950917	5/16"	0.183"	0.065"	16	—
0950918	3/8"	0.305"	0.035"	20	—
0950919	3/8"	0.277"	0.049"	18	—
0950920	3/8"	0.245"	0.065"	16	—
0950921	1/2"	0.430"	0.035"	20	—
0950922	1/2"	0.402"	0.049"	18	—
0950923	1/2"	0.370"	0.065"	16	—
0950924	1/2"	0.310"	0.095"	13	—
0950925	1/2"	0.282"	0.109"	12	—
0950926	1/2"	0.260"	0.120"	11	—
0950927	5/8"	0.555"	0.038"	20	—
0950928	5/8"	0.495"	0.065"	16	—
0950929	5/8"	0.385"	0.120"	11	—
0950930	3/4"	0.680"	0.035"	20	—
0950931	3/4"	0.652"	0.049"	18	—
0950932	3/4"	0.620"	0.065"	16	—
0950933	3/4"	0.584"	0.083"	14	—
0950934	3/4"	0.560"	0.095"	13	—
0950935	3/4"	0.532"	0.109"	12	—
0950936	3/4"	0.510"	0.120"	11	—
0950937	3/4"	0.374"	0.188"	3/16	—
0950938	7/8"	0.805"	0.035"	20	—
0950939	7/8"	0.777"	0.049"	18	—
0950940	7/8"	0.745"	0.065"	16	—
0950941	7/8"	0.709"	0.083"	14	—
0950942	7/8"	0.657"	0.109"	12	—
0950943	7/8"	0.635"	0.120"	11	—
0950944	1"	0.930"	0.035"	20	—
0950945	1"	0.902"	0.049"	18	—
0950946	1"	0.870"	0.065"	16	—
0950947	1"	0.760"	0.120"	11	—
0950948	1"	0.624"	0.188"	3/16	—
0950949	1"	0.500"	0.250"	1/4	—
0950950	1-1/8"	0.995"	0.065"	16	—
0950951	1-1/8"	0.885"	0.120"	11	—
0950952	1-1/8"	0.625"	0.250"	1/4	—
0950953	1-1/4"	1.152"	0.049"	18	—
0950954	1-1/4"	1.120"	0.065"	16	—
0950955	1-1/4"	1.010"	0.120"	11	—
0950956	1-1/4"	0.874"	0.188"	3/16	—
0950957	1-1/4"	0.750"	0.250"	1/4	—
0950958	1-3/8"	1.245"	0.065"	16	—
0950959	1-3/8"	1.135"	0.120"	11	—
0950960	1-3/8"	0.875"	0.250"	1/4	—
0990667	1-1/2"	1.370"	0.065"	16	—
0990668	1-1/2"	1.334"	0.083"	14	—
0990669	1-1/2"	1.310"	0.095"	13	—
0990670	1-1/2"	1.282"	0.109"	12	—
0950961	1-1/2"	1.124"	0.188"	3/16	—
0950962	1-1/2"	1.000"	0.250"	1/4	—
0950963	1-1/2"	0.750"	0.375"	3/8	—
0950964	1-3/4"	1.374"	0.188"	3/16	—
0950965	1-3/4"	1.250"	0.250"	1/4	—
0950966	1-3/4"	1.000"	0.375"	3/8	—
0990671	2"	1.870"	0.065"	16	—
0990672	2"	1.834"	0.083"	14	—
0990673	2"	1.810"	0.095"	13	—

Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0990674	2"	1.782"	0.109"	12	—
0950967	2"	1.760"	0.120"	11	—
0950968	2"	1.624"	0.188"	3/16	—
0950969	2"	1.500"	0.250"	1/4	—
0950970	2"	1.250"	0.375"	3/8	—
0999591	2"	1.000"	0.500"	1/2	—
0950972	2-1/4"	2.120"	0.065"	16	—
0950973	2-1/4"	2.010"	0.120"	11	—
0950974	2-1/4"	1.874"	0.188"	3/16	—
0950975	2-1/4"	1.750"	0.250"	1/4	—
0950976	2-1/4"	1.500"	0.375"	3/8	—
0950977	2-1/4"	1.374"	0.438"	7/16	—
0990675	2-1/2"	2.370"	0.065"	16	—
0990676	2-1/2"	2.334"	0.083"	14	—
0990677	2-1/2"	2.310"	0.095"	13	—
0990678	2-1/2"	2.282"	0.109"	12	—
0950978	2-1/2"	2.260"	0.120"	11	—
0950979	2-1/2"	2.124"	0.188"	3/16	—
0950980	2-1/2"	2.000"	0.250"	1/4	—
0950981	2-1/2"	1.750"	0.375"	3/8	—
0999590	2-1/2"	1.500"	0.500"	1/2	—
0950983	2-3/4"	2.510"	0.120"	11	—
0950984	2-3/4"	2.250"	0.250"	1/4	—
0950985	2-3/4"	2.000"	0.375"	3/8	—
0999589	2-3/4"	1.750"	0.500"	1/2	—
0950987	3"	2.870"	0.065"	16	—
0950988	3"	2.760"	0.120"	11	—
0950989	3"	2.624"	0.188"	3/16	—
0950990	3"	2.500"	0.250"	1/4	—
0950991	3"	2.250"	0.375"	3/8	—
0950992	3"	2.000"	0.500"	1/2	—
0950993	3"	1.750"	0.625"	5/8	—
0950994	3-1/4"	3.010"	0.120"	11	—
0950995	3-1/4"	2.874"	0.188"	3/16	—
0950996	3-1/4"	2.750"	0.250"	1/4	—
0950997	3-1/4"	2.500"	0.375"	3/8	—
0950998	3-1/4"	2.250"	0.500"	1/2	—
0950999	3-1/2"	3.370"	0.065"	16	—
0951000	3-1/2"	3.260"	0.120"	11	—
0951001	3-1/2"	3.124"	0.188"	3/16	—
0951002	3-1/2"	3.000"	0.250"	1/4	—
0951003	3-1/2"	2.750"	0.375"	3/8	—
0951004	3-1/2"	2.500"	0.500"	1/2	—
0951005	3-3/4"	3.510"	0.120"	11	—
0951006	3-3/4"	3.25"	0.250"	1/4	—
0951007	3-3/4"	3.000"	0.375"	3/8	—
0951008	3-3/4"	2.750"	0.500"	1/2	—
0951009	4"	3.760"	0.120"	11	—
0951010	4"	3.624"	0.188"	3/16	—
0951011	4"	3.500"	0.250"	1/4	—
0951012	4"	3.250"	0.375"	3/8	—
0951013	4"	3.000"	0.500"	1/2	—
0951014	4-1/4"	3.750"	0.250"	1/4	—
0951015	4-1/4"	3.500"	0.375"	3/8	—
0951016	4-1/4"	3.250"	0.500"	1/2	—
0951017	4-1/2"	4.260"	0.120"	11	—
0951018	4-1/2"	4.000"	0.250"	1/4	—
0951019	4-1/2"	3.500"	0.500"	1/2	—
0951020	4-3/4"	4.250"	0.250"	1/4	—
0951021	4-3/4"	3.750"	0.500"	1/2	—
0951022	5"	4.760"	0.120"	11	—
0951023	5"	4.500"	0.250"	1/4	—
0951024	5"	4.000"	0.500"	1/2	—
0951025	5-1/4"	4.750"	0.250"	1/4	—
0951026	5-1/4"	4.250"	0.500"	1/2	—
0951027	5-1/2"	5.000"	0.250"	1/4	—
0951028	5-1/2"	4.500"	0.500"	1/2	—
0951029	5-3/4"	4.750"	0.500"	1/2	—
0951030	6"	5.760"	0.120"	11	—
0951031	6"	5.500"	0.250"	1/4	—
0951032	6"	5.000"	0.500"	1/2	—
0951033	6-1/4"	5.750"	0.250"	1/4	—

# ROUND TUBE

## Round Tube Cont.

Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0951034	6-1/4"	5.250"	0.500"	1/2	^—
0951035	6-1/2"	6.000"	0.250"	1/4	—
0951036	6-1/2"	5.500"	0.500"	1/2	—
0951037	6-3/4"	6.250"	0.250"	1/4	—
0951038	6-3/4"	5.750"	0.500"	1/2	—
0951039	7"	6.500"	0.250"	1/4	—
0951040	7"	6.000"	0.500"	1/2	—
0951041	7"	5.750"	0.625"	5/8	—
0951042	7-1/2"	7.000"	0.250"	1/4	—
0951043	7-1/2"	6.500"	0.500"	1/2	—
0951044	7-1/2"	6.250"	0.625"	5/8	—
0951045	8"	7.500"	0.250"	1/4	—
0951046	8"	7.000"	0.500"	1/2	—
0951047	8"	6.750"	0.625"	5/8	—
0951048	8-1/2"	8.000"	0.250"	1/4	—
0951049	8-1/2"	7.500"	0.500"	1/2	—
0951050	8-1/2"	7.250"	0.625"	5/8	—
0951051	9"	8.500"	0.250"	1/4	—
0951052	9"	8.000"	0.500"	1/2	—
0951053	9-1/2"	9.000"	0.250"	1/4	—
0951054	9-1/2"	8.500"	0.500"	1/2	—
0951055	10"	9.624"	0.188"	3/16	—
0951056	10"	9.500"	0.250"	1/4	—
0951057	10"	9.000"	0.500"	1/2	—
0951058	10-1/2"	10.000"	0.250"	1/4	—
0951059	10-1/2"	9.500"	0.500"	1/2	—
0951060	12"	11.500"	0.250"	1/4	—
0951061	12"	11.000"	0.500"	1/2	—

## Chrome-Moly Tube

Round, CDS (Cold Drawn Seamless) Condition N, Aircraft Quality Tube. Made from 4130 Alloy. Certified to MIL T 6736. Material is weldable, has good strength and can be heat treated. Comes in 20' random lengths or have it "cut to length."



Part No.	O.D.	I.D.	Thickness	UOM /In
0952236	3/16"	0.118"	0.035"	^—
0952237	3/16"	0.09"	0.049"	—
0952238	1/4"	0.18"	0.035"	—
0952239	1/4"	0.152"	0.049"	—
0952240	1/4"	0.134"	0.058"	—
0952241	1/4"	0.12"	0.065"	—
0952242	5/16"	0.243"	0.035"	—
0952243	5/16"	0.214"	0.049"	—
0952244	5/16"	0.197"	0.058"	—
0952245	5/16"	0.182"	0.065"	—
0952246	3/8"	0.305"	0.035"	—
0952247	3/8"	0.277"	0.049"	—
0952248	3/8"	0.259"	0.058"	—
0952249	3/8"	0.245"	0.065"	—
0952250	3/8"	0.135"	0.12"	—
0952251	7/16"	0.367"	0.035"	—
0952252	7/16"	0.34"	0.049"	—
0952253	7/16"	0.322"	0.058"	—
0952254	1/2"	0.43"	0.035"	—
0952255	1/2"	0.402"	0.049"	—
0952256	1/2"	0.384"	0.058"	—
0952257	1/2"	0.37"	0.065"	—
0952258	1/2"	0.26	0.12"	—
0952259	5/8"	0.555"	0.035"	—
0952260	5/8"	0.527"	0.049"	—
0952261	5/8"	0.509"	0.058"	—
0952262	5/8"	0.495"	0.065"	—
0952263	5/8"	0.385"	0.12"	—
0952264	3/4"	0.68"	0.035"	—
0952265	3/4"	0.652"	0.049"	—
0952266	3/4"	0.634"	0.058"	—
0952267	3/4"	0.62"	0.065"	—
0952268	3/4"	0.584"	0.083"	—
0952269	3/4"	0.56"	0.095"	—
0952270	3/4"	0.51"	0.12"	—

## 304 Stainless Steel Welded Round Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". The economical choice when the smooth internal finish of seamless tubing is not essential. Meets ASTM A269; 5/8 OD and larger also meets ASTM A249.



Part No.	O.D.	I.D.	Thickness	UOM /In
0952271	3/4"	0.375"	0.188"	^—
0952272	7/8"	0.805"	0.035"	—
0952273	7/8"	0.777"	0.049"	—
0952274	7/8"	0.759"	0.058"	—
0952275	7/8"	0.745"	0.065"	—
0952276	7/8"	0.709"	0.083"	—
0952277	7/8"	0.685"	0.095"	—
0952278	7/8"	0.635"	0.12"	—
0952279	7/8"	0.5"	0.188"	—
0952280	1"	0.93"	0.035"	—
0952281	1"	0.902"	0.049"	—
0952282	1"	0.884"	0.058"	—
0952283	1"	0.87"	0.065"	—
0952284	1"	0.834"	0.083"	—
0952285	1"	0.81"	0.095"	—
0952286	1"	0.76"	0.12"	—
0952287	1"	0.625"	0.188"	—
0952288	1-1/8"	1.027"	0.049"	—
0952289	1-1/8"	1.009"	0.058"	—
0952290	1-1/8"	0.996"	0.065"	—
0952291	1-1/4"	1.152"	0.049"	—
0952292	1-1/4"	1.134"	0.058"	—
0952293	1-1/4"	1.12"	0.065"	—
0952294	1-1/4"	1.084"	0.083"	—
0952295	1-1/4"	1.06"	0.095"	—
0952296	1-1/4"	1.01"	0.12"	—
0952297	1-3/8"	1.259"	0.058"	—
0952298	1-3/8"	1.245"	0.065"	—
0952299	1-3/8"	1.209"	0.083"	—
0952300	1-1/2"	1.402"	0.049"	—
0952301	1-1/2"	1.384"	0.058"	—
0952302	1-1/2"	1.37"	0.065"	—
0952303	1-1/2"	1.334"	0.083"	—
0952304	1-1/2"	1.31"	0.095"	—
0952305	1-1/2"	1.26"	0.12"	—
0952306	1-1/2"	1.124"	0.188"	—
0952307	1-5/8"	1.459"	0.083"	—
0952308	1-5/8"	1.435"	0.095"	—
0952309	1-5/8"	1.385"	0.12"	—
0952310	1-3/4"	1.62"	0.065"	—
0952311	1-3/4"	1.584"	0.083"	—
0952312	1-3/4"	1.56"	0.095"	—
0952313	2"	1.87"	0.065"	—
0952314	2"	1.81"	0.095"	—
0952315	2"	1.76"	0.12"	—
0952316	2-1/4"	2.01"	0.12"	—
0952317	2-1/2"	2.334"	0.083"	—
0952318	3"	2.81"	0.095"	—

Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0950732	3/16"	0.118"	0.035"	20	^—
0950733	1/4"	0.194"	0.028"	22	—
0950734	1/4"	0.180"	0.035"	20	—
0950735	1/4"	0.152"	0.049"	18	—
0950736	5/16"	0.257"	0.028"	22	—
0950737	5/16"	0.243"	0.035"	20	—
0950738	5/16"	0.215"	0.049"	18	—
0950739	3/8"	0.305"	0.035"	20	—
0950740	3/8"	0.277"	0.049"	18	—
0950741	3/8"	0.245"	0.065"	16	—
0950742	7/16"	0.308"	0.065"	16	—
0950743	1/2"	0.430"	0.035"	20	—
0950744	1/2"	0.370"	0.065"	16	—
0950745	5/8"	0.555"	0.035"	20	—
0950746	5/8"	0.495"	0.065"	16	—
0950747	5/8"	0.385"	0.120"	11	—
0950748	3/4"	0.680"	0.035"	20	—
0950749	3/4"	0.652"	0.049"	18	—
0950750	3/4"	0.620"	0.065"	16	—
0950751	3/4"	0.510"	0.120"	11	—
0950752	7/8"	0.745"	0.065"	16	—
0950753	7/8"	0.635"	0.120"	11	—
0950754	1"	0.930"	0.035"	20	—
0950755	1"	0.902"	0.049"	18	—
0950756	1"	0.870"	0.065"	16	—
0950757	1"	0.834"	0.083"	14	—
0950758	1"	0.760"	0.120"	11	—
0950759	1-1/4"	1.180"	0.035"	20	—
0950760	1-1/4"	1.120"	0.065"	16	—
0950761	1-1/4"	1.010"	0.120"	11	—
0950762	1-1/2"	1.370"	0.065"	16	—
0950763	1-1/2"	1.260"	0.120"	11	—
0950764	1-3/4"	1.680"	0.035"	20	—
0950765	1-3/4"	1.620"	0.065"	16	—
0950766	2"	1.930"	0.035"	20	—
0950767	2"	1.870"	0.065"	16	—
0950768	2"	1.760"	0.120"	11	—
0950769	2-1/2"	2.370"	0.065"	16	—
0950770	2-1/2"	2.260"	0.120"	11	—
0950771	3"	2.870"	0.065"	16	—
0950772	3"	2.760"	0.120"	11	—
0950773	3-1/4"	3.010"	0.120"	11	—
0950774	3-1/2"	3.370"	0.065"	16	—
0950775	4"	3.870"	0.065"	16	—

The : symbol after a price denotes that it is a Direct Ship Product (DSP) and shipping, availability & lead times may vary.

METALS, ALLOYS & MATERIALS

# ROUND TUBE

## Round Tube Cont.

### 304 Stainless Steel Seamless Round Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". Provides good corrosion resistance. The seamless inner surface prevents buildup. Conforms to ASTM A269 and A213.



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0950776	1/4"	0.180"	0.035"	20	—
0950777	1/4"	0.152"	0.049"	18	—
0950778	1/4"	0.120"	0.065"	16	—
0950779	5/16"	0.243"	0.035"	20	—
0950780	5/16"	0.183"	0.065"	16	—
0950781	3/8"	0.305"	0.035"	20	—
0950782	3/8"	0.245"	0.065"	16	—
0950783	1/2"	0.430"	0.035"	20	—
0950784	1/2"	0.370"	0.065"	16	—
0950785	1/2"	0.260"	0.120"	11	—
0950786	5/8"	0.495"	0.065"	16	—
0950787	5/8"	0.385"	0.120"	11	—
0950788	3/4"	0.680"	0.035"	20	—
0950789	3/4"	0.620"	0.065"	16	—
0950790	3/4"	0.510"	0.120"	11	—
0950791	1"	0.902"	0.049"	18	—
0950792	1"	0.870"	0.065"	16	—
0950793	1"	0.834"	0.083"	14	—
0950794	1"	0.760"	0.120"	11	—
0950795	1"	0.500"	0.250"	1/4	—
0950796	1-1/4"	1.120"	0.065"	16	—
0950797	1-1/4"	1.010"	0.120"	11	—
0950798	1-1/4"	0.750"	0.250"	1/4	—
0950799	1-1/2"	1.370"	0.065"	16	—
0950800	1-1/2"	1.260"	0.120"	11	—
0950801	1-1/2"	1.000"	0.250"	1/4	—
0950802	2"	1.624"	0.188"	3/16	—
0950803	2"	1.500"	0.250"	1/4	—
0950804	2-1/4"	1.874"	0.188"	3/16	—
0950805	2-1/2"	2.000"	0.250"	1/4	—
0950806	3"	2.760"	0.120"	11	—
0950807	3"	2.624"	0.188"	3/16	—
0950808	3"	2.500"	0.250"	1/4	—

### 304 Stainless Steel Seamless Structural Round Tube (Mechanical Tube)

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". Also known as hollow bar, this tubing is ideal for mechanical part production.

Conforms to ASTM A511



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0992499	2"	1.500"	0.250"	1/4	—
0992506	2"	1.250"	0.375"	3/8	—
0992500	2-1/4"	1.750"	0.250"	1/4	—
0992507	2-1/4"	1.500"	0.375"	3/8	—
0992501	2-1/2"	2.000"	0.250"	1/4	—
0992508	2-1/2"	1.750"	0.375"	3/8	—
0992513	2-1/2"	1.500"	0.500"	1/2	—
0992502	2-3/4"	2.250"	0.250"	1/4	—
0992509	2-3/4"	2.000"	0.375"	3/8	—
0992514	2-3/4"	1.750"	0.500"	1/2	—
0992503	3"	2.500"	0.250"	1/4	—
0992510	3"	2.250"	0.375"	3/8	—
0992515	3"	2.000"	0.500"	1/2	—
0992511	3-1/4"	2.500"	0.375"	3/8	—
0992516	3-1/4"	2.250"	0.500"	1/2	—
0992522	3-1/4"	1.750"	0.750"	3/4	—
0992504	3-1/2"	3.000"	0.250"	1/4	—
0992517	3-1/2"	2.500"	0.500"	1/2	—
0992523	3-1/2"	2.000"	0.750"	3/4	—
0992505	3-3/4"	3.250"	0.250"	1/4	—
0992518	3-3/4"	2.750"	0.500"	1/2	—
0992520	3-3/4"	2.500"	0.625"	5/8	—
0992512	4"	3.250"	0.375"	3/8	—
0992519	4"	3.000"	0.500"	1/2	—
0992521	4"	2.750"	0.625"	5/8	—
0992524	4"	2.500"	0.750"	3/4	—

### 316/316L Stainless Steel Seamless Round Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". Contains molybdenum which greatly increases its corrosion resistance as well as its physical properties at elevated temperatures. The seamless inner surface prevents buildup. Conforms to ASTM A269 and A213.



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0950720	1/4"	0.180"	0.035"	20	—
0950721	1/4"	0.120"	0.065"	16	—
0950722	3/8"	0.305"	0.035"	20	—
0950723	3/8"	0.245"	0.065"	16	—
0950724	1/2"	0.430"	0.035"	20	—
0950725	1/2"	0.370"	0.065"	16	—
0950726	5/8"	0.527"	0.049"	18	—
0950727	5/8"	0.495"	0.065"	16	—
0950728	3/4"	0.680"	0.035"	20	—
0950729	3/4"	0.620"	0.065"	16	—
0950730	1"	0.902"	0.049"	18	—
0950731	1"	0.760"	0.120"	11	—

### 316 Stainless Steel Seamless Structural Round Tube (Mechanical Tube)

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". Also known as hollow bar, this tubing is ideal for mechanical part production.

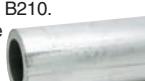
Conforms to ASTM A511



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0992730	2"	1.250"	0.375"	3/8	—
0992727	2"	1.500"	0.250"	1/4	—
0992731	2-1/2"	1.750"	0.375"	3/8	—
0992728	2-1/2"	2.000"	0.250"	1/4	—
0992734	3"	2.000"	0.500"	1/2	—
0992732	3"	2.250"	0.375"	3/8	—
0992729	3"	2.500"	0.250"	1/4	—
0992735	3-1/2"	2.500"	0.500"	1/2	—
0992736	3-3/4"	2.750"	0.500"	1/2	—
0992737	4"	3.000"	0.500"	1/2	—
0992733	4"	3.250"	0.375"	3/8	—

### 6061-T6 Aluminum Drawn Seamless Round Tube

Standard tube lengths are 12' (144") Random Lengths, or have it "cut to length". Type 6061 is the most versatile of the heat treatable aluminum alloys. It has most of the good qualities of aluminum, and it offers a wide range of mechanical properties and corrosion resistance. Meets ASTM B210. Size Tolerances for these parts are found at the end of the section.



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0950828	3/16"	0.118"	0.035"	20	—
0950829	1/4"	0.180"	0.035"	20	—
0950830	1/4"	0.152"	0.049"	18	—
0950831	5/16"	0.243"	0.035"	20	—
0950832	3/8"	0.305"	0.035"	20	—
0950833	3/8"	0.277"	0.049"	18	—
0950834	3/8"	0.245"	0.065"	16	—
0950835	1/2"	0.430"	0.035"	20	—
0950836	1/2"	0.402"	0.049"	18	—
0950837	1/2"	0.370"	0.065"	16	—
0950838	5/8"	0.555"	0.035"	20	—
0950839	5/8"	0.509"	0.058"	17	—
0950840	5/8"	0.495"	0.065"	16	—
0950841	3/4"	0.680"	0.035"	20	—
0950842	3/4"	0.652"	0.049"	18	—
0950843	3/4"	0.620"	0.065"	16	—
0950844	3/4"	0.584"	0.083"	14	—
0950845	7/8"	0.777"	0.049"	18	—
0950846	7/8"	0.745"	0.065"	16	—
0950847	1"	0.930"	0.035"	20	—
0950848	1"	0.902"	0.049"	18	—
0950849	1"	0.884"	0.058"	17	—
0950850	1"	0.870"	0.065"	16	—
0950851	1"	0.750"	0.125"	1/8	—
0950852	1"	0.500"	0.250"	1/4	—
0950853	1-1/4"	1.152"	0.049"	18	—
0950854	1-1/4"	1.120"	0.065"	16	—
0950855	1-1/4"	1.084"	0.083"	14	—
0950856	1-1/4"	1.010"	0.120"	11	—
0950857	1-1/4"	0.750"	0.250"	1/4	—
0950858	1-1/2"	1.430"	0.035"	20	—
0950859	1-1/2"	1.402"	0.049"	18	—
0950860	1-1/2"	1.370"	0.065"	16	—
0950861	1-1/2"	1.250"	0.125"	1/8	—
0950862	1-1/2"	1.000"	0.250"	1/4	—
0950863	1-3/4"	1.620"	0.065"	16	—
0950865	2"	1.902"	0.049"	18	—
0950866	2"	1.870"	0.065"	16	—
0950867	2"	1.750"	0.125"	1/8	—
0950868	2"	1.500"	0.250"	1/4	—
0950869	2-1/2"	2.370"	0.065"	16	—
0950870	2-1/2"	2.250"	0.125"	1/8	—
0950871	2-1/2"	2.000"	0.250"	1/4	—
0950872	2-1/2"	1.500"	0.500"	1/2	—
0950873	3"	2.750"	0.125"	1/8	—
0950874	3"	2.500"	0.250"	1/4	—
0950875	3"	2.250"	0.375"	3/8	—
0950876	3"	2.000"	0.500"	1/2	—
0950877	4"	3.750"	0.125"	1/8	—
0950878	4"	3.500"	0.250"	1/4	—
0950879	4"	3.000"	0.500"	1/2	—
0950880	6"	5.500"	0.250"	1/4	—
0950881	6"	5.000"	0.500"	1/2	—
0950882	8"	7.500"	0.250"	1/4	—
0950883	8"	7.000"	0.500"	1/2	—

## Round Tube Cont.

### 6061-T6511 Aluminum Extruded Seamless Structural Round Tube

Standard tube lengths are 24' (288") Random Lengths, or have it "cut to length". This material offers good mechanical properties and good corrosion resistance. Conforms to ASTM B241. Size Tolerances for these parts are found at the end of the section.



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0950884	1-1/2"	1.250"	0.125"	1/8	—
0959406	1-1/2"	1.000"	0.250"	1/4	—
0950885	2"	1.750"	0.125"	1/8	—
0984308	2"	1.500"	0.250"	1/4	—
0984313	2"	1.250"	0.375"	3/8	—
0984315	2"	1.000"	0.500"	1/2	—
0984309	2-1/4"	1.750"	0.250"	1/4	—
0984316	2-1/4"	1.250"	0.500"	1/2	—
0950886	2-1/4"	2.000"	0.125"	1/8	—
0984310	2-1/2"	2.000"	0.250"	1/4	—
0950887	2-1/2"	1.500"	0.500"	1/2	—
0950888	3"	2.750"	0.125"	1/8	—
0984311	3"	2.500"	0.250"	1/4	—
0984317	3"	2.000"	0.500"	1/2	—
0950890	3"	1.500"	0.750"	3/4	—
0984312	3-1/2"	3.000"	0.250"	1/4	—
0984314	3-1/2"	2.750"	0.375"	3/8	—
0984318	3-1/2"	2.500"	0.500"	1/2	—
0950891	3-1/2"	2.000"	0.750"	3/4	—
0950892	4"	3.750"	0.125"	1/8	—
0950893	4"	3.500"	0.250"	1/4	—
0950894	4"	3.000"	0.500"	1/2	—
0950895	4"	2.500"	0.750"	3/4	—
0950896	4-1/2"	3.500"	0.500"	1/2	—
0950897	4-1/2"	3.000"	0.750"	3/4	—
0950898	5"	4.000"	0.500"	1/2	—
0950899	5"	3.500"	0.750"	3/4	—
0950900	5"	3.000"	1.000"	1	—
0950901	5-1/2"	4.500"	0.500"	1/2	—
0950902	5-1/2"	4.000"	0.750"	3/4	—
0950903	5-1/2"	3.500"	1.000"	1	—
0950904	6"	5.000"	0.500"	1/2	—
0950905	6"	4.500"	0.750"	3/4	—
0950906	6-1/2"	4.500"	1.000"	1	—
0950907	7"	6.000"	0.500"	1/2	—
0950908	7"	5.500"	0.750"	3/4	—
0950909	7"	5.000"	1.000"	1	—
0950910	8"	7.500"	0.250"	1/4	—
0950911	8"	7.000"	0.500"	1/2	—
0950912	8"	6.000"	1.000"	1	—

### 330 Brass Seamless Round Tube

Standard tube lengths are 12' (144") Random Lengths, or have it "cut to length". This low lead brass makes a general utility tube that is suitable for a variety of applications where corrosive conditions are not severe. It is used where good machinability is required, together with moderate cold working properties. It is readily soldered and brazed, but the lead content prevents successful welding.



Part No.	O.D.	I.D.	Thickness	Gauge	UOM /In
0951191	1/8"	0.085"	0.020"	25	—
0951193	1/4"	0.186"	0.032"	21	—
0951194	1/4"	0.120"	0.065"	16	—
0951195	5/16"	0.248"	0.032"	21	—
0951196	5/16"	0.182"	0.065"	16	—
0951197	3/8"	0.311"	0.032"	21	—
0951198	3/8"	0.245"	0.065"	16	—
0951199	7/16"	0.373"	0.032"	21	—
0951200	7/16"	0.307"	0.065"	16	—
0951201	1/2"	0.436"	0.032"	21	—
0951202	1/2"	0.370"	0.065"	16	—
0951203	5/8"	0.561"	0.032"	21	—
0951204	5/8"	0.495"	0.065"	16	—
0951205	3/4"	0.686"	0.032"	21	—
0951206	3/4"	0.620"	0.065"	16	—
0951207	7/8"	0.811"	0.032"	21	—
0951208	7/8"	0.745"	0.065"	16	—
0951209	1"	0.936"	0.032"	21	—
0951210	1"	0.870"	0.065"	16	—

## Pipe

### Cut to Length Black Pipe

Black, Plain end, Schedule 40 pipe that conforms to ASTM A53 Type F

Standard lengths are 21' or have them "cut-to-length".



Schedule 40	Size	UOM /In
0952172	1/8"	—
0952173	1/4"	—
0952174	3/8"	—
0999838	1/2"	—
0999837	3/4"	—
0999836	1"	—
0952175	1-1/4"	—
0999835	1-1/2"	—
0952176	2"	—
0952177	2-1/2"	—
0952178	3"	—
0952179	3-1/2"	—
0952180	4"	—
0952181	5"	—
0952182	6"	—
0952183	8"	—
0952184	10"	—
0952185	12"	—

### 304 Stainless Steel Pipe

Material is a schedule 40 pipe that conforms to ASTM A312. Dual certed to 304/304L. 304 has excellent corrosion resistance. Supplied in 21' random lengths or have it "cut-to-length."



Part No.	Size	UOM /In
0952134	1/8"	—
0952135	1/4"	—
0952136	3/8"	—
0952137	1/2"	—
0952138	3/4"	—
0952139	1"	—
0952140	1-1/4"	—
0952141	1-1/2"	—
0952142	2"	—
0952143	2-1/2"	—
0952144	3"	—

### 6061-T6 Aluminum Pipe

Our aluminum pipe is a T6 temper that comes in 20' random lengths or have it "cut-to-length". 6061 pipe is lightweight and has good strength and corrosion resistance.



Part No.	Size	UOM /In
0952124	1/4"	—
0952125	3/8"	—
0952126	1/2"	—
0952127	3/4"	—
0952128	1"	—
0952129	1-1/4"	—
0952130	1-1/2"	—
0952131	2"	—
0952132	2-1/2"	—
0952133	3"	—

### Galvanized Pipe

Material is an ASTM A53 schedule 40 galvanized pipe. Supplied in 21' lengths or have them "cut-to-length". Galvanized to provide extra corrosion resistance.



Part No.	Size	UOM /In
0952197	1/4"	—
0952198	3/8"	—
0952199	1/2"	—
0952200	3/4"	—
0952201	1"	—
0952202	1-1/4"	—
0952203	1-1/2"	—
0952204	2"	—
0952205	2-1/2"	—
0952206	3"	—
0952207	3-1/2"	—
0952208	4"	—

# SQUARE TUBE

## Square Tube

### Structural Carbon Steel Square Tube

Standard tubes are either 20' (240") or 24' (288") Random Length's, or have it "cut to length". Structural Tubing is an efficient structural member with many inherent advantages, includes strength & lightness. It is made from flat rolled basic oxygen steel, which is formed into a tubular shape & then welded by the electric resistance process. Conforms to ASTM A500 Grade B.



### Structural Carbon Steel Square Tube - ASTM A500 Grade B

Part No.	O.D.	Thickness	Gauge	UOM /In
0951062	1/2" x 1/2"	0.065"	16	^
0951063	3/4" x 3/4"	0.065"	16	—
0951064	3/4" x 3/4"	0.120"	11	—
0951065	1" x 1"	0.065"	16	—
0951066	1" x 1"	0.120"	11	—
0951067	1-1/4" x 1-1/4"	0.065"	16	—
0951068	1-1/4" x 1-1/4"	0.120"	11	—
0951069	1-1/4" x 1-1/4"	0.188"	3/16	—
0951070	1-1/2" x 1-1/2"	0.065"	16	—
0951071	1-1/2" x 1-1/2"	0.120"	11	—
0951072	1-1/2" x 1-1/2"	0.188"	3/16	—
0951073	1-1/2" x 1-1/2"	0.250"	1/4	—
0951074	1-3/4" x 1-3/4"	0.120"	11	—
0951075	2" x 2"	0.120"	11	—
0951076	2" x 2"	0.188"	3/16	—
0951077	2" x 2"	0.250"	1/4	—
0951078	2-1/2" x 2-1/2"	0.120"	11	—
0951079	2-1/2" x 2-1/2"	0.188"	3/16	—
0951080	2-1/2" x 2-1/2"	0.250"	1/4	—
0951081	3" x 3"	0.120"	11	—
0951082	3" x 3"	0.188"	3/16	—
0951083	3" x 3"	0.250"	1/4	—
0951084	3" x 3"	0.375"	3/8	—
0951085	3-1/2" x 3-1/2"	0.188"	3/16	—
0951086	3-1/2" x 3-1/2"	0.250"	1/4	—
0951087	3-1/2" x 3-1/2"	0.313"	5/16	—
0951088	4" x 4"	0.120"	11	—
0951089	4" x 4"	0.188"	3/16	—
0951090	4" x 4"	0.250"	1/4	—
0951091	4" x 4"	0.375"	3/8	—
0951092	4" x 4"	0.500"	1/2	—
0951093	4-1/2" x 4-1/2"	0.250"	1/4	—
0951094	5" x 5"	0.250"	1/4	—
0951095	5" x 5"	0.500"	1/2	—
0951096	6" x 6"	0.250"	1/4	—
0951097	6" x 6"	0.375"	3/8	—
0951098	6" x 6"	0.500"	1/2	—
0951099	7" x 7"	0.250"	1/4	—
0951100	7" x 7"	0.375"	3/8	—
0951101	7" x 7"	0.500"	1/2	—
0951102	8" x 8"	0.250"	1/4	—
0951103	8" x 8"	0.375"	3/8	—
0951104	8" x 8"	0.500"	1/2	—
0951105	10" x 10"	0.250"	1/4	—
0951106	10" x 10"	0.500"	1/2	—
0951107	12" x 12"	0.250"	1/4	—
0951108	12" x 12"	0.500"	1/2	—

### Mechanical Carbon Steel Square Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This material is easy to cold form, bend, braze and weld. Typically made with 1010 steel. Conforms to ASTM A513.



### 304 Stainless Steel Welded Unpolished Square Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This welded mechanical tube offers corrosion resistance with strength. It is easily welded. Conforms to ASTM A554.



Part No.	O.D.	Thickness	Gauge	UOM /In
099227	1/2" x 1/2"	0.063"	1/16	^
0951182	3/4" x 3/4"	0.049"	18	—
0992228	3/4" x 3/4"	0.063"	1/16	—
0951183	3/4" x 3/4"	0.083"	14	—
0951184	3/4" x 3/4"	0.120"	11	—
0992229	1" x 1"	0.063"	1/16	—
0990679	1" x 1"	0.065"	16	—
0990680	1" x 1"	0.083"	14	—
0951185	1" x 1"	0.095"	13	—
0990681	1" x 1"	0.109"	12	—
0990682	1" x 1"	0.120"	11	—
0992230	1-1/4" x 1-1/4"	0.063"	1/16	—
0951186	1-1/4" x 1-1/4"	0.083"	14	—
0951187	1-1/4" x 1-1/4"	0.109"	12	—
0990683	1-1/2" x 1-1/2"	0.065"	16	—
0990684	1-1/2" x 1-1/2"	0.083"	14	—
0990685	1-1/2" x 1-1/2"	0.109"	12	—
0990686	1-1/2" x 1-1/2"	0.120"	11	—
0951188	1-3/4" x 1-3/4"	0.083"	14	—
0951189	1-3/4" x 1-3/4"	0.120"	11	—
0990687	2" x 2"	0.065"	16	—
0990688	2" x 2"	0.083"	14	—
0990689	2" x 2"	0.109"	12	—
0990690	2" x 2"	0.120"	11	—
0951190	3" x 3"	0.083"	14	—

### Alloy 4130 Steel Square Tube

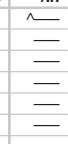
Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This is a cold drawn seamless alloy tube, which is strong and long lasting, and especially suitable for welding. Conforms to ASTM A519.



Part No.	O.D.	Thickness	Gauge	UOM /In
0992213	3/8" x 3/8"	0.035"	20	^
0992214	1/2" x 1/2"	0.035"	20	—
0992215	5/8" x 5/8"	0.035"	20	—
0992219	5/8" x 5/8"	0.049"	18	—
0992223	5/8" x 5/8"	0.065"	16	—
0992216	3/4" x 3/4"	0.035"	20	—
0992220	3/4" x 3/4"	0.049"	18	—
0992218	1 x 1"	0.035"	20	—

### 6061 Aluminum Drawn Seamless Square Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This material has a high degree of resistance to corrosion, is easily welded and is lightweight. Conforms to ASTM B210.



Part No.	O.D.	Thickness	Gauge	UOM /In
0993702	1" x 1"	0.125"	1/8	^
0993703	1-1/2" x 1-1/2"	0.125"	1/8	—
0993704	2" x 2"	0.125"	1/8	—
0993705	2" x 2"	0.188"	3/16	—
0993706	2" x 2"	0.250"	1/4	—
0993707	2-1/2" x 2-1/2"	0.250"	1/4	—
0993708	3" x 3"	0.250"	1/4	—
0993709	4" x 4"	0.250"	1/4	—

### 6063 Extruded Aluminum Square Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This grade is commonly referred to as the architectural alloy. 6063 is more corrosion resistant to Alloy 6061, while still being lightweight and easily weldable. Conforms to ASTM B221 & QQ-A-200/9.



Part No.	O.D.	Thickness	Gauge	UOM /In
0993684	3/4" x 3/4"	0.125"	1/8	^
0993683	1" x 1"	0.062"	1/16	—
0993686	1" x 1"	0.125"	1/8	—
0993690	1-1/4" x 1-1/4"	0.125"	1/8	—
0993692	1-1/2" x 1-1/2"	0.125"	1/8	—
0993694	1-3/4" x 1-3/4"	0.125"	1/8	—
0993697	2" x 2"	0.125"	1/8	—
0999852	2" x 2"	0.180"	7	—
0950825	2" x 2"	0.250"	1/4	—
0993700	3" x 3"	0.125"	1/8	—
0950826	3" x 3"	0.250"	1/4	—
0993701	4" x 4"	0.125"	1/8	—
0950827	4" x 4"	0.250"	1/4	—

# RECTANGULAR TUBE, MARKING PRODUCTS, SHEET & PLATE

## Rectangular Tube

### Structural Carbon Steel Rectangular Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". Structural Tubing is an efficient structural member with many inherent advantages, includes strength & lightness. It is made from flat rolled basic oxygen steel, which is formed into a tubular shape & then welded by the electric resistance process.

Conforms to ASTM A500 Grade B.



Part No.	O.D.	Thickness	Gauge	UOM /In
0951109	1" x 1/2"	0.065"	16	—
0951110	1-1/2" x 1/2"	0.065"	16	—
0951111	1-1/2" x 3/4"	0.120"	11	—
0951112	1-1/2" x 1"	0.120"	11	—
0951113	2" x 1"	0.065"	16	—
0951114	2" x 1"	0.120"	11	—
0951115	2" x 1-1/2"	0.120"	11	—
0951116	2-1/2" x 1"	0.083"	14	—
0951117	2-1/2" x 1-1/2"	0.120"	11	—
0951118	2-1/2" x 1-1/2"	0.188"	3/16	—
0951119	2-1/2" x 1-1/2"	0.250"	1/4	—
0951120	3" x 1"	0.120"	11	—
0951121	3" x 1-1/2"	0.120"	11	—
0951122	3" x 1-1/2"	0.188"	3/16	—
0951123	3" x 2"	0.120"	11	—
0951124	3" x 2"	0.188"	3/16	—
0951125	3" x 2"	0.250"	1/4	—
0951126	4" x 2"	0.120"	11	—
0951127	4" x 2"	0.188"	3/16	—
0951128	4" x 2"	0.250"	1/4	—
0951129	4" x 3"	0.120"	11	—
0951130	4" x 3"	0.188"	3/16	—
0951131	4" x 3"	0.250"	1/4	—
0951132	5" x 2"	0.120"	11	—
0951133	5" x 2"	0.188"	3/16	—
0951134	5" x 2"	0.250"	1/4	—
0951135	5" x 3"	0.120"	11	—
0951136	5" x 3"	0.188"	3/16	—
0951137	5" x 3"	0.250"	1/4	—
0951138	5" x 3"	0.375"	3/8	—
0951139	5" x 3"	0.500"	1/2	—
0951140	6" x 2"	0.120"	11	—
0951141	6" x 2"	0.188"	3/16	—
0951142	6" x 2"	0.250"	1/4	—
0951143	6" x 3"	0.188"	3/16	—
0951144	6" x 3"	0.250"	1/4	—
0951145	6" x 3"	0.375"	3/8	—
0951146	6" x 4"	0.250"	1/4	—
0951147	6" x 4"	0.500"	1/2	—
0951148	7" x 5"	0.250"	1/4	—
0951149	7" x 5"	0.500"	1/2	—
0951150	8" x 2"	0.250"	1/4	—
0951151	8" x 2"	0.375"	3/8	—
0951152	8" x 3"	0.250"	1/4	—
0951153	8" x 3"	0.375"	3/8	—
0951154	8" x 4"	0.188"	3/16	—
0951155	8" x 4"	0.250"	1/4	—
0951156	8" x 4"	0.375"	3/8	—
0951157	8" x 4"	0.500"	1/2	—
0951158	8" x 6"	0.188"	3/16	—
0951159	8" x 6"	0.250"	1/4	—
0951160	8" x 6"	0.313"	5/16	—
0951161	8" x 6"	0.375"	3/8	—
0951162	8" x 6"	0.500"	1/2	—
0951163	10" x 2"	0.188"	3/16	—
0951164	10" x 2"	0.250"	1/4	—
0951165	10" x 3"	0.250"	1/4	—
0951166	10" x 4"	0.188"	3/16	—
0951167	10" x 4"	0.250"	1/4	—

Part No.	O.D.	Thickness	Gauge	UOM /In
0951168	10" x 4"	0.375"	3/8	—
0951169	10" x 4"	0.500"	1/2	—
0951170	10" x 6"	0.250"	1/4	—
0951171	10" x 6"	0.500"	1/2	—
0951172	10" x 8"	0.250"	1/4	—
0951173	10" x 8"	0.500"	1/2	—
0951174	12" x 4"	0.250"	1/4	—
0951175	12" x 4"	0.500"	1/2	—
0951176	12" x 6"	0.250"	1/4	—
0951177	12" x 6"	0.375"	3/8	—
0951178	12" x 6"	0.500"	1/2	—
0951179	12" x 8"	0.375"	3/8	—
0951180	12" x 8"	0.500"	1/2	—
0951181	12" x 8"	0.625"	5/8	—

### Alloy 4130 Steel Rectangular Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This is a cold drawn seamless alloy tube, which is strong and long lasting, and especially suitable for welding. Conforms to ASTM A519.



### 304 Stainless Steel Welded Unpolished Rectangular Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This welded mechanical tube offers corrosion resistance with strength. It is easily welded. Conforms to ASTM A554.

Part No.	O.D.	Thickness	Gauge	UOM /In
0992217	1" x 1/2"	0.035"	20	—
0992221	1" x 1/2"	0.049"	18	—
0992224	1" x 1/2"	0.065"	16	—
0992222	1-1/2" x 3/4"	0.049"	18	—
0992225	1-1/2" x 1"	0.065"	16	—
0992226	1-3/4" x 1"	0.065"	16	—

### 6063 Extruded Aluminum Rectangular Tube

Standard tube lengths are 20' (240") Random Lengths, or have it "cut to length". This grade is commonly referred to as the architectural alloy. 6063 is more corrosion resistant to Alloy 6061, while still being lightweight and easily weldable. Conforms to ASTM B221 & QQ-A-200/9.



Part No.	O.D.	Thickness	Gauge	UOM /In
0950816	2" x 1"	0.120"	11	—
0950817	3" x 2"	0.120"	11	—
0950818	4" x 2"	0.120"	11	—
0950819	4" x 2"	0.250"	1/4	—
0950820	6" x 4"	0.250"	1/4	—

## Marking Products



### Paintstick Markers

- **B Paintstik Markers**
- B Paintstik marker marks on any material, surface, or texture
- Real paint in stick form
- Weather-resistant, UV-resistant
- Ideal for layout, color coding, fabrication, and identification
- Marks through oil and water
- Marks on smooth, rough, rusty, or dirty surfaces
- For use on metal, wood, plastic, concrete, rubber, glass, cardboard, and paper,
- Lead free, non-toxic
- Marking range: -50°F - 150°F

### BL Paintstik

- Bleeds through solvent-based paints
- For fabricating structural steel, or layout work where the marks are required to bleed through a primer coat covering the marks
- To prevent bleeding through the finish coat, seal the marked areas with water-based epoxy paint
- Marking range: -50°F - 150°F

### Fast Dry Paintstik

- Completely dries in 5 minutes
- Ideal for marking in fabricating shops and assembly lines where immediate handling is necessary
- For marking metal, wood, glass, plastic, concrete, rubber, cardboard, and paper
- 3/8 size for marking smaller items
- Marking range: -50°F - 150°F

### M Paintstik

- Marks annealed, normalized and heat treated surfaces
- For welds, ingots, castings, forgings, and annealed parts
- Will not come off in oil or water baths
- Mark at room temperature
- With stands 1600°F

Part No.	Vendor No.	Description	Price /Ea
0200649	80220	B Paintstik®-White	\$1.19
0200650	80221	B Paintstik®-Yellow	1.19
0200651	80222	B Paintstik®-Red	1.19
0200658	81920	M Paintstick-White	1.99
0200675	82721	Fast Dry Paintstick-Yellow	3.99
0200676	80725	BL Paintstick-Blue	3.79

## Sheet & Plate

### Cold Rolled Steel Sheet

This low carbon, commercial quality sheet is soft enough to bend flat on itself without cracking, and is ductile enough for shallow drawing. The carbon is .10 max for improved welding and forming. Conforms to ASTM A1008.



Part No.	Size	Thickness	Gauge	Price /Ea
0999692	48" x 48"	0.0355"	20	\$31.35
0999691	48" x 48"	0.0595"	16	47.45

# SHEET & PLATE, KEYSTOCK

## Sheet & Plate Cont.

### Galvannealed Cold Rolled Steel Sheet

The same as the cold rolled steel, with the added benefit of corrosion resistance. Galvannealed finish is ready to paint.

Part No.	Size	Thickness	Gauge	Price /Ea
0999950	48" x 48"	.0336"	22	\$37.62
0999949	48" x 48"	.0516"	18	51.83

### 304 Stainless Steel Sheet

The most widely used of the stainless steels, 304 is highly corrosion resistant and easily welded. Conforms to ASTM A167-93/A240. Supplied with 2B Mill Finish.

Part No.	Size	Thickness	Gauge	Price /Ea
0999959	48" x 48"	0.036"	20	142.67
0999960	48" x 48"	0.060"	16	\$238.35

### 6061-T6 Aluminum Sheet

This material offers good formability, weldability and corrosion resistance. Common uses are boats, furniture, engineering & structural applications, and transportation equipment. Conforms to ASTM B209 & QQ-A-250/11. Supplied in a Standard Mill Finish.

Part No.	Size	Thickness	Price /Ea
0999958	48" x 48"	0.032"	\$74.98
0999957	48" x 48"	0.062"	134.46

### 110 Copper Sheet

Used for electrical and general purpose, 110 is highly conductive, corrosive resistant and highly ductile. It is easy to solder and braze. Conforms to ASTM B152 Type ETP.

Part No.	Size	Thickness	Price /Ea
0999952	36" x 48"	0.032"	\$197.21
0999951	36" x 48"	0.062"	390.37

### 6061 Aluminum Plate

This is the most versatile of the heat treatable aluminum alloys. It offers good mechanical properties, corrosion resistance, and is weldable by all methods. It has a mill finish. Conforms to ASTM B209, QQ-A-250/11, & AMS 4053.

Part No.	Size	Thickness	Price /Ea
0999956	48" x 48"	1/8"	\$253.56
0999955	48" x 48"	1/4"	711.02

### 3003 Aluminum Tread Plate

Offers good corrosion resistance, has good weldability and workability, and is non heat-treatable.

Part No.	Size	Thickness	Price /Ea
0999954	48" x 48"	1/8"	\$166.31

### 6061-T6 Aluminum Tread Plate

This is the most versatile of the heat treatable aluminum alloys. It offers good mechanical properties, corrosion resistance, and is weldable by all methods.

Part No.	Size	Thickness	Price /Ea
0999953	48" x 48"	3/16"	\$378.38

Other Sheet and Plate sizes and materials available upon request.



### Rectangular - Plain

Size	Length	Part No.	Price /Ea
3/16" x 1/8"	12"	47851	\$1.17
1/4" x 1/8"	12"	47852	2.31
1/4" x 3/16"	12"	47853	1.27
5/16" x 3/16"	12"	47854	2.46
5/16" x 1/4"	12"	47855	1.69
3/8" x 3/16"	12"	47856	4.65
3/8" x 1/4"	12"	47857	2.01
3/8" x 5/16"	12"	47858	2.36
7/16" x 1/4"	12"	47859	2.49
7/16" x 5/16"	12"	47860	2.97
7/16" x 3/8"	12"	47861	4.20
1/2" x 1/4"	12"	47862	2.36
1/2" x 5/16"	12"	47863	3.63
1/2" x 3/8"	12"	47864	3.20
1/2" x 7/16"	12"	47865	4.18
5/8" x 5/16"	12"	47866	4.65
5/8" x 3/8"	12"	47867	3.97
3/4" x 1/2"	12"	47868	5.66
3/4" x 5/8"	12"	47869	7.52
3/4" x 1"	12"	47871	12.93

### Keystock

#### Steel Keystock Available in 12" & 36" Lengths.

Keystock is solid core bars used as keys to lock shaft components together by being inserted into machined slots. Material is high quality, cold drawn low carbon C1018 steel. All keystock is supplied as oversized. Available in square plain and zinc plated, and rectangular plain. Size tolerances for these parts are found at the end of the section.



#### 18-8 Stainless Steel - Undersize Available in 12" and 36" lengths.

Keystock is solid core bars used as keys to lock shaft components together by being inserted into machined slots. Material is high quality stainless steel. All keystock is supplied undersized. Size tolerances for these parts are found at the end of the section.



### Square - Plain

Size	Part No.	12"		36"	
		Price /Ea	Part No.	Price /Ea	Part No.
1/8"	47910	\$0.66	47930	\$1.77	
5/32"	47911	0.85			
3/16"	47912	0.87	47932	2.22	
1/4"	47913	1.02	47933	3.04	
5/16"	47914	1.48	47934	4.36	
3/8"	47915	1.76	47935	4.92	
7/16"	47916	2.17	47936	6.43	
1/2"	47917	2.48	47937	6.64	
9/16"	47918	3.84	47938	10.32	
5/8"	47919	3.94	47939	10.57	
11/16"	47920	5.44	47940	15.18	
3/4"	47921	5.44	47941	15.65	
7/8"	47923	6.93	47943	20.00	
1"	47924	8.86	47944	25.57	
1-1/8"	47927	16.19			
1-1/4"	47925	15.48	47945	43.53	
1-1/2"	47926	21.36	47946	52.06	



### Square - Stainless Steel

Size	Part No.	12"		36"	
		Price /Ea	Part No.	Price /Ea	Part No.
1/8"	0120714	\$2.65			
3/16"	0120715	3.38	0120725	\$11.38	
1/4"	0120716	4.71	0120726	14.49	
5/16"	0120717	6.90			
3/8"	0120718	9.60	0120727	31.61	
7/16"	0120719	15.00			
1/2"	0120720	17.40			
5/8"	0120721	28.14			
3/4"	0120722	34.44			
7/8"	0120723	63.39			
1"	0120724	73.40			



### Square - Zinc Plated

Size	Part No.	12"		36"	
		Price /Ea	Part No.	Price /Ea	Part No.
1/8"	47810	\$0.69	47830	\$2.21	
5/32"	47811	0.84	47831	2.86	
3/16"	47812	0.87	47832	2.98	
1/4"	47813	1.27	47833	3.83	
5/16"	47814	1.67	47834	5.38	
3/8"	47815	2.28	47835	6.61	
7/16"	47816	2.79	47836	8.43	
1/2"	47817	3.13	47837	9.47	
9/16"	47818	5.92	47838	16.16	
5/8"	47819	4.95	47839	14.73	
11/16"	47820	8.16	47840	27.43	
3/4"	47821	7.23	47841	21.64	
13/16"	47822	10.73	47842	43.12	
7/8"	47823	9.28	47843	27.83	
1"	47824	11.83	47844	35.48	
1-1/8"	47827	18.18			
1-1/4"	47825	20.69	47845	60.09	
1-1/2"	47826	23.44	47846	72.45	

### Square Metric - Zinc Plated

Size	Part No.	12"		1M	
		Price /Ea	Part No.	Price /Ea	Part No.
4mm	0120728	\$2.24	0120746	\$5.05	
5mm	0120729	3.59	0120747	6.14	
6mm	0120730	2.79	0120748	8.27	
7mm	0120731	4.18	0120749	10.44	
8mm	0120733	4.63	0120751	10.26	
10mm	0120736	8.11	0120755	17.25	
12mm	0120740	8.61	0120758	22.02	
14mm	0120742	10.68	0120760	38.39	
16mm	0120743	13.93	0120761	67.41	
18mm	0120744	17.56	0120762	82.39	
20mm	0120745	21.65	0120763	101.04	

# KEYSTOCK, MACHINE KEYS, KEYED SHAFTS

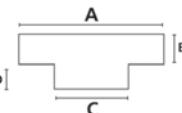
## Keystock Cont.

### Rectangular Metric - Zinc Plated

Size	12" Zinc Plated		1M Zinc	
	Part No.	Price /Ea	Part No.	Price /Ea
7mm x 8mm	0120732	\$4.52	0120750	\$12.17
8mm x 10mm	0120734	4.43	0120752	17.09
8mm x 12mm	0120735	5.28	0120753	20.37
9mm x 14mm	0120737	11.00	0120754	29.06
10mm x 16mm	0120738	14.25	0120756	44.90
11mm x 18mm	0120739	17.06	0120757	81.12
12mm x 20mm	0120741	16.77	0120759	90.78
20mm x 36mm			0120764	120.63

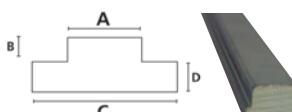
### Step Key Stock

Step Key Stock is Zinc plated C1018 steel which is supplied in 1' lengths. Also known as "offset" keystone. Typical Rockwell hardness is B86. Tolerances: dimensions A & C = +.002, B & D = .005. Type 1 is typically used for salvage and repair of damaged keyways in shafts. Type 2 is typically used for mating mismarked keyways, gears and shafts.



#### Type 1

Part No.	Size A	Size B	Size C	Size D	Price /Ea
0953060	3/16"	3/32"	1/8"	1/16"	\$10.44
0953061	3/8"	3/16"	5/16"	1/8"	12.28
0953062	3/8"	3/16"	5/16"	5/32"	16.28
0953063	1/2"	1/4"	7/16"	5/32"	21.73
0953064	5/8"	5/16"	3/8"	3/16"	25.61
0953065	3/4"	3/8"	1/2"	1/4"	35.19
0953066	3/4"	3/8"	5/8"	3/16"	46.90
0953067	3/4"	3/8"	5/8"	5/16"	33.89
0953068	1"	1/2"	7/8"	7/16"	43.98



#### Type 2

Part No.	Size A	Size B	Size C	Size D	Price /Ea
0953069	3/16"	3/32"	1/4"	3/32"	\$10.21
0953070	3/16"	3/32"	1/4"	1/8"	11.07
0953071	1/4"	1/8"	5/16"	1/8"	10.83
0953072	1/4"	1/8"	3/8"	1/8"	11.41
0953073	1/4"	1/8"	3/8"	3/16"	11.62
0953074	3/8"	3/16"	7/16"	5/32"	17.11
0953075	3/8"	3/16"	1/2"	3/16"	18.53
0953076	3/8"	3/16"	1/2"	1/4"	18.81
0953077	1/2"	1/4"	9/16"	3/16"	37.12
0953078	1/2"	1/4"	5/8"	3/16"	24.37
0953079	1/2"	1/4"	5/8"	5/16"	33.04
0953080	1/2"	1/4"	11/16"	1/4"	27.20
0953081	5/8"	5/16"	11/16"	1/4"	41.06
0953082	3/4"	3/8"	7/8"	7/16"	35.19
0953083	3/4"	3/8"	1"	1/2"	36.61

## Machine Keys

### Square Ends - Undersize

Machine Keys are made from C1018 steel and are supplied plain. Keys have square ends and are supplied in packages of 10. Tolerances are +.000/-002.



Part No.	Size	Length	Price /Ea
0953148	1/8"	3/4"	\$0.19
0953149	1/8"	1"	0.20
0953150	1/8"	1-1/4"	0.21
0953151	3/16"	1/2"	0.18
0953152	3/16"	3/4"	0.20
0953153	3/16"	1"	0.21
0953154	3/16"	1-1/4"	0.22
0953155	3/16"	1-1/2"	0.23
0953156	3/16"	1-3/4"	0.25
0953157	3/16"	2"	0.27
0953158	3/16"	2-1/2"	0.32
0953159	1/4"	3/4"	0.33
0953160	1/4"	1"	0.33
0953161	1/4"	1-1/4"	0.35
0953162	1/4"	1-1/2"	0.37
0953163	1/4"	1-3/4"	0.39
0953164	1/4"	2"	0.41
0953165	1/4"	2-1/4"	0.43
0953166	1/4"	2-1/2"	0.45
0953167	1/4"	3"	0.49
0953168	5/16"	1-1/4"	0.40
0953169	5/16"	1-1/2"	0.45
0953170	5/16"	2"	0.50
0953171	5/16"	2-1/2"	0.57
0953172	3/8"	1-1/4"	0.47
0953173	3/8"	1-1/2"	0.55
0953174	3/8"	2"	0.62
0953175	3/8"	2-1/2"	0.73
0953176	1/2"	1-1/2"	0.66
0953177	1/2"	2"	.74
0953178	1/2"	2-1/2"	.90

### Square Ends - Oversize

Machine Keys are made from C1018 steel and are supplied plain. Keys have square ends and are supplied in packages of 10. Tolerances are +.002/-000.

Part No.	Size	Length	Price /Ea
0953179	1/8"	1/2"	\$0.18
0953180	1/8"	3/4"	0.20
0953181	1/8"	1"	0.21
0953182	3/16"	1/2"	0.22
0953183	3/16"	3/4"	0.22
0953184	3/16"	1"	0.23
0953185	3/16"	1-1/4"	0.26
0953186	3/16"	1-1/2"	0.27
0953187	3/16"	1-3/4"	0.28
0953188	3/16"	2"	0.31
0953189	1/4"	3/4"	0.34
0953190	1/4"	1"	0.34
0953191	1/4"	1-1/4"	0.36
0953192	1/4"	1-1/2"	0.38
0953193	1/4"	1-3/4"	0.40
0953194	1/4"	2"	0.42
0953195	1/4"	2-1/4"	0.44
0953196	1/4"	2-1/2"	0.46
0953197	3/8"	1"	0.52
0953198	3/8"	1-1/4"	0.55
0953199	3/8"	1-3/4"	0.60
0953200	3/8"	2"	0.63
0953201	3/8"	2-1/4"	0.68
0953202	3/8"	2-3/4"	0.80
0953203	1/2"	1"	0.53
0953204	1/2"	2"	0.73

### Round Ends - Oversize

Machine Keys are made from C1018 steel and are supplied plain. Keys have round ends and are supplied in packages of 10. Tolerances are +.002/-000.



Part No.	Size	Length	Pkg. Qty.	Price /Ea
0953205	3/16"	1/2"	5	\$0.97
0953206	3/16"	3/4"	5	1.01
0953207	3/16"	1-1/2"	5	1.10
0953208	3/8"	1"	5	1.22
0953209	3/8"	1-1/4"	5	1.26
0953210	3/8"	1-1/2"	5	1.31
0953211	3/8"	2"	5	1.47
0953212	3/8"	2-1/2"	5	1.55
0953213	1/2"	1"	5	1.64
0953214	1/2"	2"	5	1.93
0953215	1/2"	2-1/2"	5	2.02
0953216	1/2"	3"	1	2.18
0953217	1/2"	3-1/2"	1	2.44

### Metric - Round Ends - Undersize

Machine Keys are made from C1045 steel and are supplied plain. Keys have round ends and are supplied in packages of 25. Tolerances are +.003/-0.030. Keys conform to DIN 6885A.

Part No.	Size	Length	Price /Ea
0953218	4mm	8mm	\$0.33
0953219	4mm	10mm	0.33
0953220	4mm	12mm	0.33
0953221	4mm	14mm	0.33
0953222	4mm	16mm	0.33
0953223	5mm	14mm	0.33
0953224	5mm	16mm	0.33
0953225	5mm	18mm	0.33
0953226	5mm	20mm	0.33
0953227	5mm	25mm	0.35
0953228	6mm	20mm	0.38
0953229	6mm	25mm	0.40
0953230	6mm	30mm	0.43
0953231	6mm	36mm	0.44
0953232	6mm	40mm	0.46

## Keyed Shafts

### Carbon Steel

Shafts are made from 1018 steel and are supplied fully keyed the entire shaft length. Key Depth tolerance is +.010/.000. Key Width Tolerance is +.002/-000. Straightness tolerance is 0.012 per foot. Supplied in 3' and 6' lengths. Keyed shafts are supplied plain.



Part No.	Diameter	Keyway Width	Keyway Height	Price /Ea
0157517	1/2"	1/8"	1/16"	\$22.54
0157518	5/8"	3/16"	3/32"	23.29
0157519	3/4"	3/16"	3/32"	24.40
0157520	7/8"	3/16"	3/32"	28.63
0157521	1"	1/4"	1/8"	32.93
0157522	1-1/8"	1/4"	1/8"	39.08
0157523	1-3/16"	1/4"	1/8"	40.79
0157524	1-1/4"	1/4"	1/8"	42.49
0157525	1-3/8"	5/16"	5/32"	49.39
0157526	1-7/16"	3/8"	3/16"	55.18
0157527	1-1/2"	3/8"	3/16"	60.22

# KEYED SHAFTS, LEAD PRODUCTS, TIN PRODUCTS

## Keyed Shafts Cont.

6' Length				
Part No.	Diameter	Keyway Width	Keyway Height	Price /Ea
0953110	1/2"	1/8"	1/16"	\$45.09
0953111	5/8"	3/16"	3/32"	46.57
0953112	3/4"	3/16"	3/32"	48.80
0953113	7/8"	3/16"	3/32"	57.25
0953114	1"	1/4"	1/8"	65.85
0953115	1-1/8"	1/4"	1/8"	78.16
0953116	1-3/16"	1/4"	1/8"	81.58
0953117	1-1/4"	1/4"	1/8"	84.99
0953118	1-3/8"	5/16"	5/32"	98.78
0953119	1-7/16"	3/8"	3/16"	110.35
0953120	1-1/2"	3/8"	3/16"	120.44

## Stainless Steel

Shafts are made from 303 stainless steel and are supplied fully keyed the entire shaft length. Key Depth tolerance is +.010/.000. Key Width Tolerances is +.002/.000. Straightness tolerance is 0.012 per foot. Supplied in 3' and 6' lengths.

3' Length				
Part No.	Diameter	Keyway Width	Keyway Height	Price /Ea
0953121	1/2"	1/8"	1/16"	\$57.40
0953122	5/8"	3/16"	3/32"	63.42
0953123	3/4"	3/16"	3/32"	66.98
0953124	7/8"	3/16"	3/32"	92.00
0953125	1"	1/4"	1/8"	98.26
0953126	1-1/8"	1/4"	1/8"	135.19
0953127	1-3/16"	1/4"	1/8"	137.78
0953128	1-1/4"	1/4"	1/8"	129.08
0953129	1-3/8"	5/16"	5/32"	178.45
0953130	1-7/16"	3/8"	3/16"	182.55
0953131	1-1/2"	3/8"	3/16"	190.88

6' Length				
Part No.	Diameter	Keyway Width	Keyway Height	Price /Ea
0953132	1/2"	1/8"	1/16"	\$110.20
0953133	5/8"	3/16"	3/32"	121.77
0953134	3/4"	3/16"	3/32"	128.59
0953135	7/8"	3/16"	3/32"	176.65
0953136	1"	1/4"	1/8"	188.66
0953137	1-1/8"	1/4"	1/8"	259.56
0953138	1-3/16"	1/4"	1/8"	264.53
0953139	1-1/4"	1/4"	1/8"	247.84
0953140	1-3/8"	5/16"	5/32"	342.62
0953141	1-7/16"	3/8"	3/16"	350.50
0953142	1-1/2"	3/8"	3/16"	366.48

## Precision Drill Rod

### Drill Rod Fractional Sizes

Conforms to ASTM A686. Diameter tolerance for 1/16" to 7/64" sizes is +/- 0.0003", for 1/8" to 31/64" sizes is +/- 0.0005", and for 1/2" and greater sizes is +/- 0.001". Length tolerance is +/- 1/8". Sold in 3' lengths. Available in other materials upon request.

Diameter	O1 Tool Steel	W1 Tool Steel	A2 Tool Steel	Diameter			
	Part No.	Price /Ea	Part No.				
1/16"	47760	\$1.13	0987896	\$1.10	0988690	\$1.24	1/16"
5/64"	0988251	1.20	0987897	1.11	0988691	2.05	5/64"
3/32"	47761	1.36	0987898	1.25	0988692	2.32	3/32"
7/64"	0988253	1.65	0987899	1.47	0988693	2.92	7/64"
1/8"	47762	1.53	0987900	1.50	0988694	3.24	1/8"
9/64"	0988255	2.04	0987901	1.57	0988695	4.02	9/64"
5/32"	47763	1.72	0987902	1.66	0988696	4.36	5/32"
11/64"	0988257	2.78	0987903	2.44	0988697	4.73	11/64"
3/16"	47764	2.20	0987904	1.86	0988698	5.85	3/16"
13/64"	0988259	2.81	0987905	2.60	0988699	6.36	13/64"
7/32"	47765	2.40	0987906	2.00	0988700	6.33	7/32"
15/64"	0988261	3.12	0987907	3.11	0988701	6.73	15/64"
1/4"	47766	2.76	0987908	2.22	0988702	5.87	1/4"
17/64"	0988263	3.49	0987909	3.08	0988703	6.36	17/64"

## Lead Products

### Lead Sheet

Cold-rolled lead sheets are good sound and vibration absorbers. They are easy to form. Use for gasketing, shielding against small amounts of radiation, and lining tanks and containers to prevent corrosion. Meets ASTM B739 and QQL-201 Grade B.



Part No.	Thickness	Length	Width	Price /Ea
0952327	1/24"	12"	12"	\$14.58
0952328	1/16"	12"	12"	22.59
0952329	3/32"	12"	12"	32.60
0952330	1/8"	12"	12"	40.08
0952331	3/16"	12"	12"	61.10
0952332	1/4"	12"	12"	83.23
0952333	1/2"	12"	12"	149.20
0952334	1"	12"	12"	273.49
0952335	1/24"	24"	24"	47.41
0952336	1/16"	24"	24"	70.25
0952337	3/32"	24"	24"	107.16
0952338	1/8"	24"	24"	135.78
0952339	3/16"	24"	24"	241.50
0952340	1/4"	24"	24"	300.69
0952341	1/24"	48"	48"	176.57
0952342	1/16"	48"	48"	237.86
0952343	3/32"	48"	48"	350.75

### Lead Brick

Use around containers, tanks, and radiation-producing equipment to help shield other equipment from radiation. Meets ASTM B749 + QQL -201 Grade B sheet.



Part No.	Thickness	Width	Length	Price /Ea
0952344	2"	3"	6"	\$54.48
0952345	2"	4"	8"	94.61

## Lead Disc

Cast-lead discs are for counterbalancing, vibration dampening, and shielding. The center hole allows you to mount them and use them as spacers and washers. Meets ASTM B29 and QQL-171e Grade C.



Part No.	Thickness	O.D.	I.D.	Price /Ea
0952347	1/2"	2-3/4"	13/32"	\$14.60
0952348	1/2"	4-1/2"	25/64"	27.43
0952349	1/2"	6"	25/64"	40.32
0952350	1/2"	8-1/2"	41/64"	62.52
0952351	1/2"	13"	41/64"	190.25
0952352	1"	4-1/2"	25/64"	49.28
0952353	1"	6"	25/64"	67.37
0952354	1"	8-1/2"	41/64"	112.25
0952355	1"	10-3/4"	41/64"	178.13
0952356	1"	13"	41/64"	256.72
0952357	2"	4-1/2"	25/64"	84.83
0952358	2"	6"	25/64"	114.91
0952359	2"	8-1/2"	41/64"	220.61

## Tin Products

### Tin Sheet

Tin sheets are ideal for making into gaskets and filters. Meets ASTM B339 Grade A. 99.85% Tin.



Part No.	Thickness	Length	Width	Gauge	Price /Ea
0952360	1/32"	12"	12"	0.03125	\$46.16
0952361	1/16"	12"	12"	0.0625	89.17
0952362	1/8"	12"	12"	0.125	178.36
0952363	1/32"	24"	24"	0.03125	178.88
0952364	1/16"	24"	24"	0.0625	363.21
0952365	1/8"	24"	24"	0.125	711.26

# PRECISION DRILL ROD

## Precision Drill Rod

Diameter	O1 Tool Steel Part No.	W1 Tool Steel Part No.	A2 Tool Steel Part No.	Price /Ea	Price /Ea	Price /Ea	Diameter
17/32"	47775	\$8.51	0987926	\$9.41	0988719	\$21.23	17/32"
35/64"	0988281	11.79					35/64"
9/16"	47776	9.56	0987927	8.37	0988720	23.65	9/16"
37/64"	0988283	13.17					37/64"
19/32"	47777	10.63	0987928	11.74	0988721	26.30	19/32"
39/64"	0988285	14.73					39/64"
5/8"	47778	11.49	0987929	10.12	0988722	29.03	5/8"
21/32"	47779	12.88	0987930	13.85	0988723	32.01	21/32"
11/16"	47780	14.12	0987931	11.38	0988724	35.14	11/16"
23/32"	47781	15.49	0987932	16.43	0988725	38.40	23/32"
3/4"	47782	16.18	0987933	13.88	0988726	41.64	3/4"
25/32"	47783	19.51	0987934	20.06			25/32"
13/16"	47784	21.68	0987935	21.64	0988727	48.87	13/16"
27/32"	47785	23.03	0987936	23.41			27/32"
7/8"	47786	23.55	0987937	18.88	0988728	56.67	7/8"
29/32"	47787	29.55	0987938	27.01			29/32"
15/16"	47788	28.35	0987939	28.83			15/16"
31/32"	47789	30.42	0987940	31.10			31/32"

Diameter	O1 Tool Steel		W1 Tool Steel		A2 Tool Steel		Diameter
	Part No.	Price /Ea	Part No.	Price /Ea	Part No.	Price /Ea	
1"	47790	\$28.98	0987941	\$24.42	0988729	\$66.42	1"
1-1/16"	47791	34.67	0987942	27.11	0988730	74.99	1-1/16"
1-1/8"	47792	37.02	0987943	27.98	0988731	84.12	1-1/8"
1-3/16"	47793	43.45	0987944	31.23			1-3/16"
1-1/4"	47794	46.34	0987945	34.74	0988732	99.28	1-1/4"
1-5/16"	47795	50.84	0987946	50.89			1-5/16"
1-3/8"	0988304	57.96	0987947	41.45	0988733	111.23	1-3/8"
1-7/16"	0988305	63.33	0987948	45.37			1-7/16"
1-1/2"	0988306	68.98	0987949	48.30	0988734	131.82	1-1/2"
1-9/16"			0987950	66.37			1-9/16"
1-5/8"	0988307	79.63	0987951	73.98			1-5/8"
1-11/16"			0987952	55.75			1-11/16"
1-3/4"	0988308	91.49	0987953	64.00	0988735	178.01	1-3/4"
1-13/16"			0987954	91.98			1-13/16"
1-7/8"	0988309	106.09	0987955	98.55			1-7/8"
1-15/16"			0987956	78.04			1-15/16"
2"	0988310	120.30	0987957	78.43	0988736	233.58	2"
2-1/4"	0988311	136.70					2-1/4"
2-1/2"	0988312	165.69					2-1/2"
2-3/4"	0988313	215.75					2-3/4"
3"	0988314	245.16					3"

## Drill Rod Number Sizes

Conforms to ASTM A686. Diameter tolerance for .063" to .120" sizes is +/-0.0003" and for .127" and greater sizes is +/-0.0005". Length tolerance is +1/8". Sold in 3' lengths.

Size	O1 Tool Steel Part No.	W1 Tool Steel Part No.	Price /Ea	Price /Ea
#52	0988318	\$1.46	0987958	\$0.89
#51	0988319	1.47	0987959	0.93
#50	0988320	1.49	0987960	0.96
#49	0988321	1.50	0987961	0.99
#48	0988322	1.53	0987962	1.03
#47	0988323	1.56	0987963	2.17
#46	0988324	1.61	0987964	1.11
#45	0988325	1.67	0987965	1.15
#44	0988326	1.68	0987966	1.19
#43	0988327	1.70	0987967	1.12
#42	0988328	1.72	0987968	1.19
#41	0988329	1.75	0987969	1.24
#40	0988330	1.75	0987970	1.27
#39	0988331	1.76	0987971	1.30
#38	0988332	1.78	0987972	1.37
#37	0988333	1.79	0987973	1.40
#36	0988334	1.81	0987974	1.44
#35	0988335	1.82	0987975	1.47
#34	0988336	1.85	0987976	1.51
#33	0988337	1.86	0987977	1.58
#32	0988338	1.90	0987978	1.65
#31	0988339	1.92	0987979	1.73
#30	0988340	1.97	0987980	1.61
#29	0988341	2.00	0987981	1.73
#28	0988342	2.04	0987982	1.81
#27	0988343	2.11	0987983	1.89
#26	0988344	2.13	0987984	1.94
#25	0988345	2.13	0987985	1.99
#24	0988346	2.14	0987986	2.03
#23	0988347	2.15	0987987	2.09
#22	0988348	2.17	0987988	2.13
#21	0988349	2.22	0987989	1.66
#20	0988350	2.25	0987990	2.01
#19	0988351	2.32	0987991	2.07
#18	0988352	2.33	0987992	2.15
#17	0988353	2.36	0987993	2.22
#16	0988354	2.37	0987994	2.28
#15	0988355	2.39	0987995	2.35
#14	0988356	2.42	0987996	2.40
#13	0988357	2.44	0987997	2.44
#12	0988358	2.49	0987998	2.50
#11	0988359	2.53	0987999	2.56
#10	0988360	2.54	0988000	2.60
#9	0988361	2.55	0988001	2.66
#8	0988362	2.69	0988002	2.76
#7	0988363	2.78	0988003	2.30
#6	0988364	2.82	0988004	2.31

**DRILL ROD**

## Drill Rod Letter Sizes

Conforms to ASTM A686. Diameter tolerance is +/-0.0005". Length tolerance is +1/8". Sold in 3' lengths. Other materials available upon request.

Part No.	Size	Price /Ea
0988370	A	\$3.21
0988371	B	3.33
0988372	C	3.43
0988373	D	3.48
47766	E	2.76
0988375	F	3.55
0988376	G	3.57
0988377	H	3.62
0988378	I	3.68
0988379	J	3.79
0988380	K	3.83
0988381	L	3.94
0988382	M	4.01
0988383	N	4.15
0988384	O	4.48
0988385	P	4.58
0988386	Q	4.85
0988387	R	5.10
0988388	S	5.31
0988389	T	5.63
0988390	U	5.94
0988391	V	5.48
0988392	W	5.72
0988393	X	5.90
0988394	Y	6.12
0988395	Z	6.37

## Drill Rod Metric Sizes

Diameter tolerance for 2mm and 3mm sizes is +/-0.008mm, for 4mm to 12mm sizes is +/-0.013mm, and for 13mm and greater sizes is +/-0.025mm. Length tolerance is +1/4". Sold in 3' lengths.

Diameter	O1 Tool Steel Part No.	W1 Tool Steel Part No.	A2 Tool Steel Part No.	Price /Ea	Price /Ea
2mm	46950	\$1.68	0988740	\$4.38	
3mm	46951	1.93	0988741	6.22	
4mm	46952	2.05	0988742	6.48	
5mm	46953	2.64	0988743	8.03	
6mm	46954	3.30	0988744	10.25	
7mm	46955	3.60	0988745	11.33	
8mm	46956	4.35	0988746	13.93	
9mm	46957	5.24	0988747	16.93	
10mm	46958	6.43	0988748	20.82	
11mm	46959	7.92	0988749	25.85	
12mm	46960	9.09	0988750	29.88	
13mm	46961	10.35	0988751	34.57	
14mm	46962	11.53	0988752	40.08	
15mm	46963	13.21	0988753	45.66	
16mm	46964	14.52	0988754	50.53	
17mm	46965	16.64	0988755	57.63	
18mm	46966	18.71	0988756	64.90	
19mm	46967	20.28	0988757	70.61	
20mm	46968	22.46	0988758	82.44	
21mm	46969	25.51	0988759	87.27	
22mm	46970	28.54	0988760	95.79	
23mm	46971	30.41	0988761	102.71	
24mm	46972	32.28	0988762	113.46	
25mm	46973	35.07	0988763	123.10	
30 mm	0988420	51.73			

# GROUND FLAT STOCK

## Ground Flat Stock

### Grade 01 Oil-Hardening Precision Ground Flat Stock

Conforms to ASTM A681 and is supplied annealed. Rockwell hardness is 89-96 B scale. Thickness tolerance is  $+/-0.001"$ . Width tolerance is  $+0.005"$ . Length tolerance is  $+1/4"$ . Sold in 1-1/2' & 3' lengths.



Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
1/64"	1/2"	0988036	\$55.40	0994044	\$107.46
1/64"	2"	0988037	86.72	0994045	168.24
1/64"	4"	0988038	160.45	0994046	311.26
1/32"	1/2"	0988039	9.48	0994047	18.41
1/32"	3/4"	0988040	12.45	0994048	24.21
1/32"	1"	0988041	14.96	0994049	29.04
1/32"	1-1/2"	0988042	20.57	0994050	39.77
1/32"	2"	0988043	26.01	0994051	50.32
1/32"	3"	0988044	37.20	0994052	71.87
1/32"	4"	0988045	48.29	0994053	93.09
3/64"	1/2"	0988046	8.37	0994054	16.26
3/64"	3/4"	0988047	10.82	0994055	21.01
3/64"	1"	0988048	13.24	0994056	25.56
3/64"	2"	0988049	22.84	0994057	43.88
3/64"	4"	0988050	50.78	0994058	80.33
1/16"	1/4"	0950508	19.58	0995059	38.34
1/16"	5/16"	0950510	22.19	09950511	43.59
1/16"	3/8"	0950512	9.91	09950513	19.21
1/16"	1/2"	0988051	5.93	0994059	11.44
1/16"	5/8"	0950514	6.87	0950515	13.19
1/16"	3/4"	0988052	7.56	0994060	14.52
1/16"	1"	0988053	9.09	0994061	17.49
1/16"	1-1/4"	0988054	10.69	0994062	20.37
1/16"	1-1/2"	0988055	12.29	0994063	23.43
1/16"	1-3/4"	0950516	13.88	0950517	26.38
1/16"	2"	0988056	15.44	0994064	29.38
1/16"	2-1/2"	0988057	18.62	0994065	35.32
1/16"	3"	0988058	21.79	0994066	41.25
1/16"	3-1/2"	0988059	25.00	0994067	47.33
1/16"	4"	0988060	28.11	0994068	53.16
1/16"	5"	0950518	34.45	0950519	65.08
1/16"	6"	0950520	40.80	0950521	77.01
1/16"	8"	0950522	59.88	0950523	112.93
1/16"	10"	0950524	74.04	0950525	139.59
3/32"	1/4"	0950526	24.74	0950527	48.51
3/32"	5/16"	0950528	21.28	0950529	41.75
3/32"	3/8"	0950530	13.58	0950531	26.61
3/32"	1/2"	0988061	7.77	0994069	14.97
3/32"	3/4"	0988062	9.67	0994070	18.55
3/32"	1"	0988063	11.67	0994071	22.21
3/32"	1-1/4"	0950532	13.59	0950533	25.72
3/32"	1-1/2"	0988064	15.52	0994072	29.33
3/32"	1-3/4"	0950534	17.48	0950535	32.95
3/32"	2"	0988065	19.42	0994073	36.53
3/32"	2-1/2"	0988066	23.35	0994074	43.76
3/32"	3"	0988067	27.26	0994075	51.06
3/32"	4"	0988068	35.00	0994076	65.48
3/32"	5"	0950536	42.79	0950537	79.92
3/32"	6"	0950538	50.56	0950539	94.35
3/32"	8"	0950540	74.15	0950541	138.04
3/32"	10"	0950542	97.72	0950543	181.79
1/8"	1/8"	0988069	16.14	0994077	31.67
1/8"	1/4"	0988070	5.89	0994078	11.40
1/8"	5/16"	0988071	6.35	0994079	12.43
1/8"	3/8"	0950544	6.82	0950545	13.15
1/8"	1/2"	0988072	7.55	0994080	14.46
1/8"	5/8"	0950546	8.68	0950547	16.11
1/8"	3/4"	0988073	9.37	0994081	17.79
1/8"	1"	0988074	11.16	0994082	21.04
1/8"	1-1/4"	0988075	12.81	0994083	24.11
1/8"	1-1/2"	0988076	14.61	0994084	27.38
1/8"	1-3/4"	0950548	16.44	0950549	30.64
1/8"	2"	0988077	18.20	0994085	33.86
1/8"	2-1/2"	0988078	22.73	0994086	40.35
1/8"	3"	0988079	25.33	0994087	46.88
1/8"	3-1/2"	0988080	28.92	0994088	53.40
1/8"	4"	0988081	32.45	0994089	59.89
1/8"	4-1/2"	0950550	36.05	0950551	66.39
1/8"	5"	0950552	39.60	0950553	72.88
1/8"	6"	0988082	46.72	0994090	85.88
1/8"	7"	0950554	60.42	0950555	110.94

Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
1/8"	8"	0988083	\$68.52	0994091	\$125.75
1/8"	10"	0950556	84.58	0950557	155.00
1/8"	12"	0950558	100.69	0950559	184.44
1/8"	14"	0950560	116.42	0950561	213.00
5/32"	3/4"	0988084	11.52	0994092	21.83
5/32"	1"	0988085	13.71	0994093	25.82
5/32"	1-1/2"	0988086	17.94	0994094	33.51
5/32"	2"	0988087	22.31	0994095	41.45
5/32"	4"	0988088	39.69	0994096	73.07
3/16"	3/16"	0988089	14.47	0994097	28.28
3/16"	1/4"	0950564	8.03	0950565	15.60
3/16"	5/16"	0950566	8.62	0950567	16.93
3/16"	3/8"	0950568	9.20	0950569	17.65
3/16"	1/2"	0988090	10.57	0994098	19.43
3/16"	5/8"	0950570	11.53	0950571	21.84
3/16"	3/4"	0988091	12.41	0994099	23.34
3/16"	1"	0988092	14.61	0994100	27.33
3/16"	1-1/4"	0988093	16.71	0994101	31.06
3/16"	1-1/2"	0988094	18.93	0994102	35.03
3/16"	1-3/4"	0950572	21.16	0950573	38.98
3/16"	2"	0988095	23.40	0994103	43.03
3/16"	2-1/2"	0950574	27.81	0950575	50.89
3/16"	3"	0988096	32.31	0994104	58.87
3/16"	3-1/2"	0950576	36.79	0950577	66.89
3/16"	4"	0988097	41.19	0994105	74.77
3/16"	5"	0950578	50.09	0950579	90.70
3/16"	6"	0950580	58.97	0950581	106.57
3/16"	8"	0950582	85.99	0950583	155.06
3/16"	10"	0950584	105.95	0950585	190.72
3/16"	12"	0950586	126.07	0950587	226.66
1/4"	1/4"	0988098	13.07	0994106	25.33
1/4"	5/16"	0950588	19.76	0950589	38.77
1/4"	3/8"	0950590	10.37	0950591	19.82
1/4"	1/2"	0988099	11.37	0994107	21.60
1/4"	5/8"	0988100	12.61	0994108	23.77
1/4"	3/4"	0988101	13.73	0994109	25.78
1/4"	1"	0988102	16.18	0994110	30.05
1/4"	1-1/4"	0950592	18.35	0950593	33.89
1/4"	1-1/2"	0988103	20.88	0994111	38.15
1/4"	1-3/4"	0950594	22.99	0950595	42.04
1/4"	2"	0988104	25.53	0994112	46.59
1/4"	2-1/2"	0988105	30.33	0994113	54.97
1/4"	3"	0988106	35.10	0994114	63.41
1/4"	3-1/2"	0950596	39.88	0950597	71.86
1/4"	4"	0988107	44.65	0994115	80.27
1/4"	4-1/2"	0988108	49.42	0994116	88.69
1/4"	5"	0988109	54.21	0994117	97.09
1/4"	5-1/2"	0950598	59.01	0950599	105.57
1/4"	6"	0988110	63.74	0994118	118.57
1/4"	7"	0950600	82.20	0950601	146.67
1/4"	8"	0988111	93.10	0994119	165.92
1/4"	10"	0988112	114.61	0994120	203.83
1/4"	12"	0950602	136.19	0950603	241.98
1/4"	14"	0950604	157.22	0950605	278.89
5/16"	5/16"	0988113	14.23	0994121	27.35
5/16"	3/8"	0950606	12.45	0950607	23.83
5/16"	1/2"	0988114	13.63	0994122	25.85
5/16"	5/8"	0950608	15.07	0950609	28.37
5/16"	3/4"	0988115	16.50	0994123	30.83
5/16"	1"	0988116	19.32	0994124	35.81
5/16"	1-1/4"	0950610	21.93	0950611	40.33
5/16"	1-1/2"	0988117	24.78	0994125	45.35
5/16"	1-3/4"	0950612	27.63	0950613	50.28
5/16"	2"	0988118	30.46	0994126	55.22
5/16"	2-1/2"	0950614	36.12	0950615	65.17
5/16"	3"	0988119	41.78	0994127	75.06
5/16"	3-1/2"	0950616	47.44	0950617	84.97
5/16"	4"	0988120	53.11	0994128	94.90
5/16"	4-1/2"	0950618	58.77	0950619	104.81
5/16"	5"	0950620	64.42	0950621	114.48
5/16"	6"	0950622	75.73	0950623	139.49
5/16"	7"	0950624	97.41	0950625	172.65
5/16"	8"	0950626	110.45	0950627	195.11
5/16"	10"	0950628	135.61	0950629	239.49
5/16"	12"	0950630	143.89	0950631	284.19
5/16"	3/8"	0988121	17.99	0994129	34.44
5/16"	1/2"	0988122	16.59	0994130	31.50
5/16"	5/8"	0950632	18.32	0950633	34.55
5/16"	3/4"	0988123	20.03	0994131	37.57
5/16"	1"	0988124	23.45	0994132	43.50
5/16"	1-1/4"	0988125	26.62	0994133	49.00

# GROUND FLAT STOCK

## Ground Flat Stock Cont.

Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
1"	10"	0950696	\$329.06	0950697	\$559.48
1"	12"	0988174	386.86	0994182	655.35
1-1/2"	1-1/2"	0950698	93.90	0950699	167.25
1-1/2"	2"	0950700	113.35	0950701	199.23
1-1/2"	2-1/2"	0950702	132.76	0950703	231.23
1-1/2"	3"	0950704	152.18	0950705	263.30
1-1/2"	3-1/2"	0950706	171.62	0950707	295.28
1-1/2"	4"	0950708	191.05	0950709	327.29
1-1/2"	5"	0950710	230.47	0950711	392.44
1-1/2"	6"	0950712	269.36	0950713	461.94
1-1/2"	8"	0950714	379.60	0950715	639.40

## Grade A2 Air-Hardening Precision Ground Flat Stock

Conforms to ASTM A681 and is supplied annealed. Rockwell hardness is 89-99 B scale. Thickness tolerance is +/-0.001". Width tolerance is +0.005". Length tolerance is +1/4" for 1-1/2' lengths; +1/2" for 3' lengths.

Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
1/16"	1/2"	0988462	\$9.38	0994278	\$16.45
1/16"	3/4"	0988463	12.70	0994279	22.16
1/16"	1"	0988464	14.62	0994280	25.42
1/16"	1-1/4"	0988465	17.09	0994281	29.69
1/16"	1-1/2"	0988466	19.73	0994282	34.39
1/16"	2"	0988467	24.86	0994283	43.00
1/16"	2-1/2"	0988468	30.14	0994284	52.02
1/16"	3"	0988469	31.91	0994285	55.15
1/16"	4"	0988470	45.74	0994286	78.90
3/32"	1/2"	0988471	12.46	0994287	21.76
3/32"	3/4"	0988472	15.71	0994288	27.27
3/32"	1"	0988473	19.01	0994289	32.84
3/32"	1-1/4"	0988474	22.49	0994290	38.22
3/32"	1-1/2"	0988475	25.48	0994291	43.78
3/32"	2"	0988476	32.00	0994292	54.89
3/32"	3"	0988477	45.13	0994293	77.21
3/32"	4"	0988478	58.27	0994294	99.51
1/8"	1/2"	0988479	10.38	0994295	17.98
1/8"	3/4"	0988480	12.85	0994296	22.11
1/8"	1"	0988481	15.32	0994297	26.17
1/8"	1-1/4"	0988482	17.62	0994298	29.98
1/8"	1-1/2"	0988483	20.14	0994299	34.11
1/8"	2"	0988484	25.06	0994300	42.30
1/8"	2-1/2"	0988485	29.98	0994301	50.48
1/8"	3"	0988486	34.95	0994302	58.66
1/8"	4"	0988487	44.81	0994303	75.09
5/32"	1/2"	0988488	13.34	0994304	23.15
5/32"	3/4"	0988489	16.55	0994305	28.41
5/32"	1"	0988490	19.72	0994306	33.76
5/32"	1-1/4"	0988491	22.75	0994307	38.79
5/32"	1-1/2"	0988492	25.97	0994308	44.04
5/32"	2"	0988493	32.37	0994309	54.72
5/32"	3"	0988494	45.18	0994310	76.00
5/32"	4"	0988495	57.98	0994311	97.25
3/16"	1/2"	0988496	14.53	0994312	25.08
3/16"	3/4"	0988497	17.79	0994313	30.42
3/16"	1"	0988498	21.10	0994314	35.88
3/16"	1-1/4"	0988499	24.16	0994315	40.92
3/16"	1-1/2"	0988500	27.42	0994316	46.28
3/16"	2"	0988501	34.12	0994317	57.22
3/16"	3"	0988502	47.35	0994318	78.86
3/16"	4"	0988503	60.55	0994319	100.60
3/16"	6"	0988504	86.98	0994320	144.00
3/16"	8"	0988505	130.07	0994321	222.41
3/16"	12"	0988506	192.45	0994322	329.03
1/4"	1/4"	0988507	22.08	0994323	38.69
1/4"	1/2"	0988508	16.50	0994324	28.45
1/4"	3/4"	0988509	20.14	0994325	34.37
1/4"	1"	0988510	23.87	0994326	40.44
1/4"	1-1/4"	0988511	27.20	0994327	45.82
1/4"	1-1/2"	0988512	30.88	0994328	51.91
1/4"	2"	0988513	38.25	0994329	63.82
1/4"	2-1/2"	0988514	45.54	0994330	75.73
1/4"	3"	0988515	52.91	0994331	87.69
1/4"	4"	0988516	67.57	0994332	111.63

The : symbol after a price denotes that it is a Direct Ship Product (DSP) and shipping, availability & lead times may vary.

Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
1/4"	6"	0988517	\$96.92	0994333	\$159.44
1/4"	8"	0988518	137.91	0994334	236.09
1/4"	12"	0988519	211.43	0994335	345.02

## Grade C1018 Low-Carbon Precision Ground Flat Stock

Material is supplied annealed. Rockwell hardness is 61-62 B scale. Thickness tolerance is +/- .001". Width tolerance is +0.005". Length tolerance is +/-1/4". Sold in 2' lengths.

Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
5/16"	1/2"	0988520	\$19.39	0994336	\$33.32
5/16"	3/4"	0988521	23.61	0994337	40.15
5/16"	1"	0988522	27.84	0994338	46.97
5/16"	1-1/2"	0988523	35.95	0994339	60.02
5/16"	2"	0988524	44.38	0994340	73.62
5/16"	3"	0988525	61.26	0994341	100.87
5/16"	4"	0988526	78.12	0994342	128.11
5/16"	6"	0988527	111.91	0994343	182.61
5/16"	8"	0988528	166.15	0994344	269.67
3/8"	3/8"	0988529	30.41	0994345	52.71
3/8"	1/2"	0988530	23.64	0994346	40.72
3/8"	3/4"	0988531	28.79	0994347	49.01
3/8"	1"	0988532	33.89	0994348	57.24
3/8"	1-1/2"	0988533	43.69	0994349	72.96
3/8"	2"	0988534	53.92	0994350	89.50
3/8"	3"	0988535	74.33	0994351	122.54
3/8"	4"	0988536	94.78	0994352	155.59
3/8"	6"	0988537	135.63	0994353	221.60
3/8"	8"	0988538	196.32	0994354	318.31
3/8"	12"	0988539	294.22	0994355	477.06
1/2"	1/2"	0988540	26.48	0994356	49.39
1/2"	3/4"	0988541	32.06	0994357	59.12
1/2"	1"	0988542	37.69	0994358	68.89
1/2"	1-1/2"	0988543	48.62	0994359	87.86
1/2"	2"	0988544	59.39	0994360	107.38
1/2"	2-1/2"	0988545	71.05	0994361	126.90
1/2"	3"	0988546	82.24	0994362	146.41
1/2"	3-1/2"	0988547	93.45	0994363	165.93
1/2"	4"	0988548	104.70	0994364	185.47
1/2"	6"	0988549	150.13	0994365	264.74
1/2"	8"	0988550	222.13	0994366	389.91
1/2"	12"	0988551	316.21	0994367	551.70
5/8"	3/4"	0988552	39.71	0994368	72.36
5/8"	1"	0988553	46.33	0994369	84.31
5/8"	1-1/2"	0988554	59.25	0994370	106.43
5/8"	2"	0988555	72.58	0994371	129.28
5/8"	3"	0988556	99.14	0994372	175.01
5/8"	4"	0988557	125.79	0994373	220.80
5/8"	6"	0988558	178.55	0994374	313.46
5/8"	8"	0988559	259.56	0994375	451.61
3/4"	3/4"	0988560	45.85	0994376	83.94
3/4"	1"	0988561	53.37	0994377	96.95
3/4"	1-1/2"	0988562	67.90	0994378	121.36
3/4"	2"	0988563	82.97	0994379	147.08
3/4"	3"	0988564	111.68	0994380	195.78
3/4"	4"	0988565	143.06	0994381	249.65
3/4"	6"	0988566	203.83	0994382	353.43
1"	1"	0988567	66.76	0994383	123.38
1"	1-1/2"	0988568	84.43	0994384	153.74
1"	2"	0988569	102.84	0994385	185.51
1"	3"	0988570	139.57	0994386	248.94
1"	4"	0988571	176.32	0994387	312.43
1"	6"	0988572	249.62	0994388	440.59

Thickness	Width	1-1/2		3	
		Part No.	Price /Ea	Part No.	Price /Ea
1/16"	1/2"	0987747	\$7.56		
1/16"	3/4"	0987748	9.15		
1/16"	1"	0987749	10.89		
1/16"	1-1/4"	0987750	12.60		
1/16"	1-1/2"	0987751	14.25		
1/16"	2"	0987752	18.35		
1/16"	3"	0987753	22.29		
1/16"	4"	0987754	25.53		
1/16"	5"	0987755	29.08		
1/16"	6"	0987756	32.53		
1/16"	8"	0987757	39.28		
1/16"	10"	0987758	49.40		
1/16"	12"	0987759	59.40		
1/16"	14"	0987760	63.53		
1/16"	16"	0987761	74.00		
1/16"	18"	0987762	87.35		
1/16"	20"</td				

# GROUND FLAT STOCK, CARBIDE BLANKS

## Ground Flat Stock Cont.

### GROUND FLAT STOCK & CARBIDE BLANKS

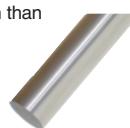
Thickness	Width	Part No.	Price /Ea
1/4"	1"	0987797	\$20.31
1/4"	1-1/4"	0987798	23.21
1/4"	1-1/2"	0987799	25.20
1/4"	2"	0987800	30.53
1/4"	2-1/2"	0987801	36.06
1/4"	3"	0987802	41.32
1/4"	3-1/2"	0987803	46.13
1/4"	4"	0987804	51.88
1/4"	5"	0987805	61.76
5/16"	1/2"	0987806	17.97
5/16"	1"	0987807	24.03
5/16"	2"	0987808	34.75
5/16"	3"	0987809	46.03
5/16"	4"	0987810	58.09
3/8"	1/2"	0987811	20.42
3/8"	3/4"	0987812	22.53
3/8"	1"	0987813	26.50
3/8"	1-1/4"	0987814	29.06
3/8"	1-1/2"	0987815	31.46
3/8"	2"	0987816	37.33
3/8"	2-1/2"	0987817	44.73
3/8"	3"	0987818	47.98
3/8"	4"	0987819	60.93
3/8"	5"	0987820	74.87
1/2"	3/4"	0987821	27.11
1/2"	1"	0987822	31.36
1/2"	1-1/2"	0987823	38.24
1/2"	2"	0987824	44.25
1/2"	2-1/2"	0987825	50.98
1/2"	3"	0987826	57.03
1/2"	4"	0987827	70.75
1/2"	5"	0987828	85.15
5/8"	5/8"	0987829	28.75
5/8"	3/4"	0987830	30.85
5/8"	1"	0987831	35.34
5/8"	1-1/2"	0987832	43.92
5/8"	2"	0987833	51.58
5/8"	2-1/2"	0987834	58.24
5/8"	3"	0987835	66.12
5/8"	3-1/2"	0987836	72.80
5/8"	4"	0987837	80.22
3/4"	3/4"	0987838	33.87
3/4"	1"	0987839	41.98
3/4"	1-1/2"	0987840	50.20
3/4"	2"	0987841	58.49
3/4"	2-1/2"	0987842	66.51
3/4"	3"	0987843	75.35
3/4"	4"	0987844	91.29
3/4"	5"	0987845	107.77
1"	1"	0987846	50.45
1"	1-1/2"	0987847	62.00
1"	2"	0987848	71.84
1"	2-1/2"	0987849	80.82
1"	3"	0987850	89.79
1"	4"	0987851	107.65
1"	5"	0987852	129.77

## Carbide Blanks



## Centerless Ground Carbide Rounds

- Manufactured from Premium C-2 Carbide.
- Shock resistant, will not chip or break under normal machining conditions.
- High abrasion resistance.
- Widest applications with only one grade of carbide.
- Greater transverse rupture strength than high speed steel.
- Unexcelled in interrupted cuts.
- Longer tool life.
- Vastly increased feeds.
- Superior overall performance.
- Ground Diameter Tolerance: 0.000/-0.0005.



Part No.	Shank Diameter	Overall Length	Price /Ea
0361442	.025"	1-1/2"	\$2.08
0361443	1/32"	1-1/2"	2.08
0361444	.040"	1-1/2"	2.08
0361445	3/64"	1-1/2"	2.08
0361446	3/64"	2"	2.08
0361447	1/16"	1-1/2"	2.08
0361448	5/64"	2"	2.85
0361449	3/32"	1-1/2"	1.86
0361450	3/32"	2"	2.74
0361451	3/32"	2-1/2"	3.40
0361452	7/64"	2-1/2"	3.40
0361453	1/8"	1-1/2"	1.64
0361454	1/8"	1-3/4"	2.41
0361455	1/8"	2"	2.63
0361456	1/8"	2-1/4"	2.96
0361457	1/8"	2-1/2"	3.18
0361458	1/8"	3"	3.90
0361459	1/8"	4"	5.97
0361516	1/8"	6"	7.68
0361526	1/8"	12"	16.12
0361460	5/32"	1-1/2"	2.43
0361461	5/32"	2"	4.02
0361462	5/32"	2-1/2"	3.53
0361463	3/16"	1-1/2"	3.04
0361464	3/16"	2"	4.14
0361465	3/16"	2-1/2"	5.36
0361466	3/16"	3"	6.33
0361467	3/16"	4"	8.66
0361518	3/16"	6"	13.71
0361527	3/16"	12"	29.43
0361468	1/4"	2"	5.48
0361469	1/4"	2-1/2"	6.09
0361470	1/4"	3"	7.97
0361471	1/4"	4"	10.97
0361520	1/4"	6"	17.37
0361528	1/4"	12"	37.50
0361472	5/16"	2"	6.94
0361473	5/16"	2-1/2"	9.09
0361474	5/16"	3"	11.31
0361475	5/16"	3-1/4"	12.91
0361476	5/16"	4"	13.72
0361522	5/16"	6"	20.86
0361529	5/16"	12"	44.19
0361477	3/8"	2"	9.19
0361478	3/8"	2-1/2"	12.09
0361479	3/8"	2-3/4"	13.28
0361480	3/8"	3"	14.36
0361481	3/8"	3-1/2"	15.54
0361482	3/8"	4"	18.02
0361483	3/8"	6"	30.53
0361530	3/8"	12"	65.53
0361485	7/16"	2-1/2"	14.77
0361486	7/16"	2-3/4"	16.25
0361487	7/16"	3"	17.72
0361488	7/16"	4"	23.63
0361489	7/16"	6"	35.45
0361531	7/16"	12"	87.33
0361490	1/2"	2"	15.43
0361491	1/2"	2-1/2"	19.29
0361492	1/2"	3"	23.15
0361493	1/2"	3-1/2"	27.01
0361494	1/2"	4"	30.86
0361495	1/2"	6"	46.30
0361532	1/2"	12"	111.11
0361497	9/16"	3-1/2"	34.18
0361533	9/16"	12"	140.63
0361498	5/8"	3"	37.26
0361499	5/8"	3-1/2"	42.20
0361500	5/8"	4"	48.23
0361501	5/8"	5"	60.29
0361502	5/8"	6"	72.35
0361534	5/8"	12"	210.07
0361504	11/16"	4"	49.15
0361505	3/4"	3-1/2"	60.17
0361506	3/4"	4"	69.44
0361507	3/4"	5"	86.81
0361508	3/4"	6"	104.17
0361510	3/4"	7"	121.53
0361535	3/4"	12"	250.00
0361511	7/8"	4"	94.53
0361524	7/8"	6"	141.78
0361536	7/8"	12"	340.28
0361512	1"	4"	123.46
0361513	1"	5"	154.33
0361514	1"	6"	185.19
0361537	1"	12"	444.45

## STB & STB - "L" Blanks

Standard C-2 Grade

Solid Carbide Rectangular Strips are widely used as wear parts, tools, grinder rests & appliances.

Tolerance: 1/16" or less +/-0.008"

1/16" or more Thickness: +/- .015" up to .023"

Width: +/- .015" up to .045"

Length: +/- .010" up to .082"



Part No.	STB Desc.	Thickness	Width	Length	Price /Ea
0358948	STB-12	1/32"	1/16"	1"	\$1.03
0358950	STB-12A	1/32"	1/16"	1-1/2"	1.12
0358951	STB-13	3/64"	3/32"	13/16"	1.34
0358967	STB-13A	3/64"	3/32"	1"	1.47
0358968	STB-22L	1/16"	1/16"	6"	6.75
0358991	STB-24A	1/16"	1/8"	1"	1.38
0361539	STB-24C	1/16"	1/8"	1-1/4"	1.69
0361540	STB-24D	1/16"	1/8"	1-1/2"	1.70
0361538	STB-24B	1/16"	1/8"	3"	2.68
0361541	STB-24L	1/16"	1/4"	6"	4.93
0358994	STB-26A	1/16"	3/16"	1"	1.43
0361542	STB-26C	1/16"	3/16"	3"	2.19
0361543	STB-26L	1/16"	3/16"	6"	6.43
0359047	STB-28A	1/16"	1/4"	1"	1.76
0361564	STB-28B	1/16"	1/4"	1-1/4"	2.14
0359054	STB-28D	1/16"	1/4"	3"	5.07
0359063	STB-28L	1/16"	1/4"	6"	10.14
0359064	STB-210L	1/16"	5/16"	6"	14.13
0359086	STB-212L	1/16"	3/8"	6"	16.36
0361567	STB-216L	1/16"	1/2"	6"	20.26
0361568	STB-220L	1/16"	5/8"	6"	32.79
0361569	STB-224L	1/16"	3/4"	6"	36.18
0361570	STB-232L	1/16"	1"	6"	38.97
0358985	STB-14	5/64"	1/8"	1-1/8"	1.86
0359090	STB-34	3/32"	1/8"	5"	3.63
0361571	STB-34L	3/32"	1/8"	8"	6.44
0359073	STB-36	3/32"	3/16"	1-1/8"	1.65
0359092	STB-36A	3/32"	3/16"	1-1/4"	1.64
0361572	STB-36L	3/32"	3/16"	8"	9.65
0361545	STB-38A	3/32"	1/4"	1"	1.46
0361546	STB-38B	3/32"	1/4"	1-1/2"	2.17
0361544	STB-38D	3/32"	1/4"	5"	7.63
0361547	STB-38L	3/32"	1/4"	8"	11.64
0359078	STB-310A	3/32"	5/16"	2"	3.17
0361565	STB-310B	3/32"	5/16"	3"	4.75
0359085	STB-310C	3/32"	5/16"	5"	8.72
0361566	STB-310L	3/32"	5/16"	8"	12.94
0359097	STB-312	3/32"	3/8"	5"	10.45
0361574	STB-312C	3/32"	3/8"	6"	12.95
0361573	STB-312L	3/32"	3/8"	8"	15.32
0359110	STB-316	3/32"	1/2"	6"	16.85
0361575	STB-316L	3/32"	1/2"	8"	20.42
0359138	STB-320	3/32"	5/8"	6"	21.91
0361576	STB-320L	3/32"	5/8"	8"	24.37
0359114	STB-324	3/32"	3/4"	6"	23.18
0359133	STB-332	3/32"	1"	6"	30.64
0359137	STB-340	3/32"	1-1/4"	6"	39.24
0359141	STB-348	3/32"	1-1/2"	6"	47.09
0359163	STB-44L	1/8"	1/8"	12"	10.72
0359181	STB-46	1/8"	3/16"	6"	8.35
0361585	STB-46L	1/8"	3/16"	12"	13.25
0361551	STB-48A	1/8"	1/4"	1"	1.70
0361552	STB-48B	1/8"	1/4"	1-1/4"	2.15
0361553	STB-48F	1/8"	1/4"	1-1/2"	2.46
0361554	STB-48C	1/8"	1/4"	2-1/4"	3.70
0361555	STB-48D	1/8"	1/4"	3"	5.79
0361556	STB-48E	1/8"	1/4"	6"	10.91
0361557	STB-48L	1/8"	1/4"	12"	23.39

## Carbide Blanks Cont.



Part No.	STB Desc.	Thickness	Width	Length	Price /Ea
0361578	STB-410A	1/8"	5/16"	1-1/2"	\$2.94
0361579	STB-410B	1/8"	5/16"	3"	5.99
0361577	STB-410	1/8"	5/16"	6"	13.45
0361580	STB-410L	1/8"	5/16"	12"	30.64
0359158	STB-412D	1/8"	3/8"	1"	2.79
0361581	STB-412A	1/8"	3/8"	2"	5.18
0359157	STB-412B	1/8"	3/8"	3"	7.30
0361582	STB-412C	1/8"	3/8"	6"	15.52
0361583	STB-412L	1/8"	3/8"	12"	33.43
0359179	STB-416A	1/8"	1/2"	1"	3.29
0359187	STB-416B	1/8"	1/2"	1-1/2"	5.11
0359183	STB-416C	1/8"	1/2"	3"	9.86
0359172	STB-416	1/8"	1/2"	6"	20.78
0361584	STB-416L	1/8"	1/2"	12"	44.58
0359203	STB-420	1/8"	5/8"	6"	25.50
0361586	STB-420L	1/8"	5/8"	12"	55.72
0359222	STB-424	1/8"	3/4"	6"	31.18
0361587	STB-424L	1/8"	3/4"	12"	66.87
0359038	STB-432	1/8"	1"	6"	40.82
0361558	STB-432L	1/8"	1-1/8"	12"	89.15
0361602	STB-440	1/8"	1-1/4"	6"	58.60
0359909	STB-448	1/8"	1-1/2"	6"	68.36
0359908	STB-456	1/8"	1-3/4"	6"	95.47
0359907	STB-516	5/32"	1/2"	6"	26.31
0359906	STB-524	5/32"	3/4"	6"	35.82
0359905	STB-532	5/32"	1"	6"	48.69
0359904	STB-540	5/32"	1-1/4"	6"	60.87
0359903	STB-548	5/32"	1-1/2"	6"	99.62
0359044	STB-68	3/16"	1/4"	6"	14.14
0361562	STB-68L	3/16"	1/4"	12"	30.62
0359267	STB-610A	3/16"	5/16"	3"	9.19
0359268	STB-610	3/16"	5/16"	6"	19.14
0359269	STB-610L	3/16"	5/16"	12"	38.27
0361588	STB-612A	3/16"	3/8"	3"	10.51
0361589	STB-612L	3/16"	3/8"	12"	45.93
0359227	STB-12	3/16"	3/8"	6"	22.23
0359249	STB-616A	3/16"	1/2"	3"	15.31
0361590	STB-616	3/16"	1/2"	6"	30.62
0361591	STB-616L	3/16"	1/2"	12"	66.87
0361560	STB-620A	3/16"	5/8"	3"	17.69
0361559	STB-620	3/16"	5/8"	6"	36.53
0361561	STB-620L	3/16"	5/8"	12"	83.59
0361549	STB-624B	3/16"	3/4"	2"	15.70
0361548	STB-624A	3/16"	3/4"	4"	30.62
0359014	STB-624	3/16"	3/4"	6"	43.21
0361550	STB-624L	3/16"	3/4"	12"	100.30
0361593	STB-632	3/16"	1"	6"	58.45
0359265	STB-632L	3/16"	1"	12"	133.74
0361592	STB-640	3/16"	1-1/4"	6"	85.79
0359258	STB-640L	3/16"	1-1/4"	12"	167.17
0359902	STB-648	3/16"	1-1/2"	6"	99.34
0359401	STB-88L	1/4"	1/4"	12"	44.58
0359323	STB-812L	1/4"	3/8"	3"	15.30
0359321	STB-812	1/4"	3/8"	6"	30.62
0361594	STB-812L	1/4"	3/8"	12"	66.86
0361596	STB-816C	1/4"	1/2"	2"	12.58
0361595	STB-816A	1/4"	1/2"	3"	18.86
0359329	STB-816	1/4"	1/2"	6"	37.73
0361597	STB-816L	1/4"	1/2"	12"	89.16
0361599	STB-820A	1/4"	5/8"	3"	23.58
0359336	STB-820	1/4"	5/8"	6"	47.15
0361598	STB-820L	1/4"	5/8"	12"	111.45
0361600	STB-824A	1/4"	3/4"	3"	28.29
0359363	STB-824	1/4"	3/4"	6"	56.58
0361601	STB-824L	1/4"	3/4"	12"	138.03
0359385	STB-832L	1/4"	1"	12"	178.31
0359389	STB-840L	1/4"	1-1/4"	12"	250.36
0359390	STB-1212L	3/8"	3/8"	12"	100.30
0359391	STB-1216L	3/8"	1/2"	12"	121.58
0359392	STB-1224L	3/8"	3/4"	12"	182.37
0359393	STB-1232L	3/8"	1"	12"	243.16
0359395	STB-1616L	1/2"	1/2"	12"	162.11
0359396	STB-16124L	1/2"	3/4"	12"	243.16

## Carbide Split Blanks

- Used for special engraving tools & special cutting tools
- Diameter Tolerance: +.000" - .0005"
- Finish Ground
- Split Tolerance: +.001" - .000" of the Tool Center
- Split Length in Proportion to Length of Tool



Part No.	Shank Dia.	Overall Length	Split Length	Price /Ea
<b>Single End</b>				
0359984	1/8"	1-1/2"	3/8"	\$7.46
0359986	1/8"	2"	3/8"	9.98
0359988	1/8"	3"	3/8"	11.19
0359990	1/8"	4"	3/8"	14.71
0359992	1/8"	6"	3/8"	20.20
0359994	3/16"	2"	1/2"	9.34
0359996	3/16"	2-1/2"	1/2"	10.95
0359998	3/16"	3"	1/2"	13.34
0360434	3/16"	4"	1/2"	15.19
0360436	3/16"	6"	1/2"	20.21
0360488	1/4"	2"	1/2"	13.34
0360490	1/4"	2-1/2"	1/2"	11.71
0360492	1/4"	3"	1/2"	17.97
0360494	1/4"	4"	1/2"	23.94
0360496	1/4"	6"	1/2"	29.51
0360508	5/16"	2-1/2"	1/2"	18.95
0360510	5/16"	3"	1/2"	25.45
0360512	5/16"	4"	1/2"	27.91
0360514	5/16"	6"	1/2"	40.30
0360520	3/8"	2-1/2"	1/2"	29.78
0360522	3/8"	3"	1/2"	35.19
0360524	3/8"	4"	1/2"	43.74
0360526	3/8"	6"	1/2"	57.83
0360530	7/16"	2-1/2"	5/8"	25.39
0360532	7/16"	3"	5/8"	30.25
0360534	7/16"	4"	5/8"	33.50
0360536	7/16"	6"	5/8"	49.17
0360555	1/2"	3"	5/8"	40.92
0360557	1/2"	4"	5/8"	48.68
0360559	1/2"	6"	5/8"	70.73
<b>Double End</b>				
0359985	1/8"	1-1/2"	3/8"	\$8.95
0359987	1/8"	2"	3/8"	12.88
0359989	1/8"	3"	3/8"	13.97
0359991	1/8"	4"	3/8"	18.98
0359993	1/8"	6"	3/8"	26.07
0359995	3/16"	2"	1/2"	11.05
0359997	3/16"	2-1/2"	1/2"	13.09
0359999	3/16"	3"	1/2"	15.95
0360435	3/16"	4"	1/2"	18.16
0360437	3/16"	6"	1/2"	24.16
0360489	1/4"	2"	1/2"	15.70
0360491	1/4"	2-1/2"	1/2"	16.25
0360493	1/4"	3"	1/2"	21.47
0360495	1/4"	4"	1/2"	28.61
0360497	1/4"	6"	1/2"	35.27
0360509	5/16"	2-1/2"	1/2"	22.59
0360511	5/16"	3"	1/2"	30.41
0360513	5/16"	4"	1/2"	33.35
0360515	5/16"	6"	1/2"	48.16
0360521	3/8"	2-1/2"	1/2"	35.59
0360523	3/8"	3"	1/2"	42.06
0360525	3/8"	4"	1/2"	52.27
0360527	3/8"	6"	1/2"	69.12
0360531	7/16"	2-1/2"	5/8"	29.87
0360533	7/16"	3"	5/8"	36.15
0360535	7/16"	4"	5/8"	40.04
0360537	7/16"	6"	5/8"	58.76
0360556	1/2"	3"	5/8"	48.82
0360558	1/2"	4"	5/8"	58.18
0360560	1/2"	6"	5/8"	84.53

## Series 1000 & 2000 Blanks

Used for wear parts and tools.



Part No.	Style 1000	Thickness	Width	Length	Price /Ea
<b>Series 1000 Blanks</b>					
0359839	1010	1/16"	1/8"	1/16"	\$0.86
0359840	1020	1/16"	3/16"	1/4"	0.79
0359841	1030	1/16"	1/4"	5/16"	0.86
0359842	1040	3/32"	1/4"	3/8"	0.89
0359843	1050	3/32"	3/16"	5/16"	1.07
0361433	1060	3/32"	3/16"	1/2"	1.07
0359844	1070	3/32"	1/4"	1/2"	1.17
0359845	1080	3/32"	5/16"	3/8"	1.06
0359846	1100	3/32"	7/16"	1/2"	1.47
0359849	1110	1/8"	3/16"	3/4"	1.23
0361434	1120	1/8"	1/4"	1/2"	1.78
0359850	1130	1/8"	1/4"	1/16"	1.36
0359851	1140	1/8"	1/4"	3/4"	1.78
0361435	1150	1/8"	5/16"	7/16"	1.19
0359852	1160	1/8"	5/16"	1/2"	1.31
0359853	1170	1/8"	5/16"	1/16"	1.67
0359854	1180	1/8"	3/8"	1/2"	1.58
0359855	1190	1/8"	3/8"	3/4"	2.30
0359856	1200	1/8"	1/2"	1/2"	2.11
0359857	1210	1/8"	1/2"	3/4"	3.06
0359858	1215	1/8"	3/4"	3/4"	4.58
0359859	1220	5/32"	3/8"	9/16"	2.66
0359860	1230	5/32"	3/8"	3/4"	3.09
0359861	1240	5/32"	5/8"	5/8"	4.13
0359862	1250	3/16"	5/16"	7/16"	2.82
0361436	1260	3/16"	5/16"	5/8"	3.31
0359863	1270	3/16"	3/8"	1/2"	3.91
0361437	1280	3/16"	3/8"	1/16"	3.38
0361438	1290	3/16"	3/8"	3/4"	3.55
0359864	1300	3/16"	7/16"	1/16"	3.22
0359865	1310	3/16"	7/16"	13/16"	4.17
0359866	1320	3/16"	1/2"	1/2"	2.95
0359867	1330	3/16"	1/2"	3/4"	4.42
0359868	1340	3/16"	3/4"	3/4"	6.59

|--|

# BALLS, FOILS

## Balls

### Standard Size Metal Balls Up to and including 1" Diameter

**BALLS & FOILS**

Chrome Steel - Grade 25

302 SS - Grade 100

316 SS - Grade 100

260 Brass - Grade 200

1010 Steel - Grade 1000

440C SS - Grade 25 Passivated, 1" is Grade 200



Diameter	Chrome Steel			302 SS			316 SS			260 Brass			1010 Steel			440C SS			
	Part No.	Pkg. Qty.	Price /Ea	Part No.	Pkg. Qty.	Price /Ea	Part No.	Pkg. Qty.	Price /Ea	Part No.	Pkg. Qty.	Price /Ea	Part No.	Pkg. Qty.	Price /Ea	Part No.	Pkg. Qty.	Price /Ea	
1/16"	0987673	100	\$0.05	0993251	100	\$0.02				0986599	100	\$0.09				0952151	100	\$0.02	1/16"
3/32"	0987675	100	0.04	0993252	100	0.02				0986600	100	0.09				0952152	100	0.01	3/32"
1/8"	0987676	100	0.02	0993253	100	0.01	0993265	100	\$0.02	0986601	100	0.04	0987154	500	\$<.01	0952153	100	0.02	1/8"
5/32"	0987678	100	0.03	0993254	100	0.02	0993266	100	0.02	0986602	100	0.03				0952154	100	0.02	5/32"
11/64"	0987679	100	0.05																11/64"
3/16"	0987680	100	0.03	0993255	100	0.03	0993267	100	0.04	0986603	100	0.04	0987155	250	<.01	0952155	100	0.04	3/16"
7/32"	0987681	100	0.03	0993256	100	0.06	0993268	100	0.08	0986604	100	0.08				0952156	100	0.07	7/32"
1/4"	0987682	100	0.04	0993257	100	0.07	0993269	100	0.09	0986605	100	0.05	0987156	250	<.01	0952157	100	0.09	1/4"
17/64"	0987683	100	0.07																17/64"
9/32"	0987684	100	0.05																9/32"
5/16"	0987685	100	0.05	0993258	50	0.18	0993270	50	0.20	0986606	50	0.11	0987157	250	0.01	0952160	50	0.17	5/16"
11/32"	0987686	100	0.08							0986607	50	0.25				0952161	50	0.23	11/32"
3/8"	0987687	100	0.09	0993259	25	0.33				0986608	50	0.20	0987158	250	0.01	0952162	25	0.27	3/8"
13/32"	0987688	100	0.11																13/32"
7/16"	0987689	100	0.11	0993260	25	0.43				0986609	25	0.57	0987159	100	0.03	0952163	25	0.28	7/16"
15/32"	0987690	100	0.14																15/32"
1/2"	0987691	100	0.15	0993261	15	0.61				0986610	25	0.32	0987160	100	0.08	0952164	15	0.54	1/2"
17/32"	0987692	50	0.21																17/32"
9/16"	0987693	50	0.22							0986611	20	0.69	0987161	100	0.12	0952165	15	0.63	9/16"
19/32"	0987694	50	0.26																19/32"
5/8"	0987695	50	0.28	0993262	5	1.33				0986612	15	0.91	0987162	100	0.15	0952166	5	1.19	5/8"
21/32"	0987696	50	0.32																21/32"
11/16"	0987697	25	0.36																11/16"
23/32"	0987698	25	0.40																23/32"
3/4"	0987699	25	0.45	0993263	5	2.43				0986613	5	1.70	0987163	50	0.32	0952167	5	1.87	3/4"
25/32"	0987700	25	0.55																25/32"
13/16"	0987701	20	0.60																13/16"
7/8"	0987702	20	0.70																7/8"
15/16"	0987703	15	1.07																15/16"
1"	0987704	10	1.27	0993264	1	6.43										0987164	25	0.66	1"
																0952171	1	3.71	

## Balls Cont.

### Standard Size Metal Balls Over 1" Diameter

Up to 1-7/16" Diameter - Grade 25

Over 1-7/16" Diameter - Grade 50

Diameter	Part No.	Material	Pkg. Qty.	Price /Ea
1-1/16"	0987705	Chrome Steel	5	\$1.46
1-1/8"	0987706	Chrome Steel	5	2.31
1-3/16"	0987707	Chrome Steel	5	2.58
1-1/4"	0987708	Chrome Steel	5	2.63
1-5/16"	0987709	Chrome Steel	4	3.75
1-3/8"	0987710	Chrome Steel	3	4.45
1-7/16"	0987711	Chrome Steel	2	5.09
1-1/2"	0987712	Chrome Steel	3	5.63
1-5/8"	0987713	Chrome Steel	1	7.40
1-3/4"	0987714	Chrome Steel	1	8.04
1-7/8"	0987715	Chrome Steel	1	13.13
2"	0987716	Chrome Steel	1	13.93
2-1/8"	0987717	Chrome Steel	1	26.68
2-1/4"	0987718	Chrome Steel	1	29.46
2-3/8"	0987719	Chrome Steel	1	32.14
2-1/2"	0987720	Chrome Steel	1	42.85
2-5/8"	0987721	Chrome Steel	1	50.89
2-3/4"	0987722	Chrome Steel	1	64.28
3"	0987723	Chrome Steel	1	88.38

## Metric Size Metal Balls

Chrome Steel, Grade 25

Diameter	Part No.	Pkg. Qty.	Price /Ea
1 mm	0987724	100	\$0.05
1.5 mm	0987725	100	0.06
2 mm	0987726	100	0.07
2.5 mm	0987727	100	0.08
3 mm	0987728	100	0.07
3.5 mm	0987729	100	0.08
4 mm	0987730	100	0.05
4.5 mm	0987731	50	0.13
5 mm	0987732	100	0.05
5.5 mm	0987733	50	0.07
6 mm	0987734	50	0.08
6.5 mm	0987735	50	0.09
7 mm	0987736	50	0.10
8 mm	0987737	25	0.04
9 mm	0987738	20	0.10
10 mm	0987739	20	0.11
12 mm	0987740	10	0.16
13 mm	0987741	5	0.20
14 mm	0987742	5	0.25
15 mm	0987743	5	0.31
16 mm	0987744	5	0.43
18 mm	0987745	3	0.58
24 mm	0987746	3	1.39

## Foils

### Soft-Temper Aluminum Foil

Use this foil to wrap, cover, mask, and patch.

Part No.	Thickness	Width	Roll Size	Price /Ea
0991761	0.001"	12"	500 ft.	\$71.44
0991762	0.001"	18"	500 ft.	95.63
0991763	0.001"	18"	1000 ft.	173.25
0991764	0.0015"	6"	500 ft.	46.88
0991765	0.0015"	8"	500 ft.	60.00
0991766	0.002"	18"	500 ft.	166.50
0991767	0.003"	36"	100 ft.	144.56
0991768	0.003"	48"	100 ft.	160.88
0991769	0.005"	36"	100 ft.	193.50
0991770	0.005"	48"	100 ft.	213.60

# FOILS, WIRE INFORMATION, STEEL & LEAD WIRE

## Foils Cont.

### Stainless Steel Foil

This heavy duty, .003 thick foil is soft temper and forms an airtight wrap for fast scale-free heat treating. For best results, parts must be dry and oil free. Thickness tolerance is +/-0.0002.

Material	Width	Max. Temp.	50' Roll		100' Roll	
			Part No.	Price/Ea	Part No.	Price/Ea
321 SS	12"	1800°F	0993323	\$115.88	0994944	\$206.44
321 SS	24"	1800°F	0993324	244.13	0994945	407.25
304 SS	12"	1800°F	0993325	100.69	0994946	189.00
304 SS	24"	1800°F	0993326	219.38	0994947	357.75
309 SS	24"	2240°F	0993327	460.11	0994948	434.91

## Wire Information

Wire gauges are stated in one of two systems. The American Wire Gauge/Brown and Sharpe (AWG/B&S) is used for all non-ferrous metals, including copper, aluminum, brass, bronze, nickel, silver, titanium and lead. The Washburn & Moen (W&M) system is used for all black and galvanized carbon steel wire, not including music wire. Stainless Steel and Music wire do not use a gauge system. It is advisable to state the thickness in thousandths of an inch when ordering as a number of different gauges are in use.

## Steel Wire

### Soft-Temper Carbon Steel Wire

#### Black

This easy-to-form wire is offered in all-purpose black and corrosion-resistant galvanized finishes. Supplied in 1/4lb, 1lb and 5lb coils. Uses W&M Gauge.

Dia.	Gauge	1/4 Lb Price /Coil		1 Lb Price /Coil		5 Lb Price /Coil				
		Part No.	Length	Part No.	Length	Part No.	Length			
.014"	30	0991331	478.25'	\$3.29	0991341	1913'	\$9.41	0991351	9565'	\$34.42
.016"	28	0991332	357.25'	3.12	0991342	1429'	8.93	0991352	7145'	32.60
.018"	26	0991333	286'	2.98	0991343	1144'	8.67	0991353	5720'	30.27
.023"	24	0991334	177'	2.76	0991344	708'	8.02	0991354	3540'	29.26
.029"	22	0991335	114.5'	2.52	0991345	458'	7.42	0991355	2290'	26.93
.035"	20	0991336	77.25'	2.40	0991346	309'	7.16	0991356	1545'	23.60
.041"	19	0991337	55.75'	2.36	0991347	223'	6.70	0991357	1115'	23.36
.048"	18	0991338	41.5'	2.36	0991348	166'	6.70	0991358	830'	22.80
.063"	16	0991339	24'	2.09	0991349	96'	6.41	0991359	480'	22.35
.080"	14	0991340	14.5'	2.07	0991350	58'	6.10	0991360	290'	21.53

### Brass Foils

Made from half-hard 260 Brass and used in forming and stamping operations. Corrosion resistant and conforms to ASTM B36 specifications.

Part No.	Thickness	Width	Length	Price /Ea
0989707	.005"	1/2"	230'	\$150.19
0989708	.006"	1/2"	220'	133.88
0989718	.005"	1"	120'	147.38
0989719	.006"	1"	110'	129.38
0989729	.005"	2"	65'	147.38
0989730	.006"	2"	60'	129.38

## Stainless Steel Wire

### Type 410 Stainless Steel Tie Wire

This stainless steel wire is soft tempered. Supplied in 1lb and 5lb coils.

Dia.	Part No.	1 Lb Price /Coil		5 Lb Price /Coil	
		Length	Part No.	Length	Part No.
.032"	0991140	362'	\$21.89	0991148	1810'\$108.87
.040"	0991141	223'	21.36	0991149	1115' 106.18
.051"	0991142	150'	20.79	0991150	750' 103.32
.064"	0991143	90'	17.36	0991151	450' 86.16
.080"	0991144	59'	17.19	0991152	295' 85.30
.105"	0991145	34'	16.78	0991153	170' 82.88
.128"	0991146	21'	16.49	0991154	105' 81.89
.162"	0991147	14'	16.25	0991155	70' 80.60

### Type 304 Stainless Steel Soft-Temper Wire

Supplied in 1/4lb coils, 1lb spools up to .051", and 1lb coils .081" and over. Conforms to ASTM A580.

Dia.	Part No.	1/4 Lb Price /Coil		1 Lb Price /Coil	
		Length	Part No.	Length	Part No.
.015"	0995494	662'	\$7.54	0985090	1655' \$28.56
.020"	0995495	372.4'	6.46	0985091	931' 15.39
.025"	0995496	238.4'	6.17	0985092	596' 14.79
.032"	0995497	145.6'	6.03	0985093	364' 11.79
.040"	0995498	93.2'	5.74	0985094	233' 11.45
.051"	0995499	57.2'	5.69	0985095	143' 11.19
.081"	0995500	36.8'	6.58	0985096	92' 15.82
.102"				0985097	57' 15.51
.129"				0985098	36' 15.44
.162"				0985099	24' 15.32
.204"				0985100	14' 9.79

## Lead Wire

### Pure Lead Wire

This non-corrosive lead wire is useful for bearing alignment, caulking, and electrical work. Supplied in 5lb and 25lb coils.

Dia.	Gauge	5 Lb Price /Coil		25 Lb Price /Coil	
		Part No.	Length	Part No.	Length
.125"	8	0990858	\$32.87	0990861	\$150.15
.188"	5	0990859	32.87	0990862	150.15
.250"	2	0990860	32.87	0990863	150.15

# T-SLOTTED ALUMINUM EXTRUSIONS & ACCESSORIES, ECONOMY FLOOR MOUNT BASE PLATES, VARIOUS HANGERS

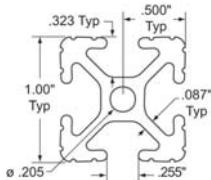
## T-Slootted Aluminium Extrusions

**80/20 Inc.**

The Industrial Erector Set®

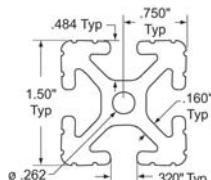
### 1" x 1" T-Slootted Extrusion

1010 is ideal for machine guards, sound enclosures, work benches, displays, and panel mount racks. Mount accessories such as valves, sensors, switches, DIN rails, etc. directly to T-Slootted extrusions.



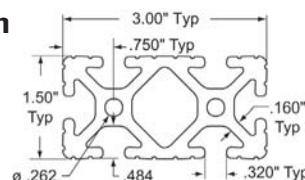
### 1.5" x 1.5" T-Slootted Extrusion

1515 offers the same ease of use as the 1515-Lite extrusion but with the added strength needed for larger scale applications. Use 1515 when designing machines guards and fixtures, shelving and material handling racks, load bearing carts, and workstations.



### 1.5" x 3" T-Slootted Extrusion

1530 heavy wall is for larger projects where strength is required. It is great for roller conveyors, fixturing, special machines, supports, linear slides, and automated assembly systems. The center of the extrusion can be used for a pressure manifold up to 150 p.s.i.

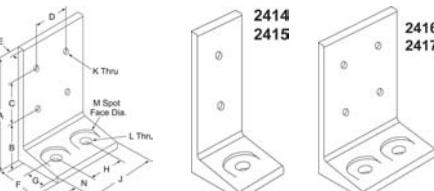


## Economy Floor Mount Base Plates

### Floor Mount Base Plates

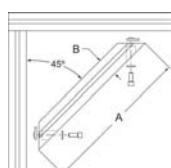
- Strong Economy Base Plates
- Bolts directly to T-Slots
- Allows vertical adjustment
- Made from 6105-T5 Clear Anodized Aluminium

Part No.	Type	Reference No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight (lbs)	Price /Ea
0951311	10 Series	2414	5.00	2.75	1.50	-	.250	2.00	.688	-	1.00	0.257	0.390	0.875	0.500	.175	\$9.98:
0951312	15 Series	2415	5.00	2.75	1.50	-	.250	2.00	.688	-	1.50	0.328	0.531	1.125	0.750	.265	12.56:
0951313	10 Series	2416	5.00	2.75	1.50	1.00	.250	2.00	.688	1.00	2.00	0.257	0.390	0.875	0.500	.350	13.54:
0951314	15 Series	2417	5.00	2.75	1.50	1.50	.250	2.00	.688	1.50	3.00	0.328	0.531	1.125	0.750	.530	14.82:



## 45° T-Slootted Aluminium Extrusion Supports

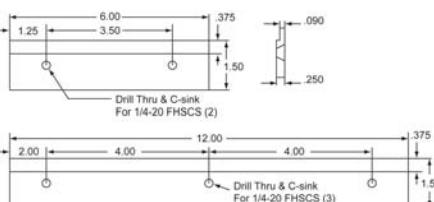
- Maintains a clean, flush connection
- Provides a strong right angle support to corners
- Mounting hardware included with each support
- Mounts directly to T-Slots



Part No.	Type	A	B	Angle	Weight (lbs)	Price /Ea
0951315	1010	6.00"	1.00"	45°	0.240	\$17.03:
0951316	1010	12.00"	1.00"	45°	0.485	18.80:
0951317	1020	6.00"	1.00"	45°	0.454	18.31:
0951318	1020	12.00"	1.00"	45°	0.918	20.09:
0951319	1515	6.00"	1.50"	45°	0.570	19.78:
0951320	1515	12.00"	1.50"	45°	1.235	24.26:
0951321	1530	6.00"	1.50"	45°	1.035	24.93:
0951322	1530	12.00"	1.50"	45°	2.130	32.28:

## Aluminium Container Hanger

- Develop your own customized storage system
- Mounts directly to T-Slots (all mounting hardware included)
- Choose from two sizes
- Made from 6105-T5 aluminum
- 10 and 15 SERIES compatible



Part No.	Length	Description	Weight	Price/Ea
0951333	6"	6" Aluminum Container Hanger	.210	\$8.39:
0951334	12"	12" Aluminum Container Hanger	.415	10.05:

# T-SLOTTED ALUMINUM EXTRUSIONS & ACCESSORIES, VARIOUS HANGERS, DOOR SIDE TRACK, VARIOUS RETAINERS

## Standard T-Slot Cover

**80/20 Inc.**

The Industrial Erector Set®

- Makes a great dust cover for T-Slots
- OSHA friendly
- Cover wires and tubes in T-Slots
- Available in black, gray, and yellow
- Stock length is 72.5"



## 10 Series T-Slot Cover

Part No.	Color	Weight (lbs)	Price/Ea
0951323	Yellow	0.096	\$4.23:
0951324	Black	0.096	4.23:
0951325	Gray	0.096	4.23:

## 15 Series T-Slot Cover

Part No.	Color	Weight (lbs)	Price/Ea
0951326	Yellow	0.121	\$4.23:
0951327	Black	0.121	4.23:
0951328	Gray	0.121	4.23:

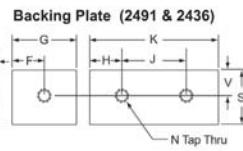
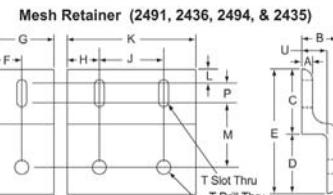
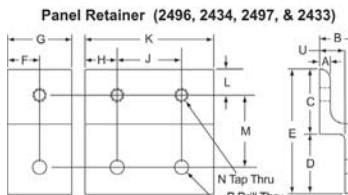
## T-Slotted Extrusion End Caps

- For use with T-Slotted extrusions
- Gives your project the finishing touch
- Made of molded ABS
- 10 and 15 SERIES compatible
- Fasteners Included



Part No.	Type	Size (in)	Weight (lbs)	Price/Ea
0951329	1010	1 x 1 x 1/8"	0.005	\$1.23:
0951330	1020	1 x 2 x 1/8"	0.010	1.65:
0951331	1515/1515-Lt	1.5 x 1.5 x 3/16"	0.015	1.90:
0951332	1530/1530-Lt	1.5 x 3 x 3/16"	0.030	1.96:

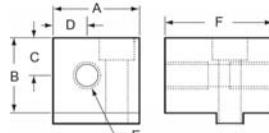
## Panel & Wire Mesh Retainers



Part No.	Reference No.	Series	A	B	C	D	E	F	G	H	J	K	L	M	N	P	S	T	U	V	Weight	Price /Ea
0951341	2496	10	0.188	0.563	1.00	0.938	1.938	0.500	1.00	-	-	-	0.392	1.108	1/4 20	0.257	-	-	0.375	0.500	.055	\$4.84:
0951343	2434	15	0.250	0.840	1.50	1.379	2.879	0.750	1.50	-	-	-	0.594	1.656	5/16 18	0.328	-	-	0.590	0.750	.175	5.08:
0951342	2497	10	0.188	0.563	1.00	0.938	1.938	-	-	0.500	1.00	2.00	0.392	1.108	1/4 20	0.257	-	-	0.375	0.500	.110	7.11:
0951344	2433	15	0.250	0.840	1.50	1.379	2.879	-	-	0.750	1.50	3.00	0.594	1.656	5/16 18	0.328	-	-	0.590	0.750	.350	7.41:
0951345	2491	10	0.188	0.563	1.00	0.938	1.938	0.500	1.00	-	-	-	0.250	0.875	1/4 20	0.375	1.00	0.255	.375	.500	.055	5.51:
0951347	2436	15	0.250	0.840	1.50	1.379	2.879	0.750	1.50	-	-	-	0.344	1.406	5/16 18	0.500	1.50	0.325	.590	.750	.175	6.43:
0951346	2494	10	0.188	0.563	1.00	0.938	1.938	-	-	0.500	1.00	2.00	0.250	0.875	1/4 20	0.375	1.00	0.255	.375	.500	.110	10.66:
0951348	2435	15	0.250	0.840	1.50	1.379	2.879	-	-	0.750	1.50	3.00	0.344	1.406	5/16 18	0.500	1.50	0.328	.590	.750	.350	12.68:

## Panel Mount Block

- Firmly mount panels flush or offset
- Simplifies adding or removing panels
- Extrusion mounting hardware included
- 0951349 mounts 3/16 panels flush
- 0951350 mounts 1/4 panels flush



Part No.	Series	A	B	C	D	E	F	Weight	Price /Ea
0951349	10	0.750	0.700	0.325	0.250	1/4 20 Tap Through	0.812	0.050	\$7.11:
0951350	15	1.00	0.880	0.440	0.390	5/16 18 Tap Through	1.250	0.120	7.66:

## Top Mount Bifold Door Hanger Assembly

- Make sliding or bifold doors without using a bottom sliding rail
- 10 and 15 SERIES compatible
- Bolts to extrusion end
- Rotates freely as door pivots
- Made from UHMW polyethylene



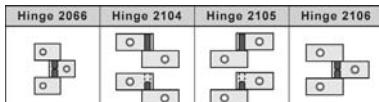
Part No.	Series	Weight	Price/Ea
0951351	10	0.045	\$7.41:
0951352	15	0.060	2.27:

# DOOR ASSEMBLIES/ACCESSORIES

## Door Hinge Assemblies

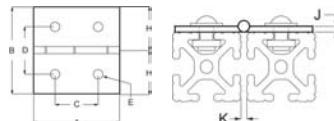
**80/20 Inc.**

The Industrial Erector Set®



Part No.	Reference No.	Series	Description	Weight	Price /Ea
0951353	2066	10	Heavy Duty Hinge	0.160	\$25.48:
0951354	2104	15	Right Lift Off Hinge Log Pin Top Short Pin Bottom	0.320	32.16:
0951355	2105	15	Left Lift Off Hinge Log Pin Top Short Pin Bottom	0.320	32.16:
0951356	2106	15	Heavy Duty Hinge	0.240	23.89:

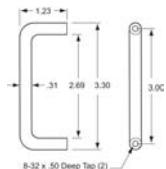
## Aluminum Door Hinge



Part No.	Series	A	B	C	D	E	H	J	K	Weight	Price/Ea
0951359	10	2.00	2.00	1.00	1.063	0.257	1.00	0.078	0.063	0.055	\$7.53:
0951360	15	3.00	3.00	1.50	1.625	0.328	1.50	0.125	0.125	0.170	9.80:

## Steel Door Handle

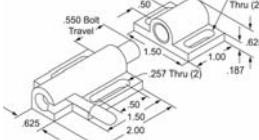
- Bolts directly to panels and doors
- Ideal for low profile applications
- (2) #8-32 x 1/2" BHSCS included
- 10 and 15 SERIES compatible



Part No.	Weight	Price/Ea
0951363	0.105	\$5.45:

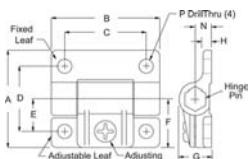
## 90° Latch

- Positive, spring loaded bolt
- Ideal for enclosure doors
- Mounting hardware included
- S/S bolt, spring, and handle
- 6105-T5 aluminum body
- Pin diameter = .386



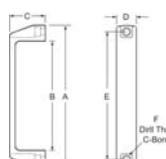
Part No.	Description	Weight (lbs)	Price /Ea
0951365	Deadbolt w/ Side Latch	.321	\$23.15:

## Adjustable Hinge



Part No.	Series	A	B	C	D	E	F	G	H	N	P	Weight	Price/Ea
0951357	10	1.44	1.69	1.25	1.00	0.500	0.720	0.500	0.230	0.270	0.197	0.030	\$15.37:
0951358	15	2.25	2.50	1.88	1.50	0.750	1.125	0.770	0.200	0.410	0.328	0.095	8.94:

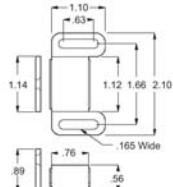
## Plastic Door Handles



Part No.	Series	A	B	C	D	E	F	Weight	Price/Ea
0951361	10	4.41	2.95	1.42	0.830	3.678	1/4" SHCS (2)	0.055	\$5.15:
0951362	15	5.47	3.69	1.63	1.02	4.60	5/16" SHCS (2)	0.095	8.39:

## Magnetic Door Catch

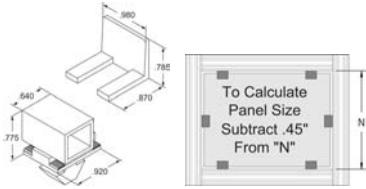
- Ideal for latching panels in place
- 10 and 15 SERIES compatible
- Lightweight
- Use with all T-Slotted extrusions
- Mounting hardware included



Part No.	Weight	Price/Ea
0951364	0.120	\$8.39:

## Quick Change Panel Clamp

- Mount panels up to 1/4" thick
- Made of high strength black nylon
- No machining or fasteners required
- 15 SERIES compatible



Part No.	Weight	Price/Ea
0951366	0.018	\$3.86:

## Inside Corner Brackets



Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951367	10	2 Hole Inside Corner Bracket	0.025	4119	2	\$3.55:
0951368	15	2 Hole Inside Corner Bracket	0.085	4302	2	3.61:
0951369	10	4 Hole Inside Corner Bracket	0.055	4115	4	4.96:
0951370	15	4 Hole Inside Corner Bracket	0.170	4301	4	5.27:
0951371	10	8 Hole Inside Corner Bracket	0.120	4114	8	6.55:
0951372	15	8 Hole Inside Corner Bracket	0.365	4304	8	8.02:

## Angled Joining Plates



Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951379	10	4 Hole 90° Angled Plate	0.090	4150	4	\$6.25:
0951380	15	4 Hole 90° Angled Plate	0.260	4350	4	6.86:
0951381	10	5 Hole 90° Angled Plate	0.125	4151	5	7.72:
0951382	15	5 Hole 90° Angled Plate	0.370	4351	5	8.70:
0951383	10	12 Hole 90° Angled Plate	0.240	4128	12	13.23:
0951384	15	12 Hole 90° Angled Plate	0.730	4328	12	15.80:

## Dynamic Pivot Assemblies



Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951391	10	3" Universal Arm Pivot	0.265	4195	4	\$23.52:
0951392	15	3" Universal Arm Pivot	0.980	4395	4	25.42:
0951393	10	0° 3" Arm Pivot	0.190	4197	4	18.38:
0951394	15	0° 3" Arm Pivot	0.655	4397	4	19.66:
0951395	10	90° 3" Arm Pivot	0.198	4198	4	18.38:
0951396	15	90° 3" Arm Pivot	0.655	4398	4	19.66:

# DOOR ASSEMBLIES/ACCESSORIES, VARIOUS BASES & CLAMPS, ALUMINUM TUBE

## Tri-Corners & Pivot Arms

**80/20 Inc.**

The Industrial Erector Set®



Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951403	10	Square Tri-Corner Connector	0.085	4042	3	\$21.87:
0951404	15	Square Tri-Corner Connector	0.131	4442	3	24.44:
0951405	10	4" Pivot Arm	0.090	4199	3	6.37:
0951406	15	6" Pivot Arm	0.210	4399	3	7.04:

## Joining Strips



Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951373	10	2 Hole Joining Strip	0.030	4107	2	\$4.17:
0951374	15	2 Hole Joining Strip	0.105	4307	2	4.23:
0951375	10	4 Hole Joining Strip	0.060	4117	4	5.88:
0951376	15	4 Hole Joining Strip	0.215	4305	4	6.06:
0951377	10	8 Hole Joining Strip	0.140	4165	8	7.29:
0951378	15	8 Hole Joining Strip	0.425	4365	8	8.39:

## Inside Corner Gussets



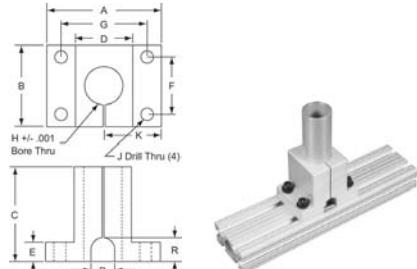
Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951385	10	2 Hole Inside Corner Gusset	0.041	4132	2	\$4.84:
0951386	15	2 Hole Inside Corner Gusset	0.125	4332	2	5.27:
0951387	10	4 Hole Inside Corner Gusset	0.092	4136	4	6.92:
0951388	15	4 Hole Inside Corner Gusset	0.275	4336	4	7.66:
0951389	10	8 Hole Inside Corner Gusset	0.184	4138	8	9.13:
0951390	15	8 Hole Inside Corner Gusset	0.551	4338	8	10.96:

## Tee Plates & Corner Brackets



Part No.	Series	Description	Weight	Reference No.	Recommended Bolt Kit	Price /Ea
0951397	10	5 Hole Tee Plate	0.120	4140	5	\$8.33:
0951398	15	5 Hole Tee Plate	0.370	4340	5	9.56:
0951399	10	12 Hole Tee Plate	0.240	4125	12	13.23:
0951400	15	12 Hole Tee Plate	0.715	4325	12	15.80:
0951401	10	4 Hole Corner Bracket	0.065	4113	4	4.96:
0951402	15	4 Hole Corner Bracket	0.175	4303	4	5.39:

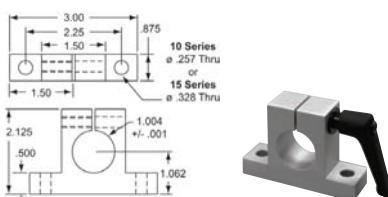
## Single Shaft Stanchion Base



Part No.	Series	Size	A	B	C	D	E	F	G	H	J	K	P	R	Weight	Price/Ea
0951407	10	1"	3.000	2.125	2.50	1.50	0.500	1.00	2.25	1.004	0.257	1.500	0.625	0.625	0.705	\$68.85:
0951408	15	1"	3.000	2.125	2.50	1.50	0.500	1.50	2.25	1.004	0.328	1.500	0.625	0.625	0.700	68.85:
0951409	15	1"	3.875	2.50	3.00	2.25	0.750	1.50	3.00	1.505	0.328	1.937	0.875	0.875	1.355	95.73:

Part No.	Description	Recommended Bolt Kit
0951407	1/4-20 x 3/4" SHCS Economy T-Nut w/o Washer	4
0951408	5/16-18 x 7/8" SHCS Economy T-Nut w/o Washer	4
0951409	5/16-18 x 1-1/4" SHCS Economy T-Nut w/ Washer	4

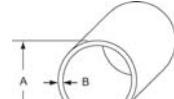
## Horizontal Quick Clamp



Part No.	Size	Series	Weight	Included Hardware	Price /Ea
0951410	1"	10	0.294	1/4-20 x 3/4" SHCS Economy T-Nut w/o Washer (2)	\$40.85:
0951411	1"	15	0.294	5/16-18 x 7/8" SHCS Economy T-Nut w/o Washer (2)	40.85:

## Aluminum Tube

Drawn Precision Tube 71" Stock Length



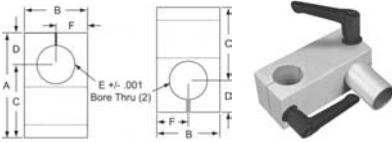
Part No.	A	B	Finish	Alloy	Lbs./Feet	Price/Ea
0951412	1.00	0.125	Clear Anodized	6061-T6	0.405	\$226.01:
0951413	1.50	0.125	Clear Anodized	6061-T6	0.630	238.94:

# VARIOUS BASES & CLAMPS, BEARINGS & WHEELS

## Quick Stanchion Cross Clamp

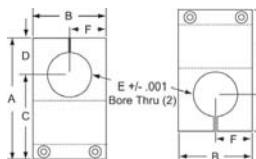
**80/20 Inc.**

The Industrial Erector Set®



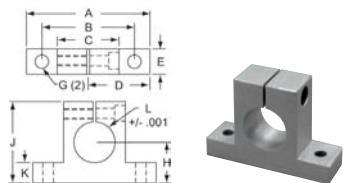
Part No.	Size	A	B	C	D	E	F	Weight	Price/Ea
0951414	1"	3.375	1.50	2.375	1.00	1.004	0.75	0.825	\$73.99:

## Stanchion Cross Clamp



Part No.	Size	A	B	C	D	E	F	Weight	Price/Ea
0951415	1"	3.125	2.00	2.125	1.00	1.004	1.00	0.925	\$71.42:

## Single Horizontal Base

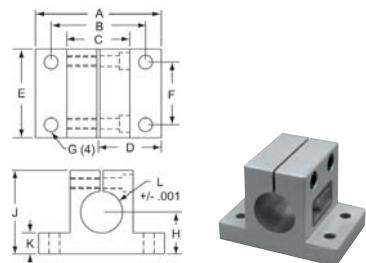


Part No.	Series	Size	A	B	C	D	E	G	H	J	K	L	Weight	Price/Ea
0951416	10	1"	3.00	2.25	1.50	1.50	0.875	.257 Thru	1.062	2.125	0.500	1.004	0.268	\$38.53:
0951417	15	1"	3.00	2.25	1.50	1.50	0.875	.328 Thru	1.062	2.125	0.500	1.004	0.259	38.53:
0951418	15	1.5"	3.875	3.00	2.25	1.937	1.125	.328 Thru	1.125	2.50	0.750	1.505	1.253	45.69:

## Included Bolt Assembly

Part No.	Included Hardware	Qty.
0951416	1/4-20 x 3/4" SHCS Economy T-Nut w/o Washer	2
0951417	5/16-18 x 7/8" SHCS Economy T-Nut w/o Washer	2
0951418	5/16-18 x 1 1/4" SHCS Economy T-Nut w/ Washer	2

## Double Horizontal Base

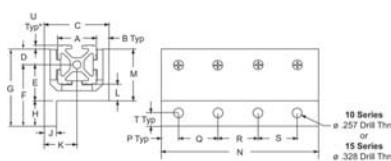


Part No.	Series	Size	A	B	C	D	E	F	G	H	J	K	L	Weight	Price/Ea
0951419	10	1"	3.00	2.25	1.50	1.50	2.00	1.00	.257 Thru	1.062	2.125	0.500	1.004	0.575	\$57.82:
0951420	15	1"	3.00	2.25	1.50	1.50	2.00	1.50	.328 Thru	1.062	2.125	0.500	1.004	0.568	57.82:
0951421	15	1.5"	3.875	3.00	2.25	1.937	2.50	1.50	.328 Thru	1.125	2.50	0.750	1.505	1.210	68.54:

## Included Bolt Assembly

Part No.	Included Hardware	Qty.
0951419	1/4-20 x 3/4" SHCS Economy T-Nut w/o Washers	4
0951420	5/16-18 x 7/8" SHCS Economy T-Nut w/o Washers	4
0951421	5/16-18 x 1 1/4" SHCS Economy T-Nut w/ Washers	4

## Single Flange Linear Bearings



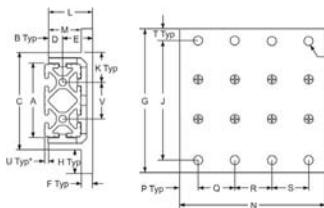
Part No.	Series	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	Weight	Price/Ea
0951422	10	1.00	0.312	1.63	0.406	0.903	1.562	1.97	0.656	0.31	0.813	0.406	1.31	1.88	0.438	1.00	-	-	0.343	0.094	0.205	\$41.83:
0951423	10	1.00	0.312	1.63	0.406	0.903	1.562	1.97	0.656	0.31	0.813	0.406	1.31	4.00	0.500	1.00	1.00	1.00	0.343	0.094	0.435	55.19:
0951424	15	1.50	0.500	2.50	0.625	1.375	2.125	2.75	0.750	0.50	1.250	0.625	2.00	2.81	0.656	1.50	-	-	0.375	0.125	0.700	54.70:
0951425	15	1.50	0.500	2.50	0.625	1.375	2.125	2.75	0.750	0.50	1.250	0.625	2.00	6.00	0.750	1.50	1.50	1.50	0.375	0.125	1.495	72.21:

# BEARINGS & WHEELS, VARIOUS FASTENERS

## Double Flange Linear Bearings

**80/20 Inc.**

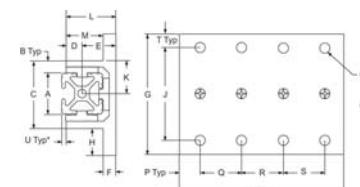
The Industrial Erector Set®



10 Series  
ø .257 Drill Thru  
or  
15 Series  
ø .328 Drill Thru



Part No.	Series	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	Weight	Price/Ea
0951426	10	2.00	0.312	2.63	0.406	0.812	0.312	3.94	0.656	3.25	0.812	1.218	0.91	1.88	0.437	1.00	-	-	0.343	0.094	1.00	0.250	\$63.03:
0951427	10	2.00	0.312	2.63	0.406	0.812	0.312	3.94	0.656	3.25	0.812	1.218	0.91	4.00	0.500	1.00	1.00	1.00	0.343	0.094	1.00	0.525	\$4.28:
0951428	15	3.00	0.500	4.00	0.640	1.235	0.375	5.50	0.750	4.75	1.250	1.875	1.50	2.81	0.656	1.50	-	-	0.375	0.125	1.50	0.810	65.60:
0951429	15	3.00	0.500	4.00	0.640	1.235	0.375	5.50	0.750	4.75	1.250	1.875	1.50	6.00	0.750	1.50	1.50	1.50	0.375	0.125	1.50	1.705	86.85:

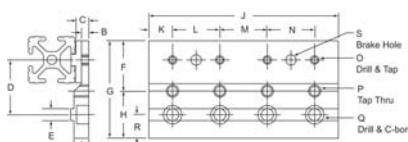


10 Series  
ø .257 Drill Thru  
or  
15 Series  
ø .328 Drill Thru



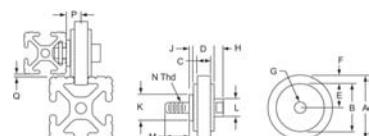
Part No.	Series	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	Weight	Price/Ea
0951430	10	1.00	0.312	1.63	0.406	0.812	0.312	2.94	0.656	2.25	0.812	1.218	0.91	1.88	0.438	1.00	-	-	0.343	0.094	0.215	\$44.71:
0951431	10	1.00	0.312	1.63	0.406	0.812	0.312	2.94	0.656	2.25	0.812	1.218	0.91	4.00	0.500	1.00	1.00	1.00	0.343	0.094	0.450	59.05:
0951432	15	1.50	0.500	2.50	0.640	1.235	0.375	4.00	0.750	3.25	1.250	1.875	1.50	2.81	0.656	1.50	-	-	0.375	0.125	0.665	57.58:
0951433	15	1.50	0.500	2.50	0.640	1.235	0.375	4.00	0.750	3.25	1.250	1.875	1.50	6.00	0.750	1.50	1.50	1.50	0.375	0.125	1.415	76.07:

## Single UniBearing™



Part No.	Series	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	Weight	Price/Ea
0951434	10	0.31	0.152	0.30	1.165	0.250	1.062	2.06	0.50	1.88	0.44	1.000	-	-	#8-32	1/4 20	1/4 20 SHCS	0.50	0.265	0.130	\$16.11:
0951435	10	0.31	0.152	0.30	1.165	0.250	1.062	2.06	0.50	4.00	0.50	1.000	1.000	1.000	#8-32	1/4 20	1/4 20 SHCS	0.50	0.265	0.270	20.58:
0951436	15	0.50	0.240	0.48	1.760	0.310	1.625	3.13	0.75	2.81	0.66	1.500	-	-	#10-24	5/16 18	5/16 18 SHCS	0.75	0.328	0.445	18.01:
0951437	15	0.50	0.240	0.48	1.760	0.310	1.625	3.13	0.75	6.00	0.75	1.500	1.500	1.500	#10-24	5/16 18	5/16 18 SHCS	0.75	0.328	0.930	22.54:

## Roller Wheels



Type: DR= Dual Roller Bearing

PL= Permanent Lube Bronze Bearing



Part No.	Series	A	B	C	D	E	F	G	H	J	K	L	M	N	Q	P	Type	Weight	Price/Ea
0951438	10	1.50	1.125	0.240	0.480	0.563	0.188	0.314	0.219	0.125	0.625	0.435	0.310	1/4 20	0.060	0.370	PL*	0.075	\$18.38:
0951439	15	2.00	1.625	0.310	0.720	0.812	0.188	0.375	0.250	0.125	0.750	0.562	0.375	5/16 18	0.060	0.485	DR*	0.185	31.36:
0951440	15	2.00	1.625	0.310	0.720	0.812	0.188	0.375	0.250	0.125	0.750	0.562	0.375	5/16 18	0.060	0.485	PL*	0.165	20.27:

## Economy T-Nut Fasteners



## Anchor Fasteners



Part No.	Description	Series	Thickness	Length	Width	Weight	Price/Ea
0951441	1/4-20 Centered Black Zinc T-Nut	10	0.094	1.00	0.443	0.0091	\$0.25:
0951442	5/16-18 Offset Black Zinc T-Nut	15	0.142	0.984	0.637	0.0206	0.33:

Part No.	Description	Nut Type	Bolt Size	Alloy	Weight	Price/Ea
0951449	10 Series Anchor Fastener	Std T-Nut	#10-32	Zinc	0.020	\$3.55:
0951450	15 Series Anchor Fastener	Std T-Nut	5/16-18	Zinc	0.100	3.86:

Part No.	Description	Series	Tap Distance	Length	Width	Weight	Price/Ea
0951445	1/4-20 Double Economy T-Nut	10	1.000	1.875	0.443	0.0198	\$0.84:
0951446	5/16-18 Double Economy T-Nut	15	1.500	2.810	0.625	0.0625	0.96:

The : symbol after a price denotes that it is a Direct Ship Product (DSP) and shipping, availability & lead times may vary.

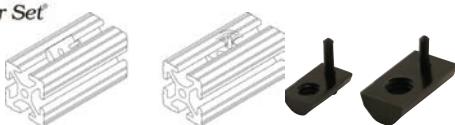
MEALS, ALLOYS & MATERIALS

# VARIOUS FASTENERS, FASTENING BOLT KITS

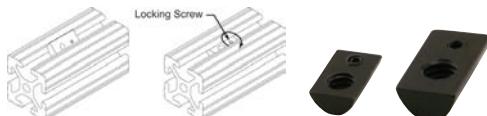
## Drop In T-Nut Fasteners

**80/20 Inc.**

The Industrial Erector Set®



Part No.	Size	Thickness	Series	Width	Length	Tap Location	Nub Location	Weight	Price/Ea
0951443	1/4-20	0.200	10	0.395	0.620	0.201	0.500	0.008	\$2.08:
0951444	5/16-18	0.285	15	0.510	0.875	0.310	0.680	0.026	2.27:



Part No.	Size	Thickness	Series	Width	Length	Tap Location	Nub Location	Weight	Price/Ea
0951447	1/4-20	0.200	10	0.395	0.620	0.201	0.500	0.0081	\$2.94:
0951448	5/16-18	0.285	15	0.510	0.875	0.310	0.680	0.0227	2.94:

## Extrusion End Fasteners



Part No.	Series	Finish	Thread	Screw Included	Weight	Price /Ea
0951451	10	Black Zinc	1/4 20	Yes	0.020	\$1.84:
0951452	15	Black Zinc	5/16 18	Yes	0.048	1.96:

## Fastening Bolt Kits

Part No.	Thread	Screw Type	Length	Nut Type	Washer	Material	Price/Ea
0951453	1/4-20	Low Head Socket Cap Screw	.1.00"	N/A	No	Black Zinc	\$0.65:
0951454	5/16-18	Low Head Socket Cap Screw	1.250"	N/A	No	Black Zinc	0.77:
0951455	1/4-20	Button Head Socket Head Cap Screw	.625"	N/A	No	Black Zinc	0.28:
0951456	5/16-18	Button Head Socket Head Cap Screw	.750"	N/A	No	Black Zinc	0.36:
0951457	1/4-20	Socket Head Cap Screw	.875"	Hex Nut	Yes	Black Zinc	0.71:
0951458	5/16-18	Flanged Button Head Socket Cap Screw	.500"	Economy T-Nut	No	Black Zinc	0.71:
0951459	5/16-18	Flanged Button Head Socket Cap Screw	.625"	Economy T-Nut	No	Black Zinc	0.73:
0951460	1/4-20	Flanged Button Head Socket Cap Screw	.500"	Economy T-Nut	No	Black Zinc	0.61:
0951461	5/16-18	Flanged Button Head Socket Cap Screw	.625"	Drop-In T-Nut	No	Black Zinc	2.70:
0951462	5/16-18	Economy T-Slot Syud	.750"	Hex Nut	Yes	Black Zinc	0.72:
0951463	5/16-18	Flanged Button Head Socket Cap Screw	.500"	N/A	No	Black Zinc	0.57:
0951464	5/16-18	Flanged Button Head Socket Cap Screw (2)	.625"	Double Economy T-Nut	No	Black Zinc	1.84:
0951465	1/4-20	Flanged Button Head Socket Cap Screw (2)	.500"	Double Economy T-Nut	No	Black Zinc	1.16:
0951466	5/16-18	Button Head Socket Head Cap Screw	.625"	Economy T-Nut	No	Black Zinc	0.61:
0951467	1/4-20	Flanged Button Head Socket Cap Screw	.325"	Economy T-Nut	No	Black Zinc	0.56:
0951468	1/4-20	Flanged Button Head Socket Cap Screw	.325"	N/A	No	Black Zinc	0.47:
0951469	1/4-20	Button Head Socket Head Cap Screw	.500"	Economy T-Nut	No	Black Zinc	0.49:
0951470	5/16-18	Button Head Socket Head Cap Screw	.750"	Hex Nut	Yes	Black Zinc	0.44:
0951471	5/16-18	Socket Head Cap Screw	.750"	Economy T-Nut	No	Black Zinc	0.61:
0951472	#10-32	Socket Head Cap Screw	.325"	Economy T-Nut	No	Black Zinc	0.39:
0951473	#10-32	Socket Head Cap Screw	.625"	Hex Nut	Yes	Black Zinc	0.33:
0951474	5/16 18	Socket Head Cap Screw	1.00"	Hex Nut	Yes	Black Zinc	0.53:
0951475	1/4-20	Flanged Button Head Socket Cap Screw	.500"	Drop-In T-Nut	No	Black Zinc	2.45:
0951476	1/4-20	Socket Head Cap Screw	.500"	Economy T-Nut	No	Black Zinc	0.45:

# METAL CUTTING EQUIPMENT

## Metal Cutting Equipment



### Horizontal Band Saw 7" x 12"

- Heavy duty cast iron saw head and table
- Oil bath hardened and ground worm gear
- Adjustable ball bearing blade guides
- Adjustable hydraulic feed system
- Automatic shut-off at end of cut
- Comes with casters for portability
- Use our synthetic cutting fluid part #0301881
- 110 Volt

#### Specifications

Cutting Capacity: 6" Round, 9-1/2" x 6" Rectangle, 11" x 1" Flat Stock

Blade Size: 3/4" x .032" x 93"

Blade Speeds: 86-132-178-260 SFPM

Motor: 3/4 HP, capacitor start, 1725 RPM

Machine Dimensions: 50" L x 18" W x 41" H

Coolant Pump: 1 Gallon Capacity, single phase motor. Wet cutting models complete with hose, flexible nozzle, shut-off valve, tank and baffle.

Height of Work Table: 23-1/2"

Net Weight: 346 lbs.



Part No.	Description	Price /Ea
0950083	7" x 12" Horizontal Cut-Off Band Saw	\$1289.56:



### Edwards Ironworkers

#### The fastest growing line of Ironworkers in the USA

Your one stop fab shop! These machines shear flats, rounds & angles, and also punch holes and notch steel. Work more IRON for less coin.

### 25 Ton Ironworker

- 25 ton
- Punch Capacity: 1" hole in 5/16" mild steel
- Open Station: Shown with optional multi shear (shears 2" x 2" x 1/4" angle iron; 6" x 1/4" flats; and has a built in rod shear), and can also use a brake; pipe notcher; or coper notcher.



Part No.	Description	Price /Ea
0950084	220 Volt/1 Phase	\$3796.00:

### 50 Ton Ironworker

- Punch Capacity: 1" diameter in 5/8" plate
- Fourth work station dedicated for 2" x 3" x 5/16" coper notcher
- Flat Bar Shear: 1/2" x 10"; 3/4" x 4"
- Angle Shear: 4" x 4" x 1/4"; 3 x 3" x 3/8"
- Shipping weight: Class 55/1550 lbs
- "Whisper Quiet" hydraulic system and electric foot pedal



Part No.	Description	Price /Ea
0951724	220 Volt/3 Phase	\$5996.00:
0951725	220 Volt/1 Phase	6196.00:
0951726	440 Volt	6116.00:
0951727	575 Volt	6564.00:

### 55 Ton Ironworker

- Punch Capacity: 1-1/16" hole through 5/8" plate, Optional oversize to 1-9/16"
- Bar Shear: 3/8" x 14" or 1/2" x 12"
- Angle Shear: 4" x 4" x 1/4" and 3" x 3" x 3/8"
- Motor Standard: 3HP, 3PH, 208/240V (options available)
- Open Station for Optional: 2X4X5/16" coper notcher; 8" or 10" brake; pipe notcher or rod shear
- "Whisper Quiet" hydraulic system and electric foot pedals are standard



Part No.	Description	Price /Ea
0950085	220 Volt/3 Phase	\$6596.00:
0951728	220 Volt/1 Phase	6896.00:
0951729	440 Volt	6716.00:
0951730	575 Volt	7164.00:

### 60 Ton Ironworker

- Punch Diameter: 1" diameter in 3/4" plate
- Flat Bar Shear: 5/8" x 12" or 1/2" x 12"
- Angle Shear: 4" x 4" x 3/8", 3" x 3" x 1/2"
- Coper Notcher: 2-1/2" x 5" x 1/4"

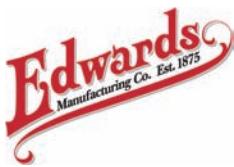


Part No.	Description	Price /Ea
7060243	220 Volt/3 Phase	\$7596.00:
7060244	220 Volt/1 Phase	7896.00:
7060245	440 Volt	7716.00:
7060246	575 Volt	8164.00:

# METAL CUTTING EQUIPMENT

EQUIPMENT

## Metal Cutting Equipment Cont.



### 65 Ton Ironworker

- Punch Capacity: 1-1/16" diameter in 3/4" plate
- Flat Bar Shear: 3/8" x 24"; 1/2" x 14"
- Angle Shear: 5" x 5" x 1/4"; 4" x 4" x 3/8"
- Coper Notcher: 2-1/2" x 6" x 1/2"
- Open Station holds optional tooling: 10" brake; pipe notcher; rod shear



Part No.	Description	Price /Ea
0951731	220 Volt/3 Phase	\$11996.00:
0951732	220 Volt/1 Phase	11996.00:
0951733	440 Volt	12116.00:
0951734	575 Volt	12564.00:

### 75 Ton Ironworker

- Punch Capacity: 1-1/16" diameter in 7/8" plate
- Throat: 10" depth; 1-5/8" Stroke
- Flat Bar Shear: 3/8" x 24"; 1/2" x 14"; 1" x 10"
- Angle Shear: 5" x 5" x 14"
- Hydraulic System: 10-1/2 GPM 2 stage pump; 300 psi valve pressure
- Open Station: Dedicated for coper notcher



Part No.	Description	Price /Ea
0951735	220 Volt/3 Phase	\$10996.00:
0951736	220 Volt/1 Phase	11196.00:
0951737	440 Volt	11116.00:
0951738	575 Volt	11564.00:

### 100 Ton Ironworker

- Punch Capacity: 1-1/16" hole through 1" plate, Optional oversize to 1-9/16"
- Bar Shear: 1" x 10" or 3/4" x 14"
- Angle Shear: 6" x 6" x 1/2"
- Open Station Tooling Options: 2-1/2" x 6" x 1/2"



Part No.	Description	Price /Ea
0950086	220 Volt/3 Phase	\$13496.00:
0951739	220 Volt/1 Phase	13496.00:
0951740	440 Volt	13616.00:
0951741	575 Volt	14064.00:

### 100 Ton Deluxe Ironworker

- Punch Capacity: 1-1/16" diameter in 1" plate
- Flat Bar Shear: 1/2" x 16"; 3/4" x 12"
- Angle Shear: 5" x 5" x 1/2"
- Coper Notcher: 3" x 5" x 1/2"
- Built in Rod Shear



Part No.	Description	Price /Ea
0951742	220 Volt/3 Phase	\$16796.00:
0951743	440 Volt	16916.00:
0951744	575 Volt	17364.00:

### 120 Ton Ironworker

- Punch Capacity: 1-1/2" diameter in 1" plate
- Flat Bar Shear: 1/2" x 24"; 1" x 12"
- Angle Shear: 6" x 6" x 1/2"
- Open Station: for optional 10" brake; pipe notcher; rod shear
- Std. Coper Notcher: 3" x 6" x 1/2"



Part No.	Description	Price /Ea
7060247	220 Volt/3 Phase	\$18996.00:
7060248	440 Volt	19116.00:
7060249	575 Volt	19564.00:

### Accessories

Part No.	Description	Price /Ea
0950087	25 Ton Coper Notcher	\$779.00:
0952021	50 Ton Notcher Blades	358.00:
0950088	55 Ton Coper Notcher	895.85:
0952023	75 Ton Notcher Blades	476.00:
0950089	100 Ton Coper Notcher	1019.00:
0950090	25 Ton 7" Brake	632.50:
0951754	50 Ton 8" Brake	661.00:
0950091	55 Ton 8" Brake	821.00:
0951755	65 Ton 8" Brake	683.00:
0951756	65 Ton 10" Brake	840.00:
0950092	100 Ton 12" Brake	935.00:
0950093	3" x 3 "x 1/4" "Vee" Notcher	840.00:
0950094	Pipe Notching Housing	269.00:
0950095	1/2" Pipe Notch Dies	302.00:
0950096	3/4" Pipe Notch Dies	325.00:
0950097	1" Pipe Notch Dies	347.00:
0950098	1-1/4" Pipe Notch Dies	370.00:
0950099	1-1/2" Pipe Notch Dies	392.00:
0950100	2" Pipe Notch Dies	414.00:
0950101	Multi Shear	706.00:
0951999	Rod Shear and Housing	980.00:
0952001	Punch Gauging	420.00:
0952003	Short Fence for Gauging	36.00:
0952004	Long Fence for Gauging	43.00:
0951746	Electric Stroke Control for 50-100 Ton Ironworkers	NoCharge

# METAL STORAGE RACKS, METAL SPECIFICATIONS

## Metals Storage Racks

- An innovative racking system to house your metal, or any other material.
- Consolidate your materials in an organized manner.
- Each compartment is 1-1/2" deep x 9" on center.



Part No.	Description	W x H x D	Cap./Shelf (lbs)	No. of Compartments	Price /Ea
0950716	1 Wide Metals Rack	3' x 6' x 12'	1500	75	\$1411.83

## Metals Specifications

### Wire Gauge Chart

Brown & Sharp; American Wire Gauge (AWG)	Standard	Manufacturers Wire Gauge (BWG)	Birmingham & Moen	Washburn US Standard	Galv. Sheet Gauge	Imperial Standard Wire Gauge (SWG)	
Gauge Decimal - Inches	Gauge Decimal - Inches	Gauge Decimal - Inches	Gauge #	Gauge Decimal - Inches	Gauge Decimal - Inches	Gauge Decimal - Inches	Gauge Decimal - Inches
Non-Ferrous Metals: Brass, Bronze, Nickel Silver & Aluminum Sheets, Brass, Bronze & Nickel Silver Wire, Brass & Bronze Strip	Cold and Hot Rolled Steel Sheets	Aluminum, Brass, Copper & Steel Tubes, Copper Sheets, Steel & Stainless Steel Strip, Flat Wire		Basic Steel Wire - All finishes	Stainless Steel Sheets	Galvanized Steel Sheets	
.5800			000000 (6/0)	.4615			.04640
.5165		.500	000000 (5/0)	.4305			.04320
.4600		.454	0000 (4/0)	.3938			.04000
.4096		.425	000 (3/0)	.3625			.03720
.3648		.380	00 (2/0)	.3310			.03480
.3249		.340	0 (1/0)	.3065			.03240
.2893		.300	1	.2830			.03000
.2576		.284	2	.2625			.02760
.2294	.2391	.259	3	.2437			.02520
.2043	.2242	.238	4	.2253			.02320
.1819	.2092	.220	5	.2070			.02120
.1620	.1943	.203	6	.1920			.01920
.1443	.1793	.180	7	.1770			.01760
.1285	.1644	.165	8	.1620	.17187	.1681	.01600
.1144	.1495	.148	9	.1483	.15625	.1532	.01440
.1019	.1345	.134	10	.1350	.14062	.1382	.01280
.0907	.1196	.120	11	.1205	.12500	.1233	.01160
.0808	.1046	.109	12	.1055	.10937	.1084	.01040
.0720	.0897	.095	13	.0915	.09375	.0934	.00920
.0641	.0747	.083	14	.0800	.07812	.0785	.00800
.0571	.0673	.072	15	.0720	.07031	.0710	.00720
.0508	.0598	.065	16	.0625	.06250	.0635	.00640
.0453	.0538	.058	17	.0540	.05625	.0575	.00560
.0403	.0478	.049	18	.0475	.05000	.0516	.00480
.0359	.0418	.042	19	.0410	.04375	.0456	.00400
.0320	.0359	.035	20	.0348	.03750	.0396	.00360
.0285	.0329	.032	21	.0317	.03437	.0366	.00320
.0253	.0299	.028	22	.0286	.03125	.0336	.00280
.0226	.0269	.025	23	.0258	.02812	.0306	.00240
.0201	.0239	.022	24	.0230	.02500	.0276	.00220
.0179	.0209	.020	25	.0204	.02187	.0247	.00200
.0159	.0179	.018	26	.0181	.01875	.0217	.00180
.0142	.0164	.016	27	.0173	.01718	.0202	.00164
.0126	.0149	.014	28	.0162	.01562	.0187	.00149
.0113	.0135	.013	29	.0150	.01406	.0172	.00136
.0100	.0120	.012	30	.0140	.01250	.0157	.00124
.0089	.0105	.010	31	.0132			.00116
.0080	.0097	.009	32	.0128			.00108
.0071	.0090	.008	33	.0118			.00100
.0063	.0082	.007	34	.0104			.00092
.0056	.0075	.005	35	.0095			.00084
.0050	.0067	.004	36	.0090			.00076
.0045	.0064		37	.0085			.00068
.0040	.0060		38	.0080			.00060

The : symbol after a price denotes that it is a Direct Ship Product (DSP) and shipping, availability & lead times may vary.

15-43 METALS, ALLOYS & MATERIALS

# METAL SPECIFICATIONS

## Metals Specifications Cont.

### Size Tolerance for Cold-Finished Carbon Steel Bars, Cold Drawn or Turned and Polished

Per ASTM A29, Table A1.11

Tolerances are minus only, all plus tolerance are 0

1018	1045	
Size Range in Inches	Max. of Carbon Range Under 0.28%	Max. of Carbon Range Over 0.28% to 0.55%
<b>Rounds</b>		
To 1-1/2, incl.	0.002	0.003
1-1/2 to 2-1/2, incl.	0.003	0.004
2-1/2 to 4, incl.	0.004	0.005
4 to 6, incl.	0.005	0.006
6 to 8, incl.	0.006	0.007
8 to 9, incl.	0.007	0.008
<b>Hexagons</b>		
To 3/4, incl.	0.002	0.003
3/4 to 1-1/2, incl.	0.003	0.004
1-1/2 to 2-1/2, incl.	0.004	0.005
2-1/2 to 3-1/8, incl.	0.005	0.006
3-1/8 to 4, incl.	0.005	0.006
<b>Squares</b>		
To 3/4, incl.	0.002	0.004
3/4 to 1-1/2, incl.	0.003	0.005
1-1/2 to 2-1/2, incl.	0.004	0.006
2-1/2 to 4, incl.	0.006	0.008
4 to 5, incl.	0.010	N/A
5 to 6, incl.	0.014	N/A
<b>Flats</b>		
Width, in. Tolerance applies to width and thickness		
To 3/4, incl.	0.002	0.004
3/4 to 1-1/2, incl.	0.004	0.005
1-1/2 to 3, incl.	0.005	0.006
3 to 4, incl.	0.006	0.008
4 to 6, incl.	0.008	0.010
Over 6, incl.	0.013	0.015

### Size Tolerance for Cold-Finished Alloy Steel Bars, Cold Drawn or Turned and Polished

Per ASTM A29, Table A1.13

Tolerances are minus only, all plus tolerances are 0.

Size Range in Inches	Max. of Carbon Range Under 0.28%	Max. of Carbon Range Over 0.28% to 0.55%
<b>Rounds</b>		
To 1-1/2, incl.	0.003	0.004
1-1/2 to 2-1/2, incl.	0.004	0.005
2-1/2 to 4, incl.	0.005	0.006
4 to 6, incl.	0.006	0.007
6 to 8, incl.	0.007	0.008
8 to 9, incl.	0.008	0.009
<b>Hexagons</b>		
To 3/4, incl.	0.003	0.004
3/4 to 1-1/2, incl.	0.004	0.005
1-1/2 to 2-1/2, incl.	0.005	0.006
2-1/2 to 3-1/8, incl.	0.006	0.007
3-1/8 to 4, incl.	0.006	N/A
<b>Squares</b>		
To 3/4, incl.	0.003	0.005
3/4 to 1-1/2, incl.	0.004	0.006
1-1/2 to 2-1/2, incl.	0.005	0.007
2-1/2 to 4, incl.	0.007	0.009
4 to 5, incl.	0.011	N/A
<b>Flats</b>		
Width, in. Tolerance applies to width and thickness		
To 3/4, incl.	0.004	0.005
3/4 to 1-1/2, incl.	0.005	0.006
1-1/2 to 2-1/2, incl.	0.006	0.007
2-1/2 to 4, incl.	0.007	0.009
4 to 5, incl.	0.011	N/A

### Size Tolerance for Cold-Finished Round Bars, Cold Drawn, Ground and Polished or Turned, Ground and Polished

Per ASTM A29, Table A1.12

Size in In., Cold Drawn, Ground & Polished	Size in In., Ground & Polished	Tolerances from Specified Size in In., Minus Only
To 1-1/2, incl.	To 1-1/2, incl.	0.001
Over 1-1/2 to 2-1/2, excl.	Over 1-1/2 to 2-1/2, excl.	0.0015
2-1/2 to 3, incl.	2-1/2 to 3, incl.	0.002
Over 3 to 4, incl.	Over 3 to 4, incl.	0.003
	N/A	Over 4 to 6, incl.
	N/A	Over 6

### Size Tolerance for Hot-Rolled Carbon and Alloy Bars

Round and Square Bars Per ASTM A6, Table 27

Specified Size	Variations from Size +	-	Out-of-Round*
To 5/16", incl.	0.005"	0.005"	0.008"
5/16" to 7/16" incl.	0.006"	0.006"	0.009"
7/16" to 5/8" incl.	0.007"	0.007"	0.010"
5/8" to 7/8" incl.	0.008"	0.008"	0.012"
7/8" to 1" incl.	0.009"	0.009"	0.013"
1" to 1-1/8" incl.	0.010"	0.010"	0.015"
1-1/8" to 1-1/4" incl.	0.011"	0.011"	0.016"
1-1/4" to 1-3/8" incl.	0.012"	0.012"	0.018"
1-3/8" to 1-1/2" incl.	0.014"	0.014"	0.021"
1-1/2" to 2" incl.	1/64"	1/64"	0.023"
2" to 2-1/2" incl.	1/32"	0"	0.023"
2-1/2" to 3-1/2" incl.	3/64"	0"	0.035"
3-1/2" to 4-1/2" incl.	1/16"	0"	0.046"
4-1/2" to 5-1/2" incl.	5/64"	0"	0.058"
5-1/2" to 6-1/2" incl.	1/8"	0"	0.070"
6-1/2" to 8-1/4" incl.	5/32"	0"	0.085"
8-1/4" to 9-1/2" incl.	3/16"	0"	0.100"
9-1/2" to 10" incl.	1/4"	0"	0.120"

\*Out-of-round is the difference between the maximum and the minimum diameters of the bar, measured at the same transverse cross section.

### Hexagon Bars

Per ASTM A6, Table 28

Specified Size	Variations from Size +	-	Out-of-Hexagon*
To 1/2" incl.	0.007"	0.007"	0.011"
1/2" to 1" incl.	0.010"	0.010"	0.015"
1" to 1-1/2" incl.	0.021"	0.013"	0.025"
1-1/2" to 2" incl.	1/32"	1/64"	1/32"
2" to 2-1/2" incl.	3/64"	1/64"	3/64"
2-1/2" to 3-1/2" incl.	1/16"	1/64"	1/16"

\*Out-of-hexagon section is the greatest difference between any two opposite faces measured at the same transverse cross section.

## Metals Specifications Cont.

### Flat Bars

Per ASTM A6, Table 26

Specified Widths, In.	Variations from Thickness, In.	Variations from Width, In.							
	0.203 to 0.230	0.230 to 1/4	1/4 to 1/2	Over 1/2 to 1	Over 1 to 2	Over 2 to 3	Over 3	+	-
To 1 incl.	0.007	0.007	0.008	0.01	N/A	N/A	N/A	1/64	1/64
Over 1 to 2 incl.	0.007	0.007	0.012	0.015	1/32	N/A	N/A	1/32	1/32
Over 2 to 4 incl.	0.008	0.008	0.015	0.02	1/32	3/64	3/64	1/16	1/16
Over 4 to 6 incl.	0.009	0.009	0.015	0.02	1/32	3/64	3/64	3/32	1/16
Over 6 to 8 incl.	N/A	0.015	0.016	0.025	1/32	3/64	**	1/8**	3/32**

Flats over 6" to 8" in width are not available as hot-rolled carbon steel bars in thickness under 0.230".

\*\* For flats over 6" to 8" in width, and to 3" in thickness

### Permitted Variations in Straightness for Steel Bars

Per ASTM A6, Table 29

Max. Permissible Variations in Straightness

1/4" any 5 feet, or 1/4 x (number of feet of total length/5)

Permitted variations in straightness do not apply to hot-rolled bars if any subsequent heating operation has been performed.

### Thickness Tolerance for Aluminum Rod and Bar

Thickness, Width, In.	Tolerance, In.	Thickness, Width, In.	Tolerance, In.
<b>Cold Finished Rod</b>			
.125-.500	+/-0.015	.065-.500	+/-0.002
.501-1.000	+/-0.020	.501-1.000	+/-0.005
1.001-1.500	+/-0.025	1.001-1.500	+/-0.003
1.501-2.000	+/-0.040	1.501-2.000	+/-0.005
2.001-3.000	+/-0.060	2.001-3.000	+/-0.008
3.001-3.499	+/-0.080	3.001-4.000	+/-0.010
3.500-5.000	+/-0.120		
<b>Extruded Rod/6061</b>			
Under .125	+/-0.006	Under .125	+/-0.006
.125-.249	+/-0.007	.125-.249	+/-0.007
.250-.499	+/-0.008	.250-.499	+/-0.008
.500-.749	+/-0.009	.500-.749	+/-0.009
.750-.999	+/-0.010	.750-.999	+/-0.010
1.000-1.499	+/-0.012	1.000-1.490	+/-0.012
1.500-1.999	+/-0.014	1.500-1.990	+/-0.014
2.000-3.999	+/-0.024	2.000-3.990	+/-0.024
4.000-5.999	+/-0.034	4.000-7.990	+/-0.034
6.000-7.999	+/-0.044	8.000-9.990	+/-0.054
8.000-9.999	+/-0.054		
10.000-11.999	+/-0.074		
12.000-13.999	+/-0.084		

### Thickness Tolerances for Square and Flat Copper Alloy Bar

Applicable to C110, C360, C464, C485

Thickness Tolerances, Plus & Minus for Widths Given in Inches

1/2 and under	Over 1/2 to 1-1/4 incl.	Over 1-1/4 to 2 incl.	Over 2 to 4 incl.	Over 4 to 8 incl.	Over 8 to 12 incl.						
Thickness, In.	C110	C360 C464 C485	C110	C360 C464 C485	C110	C360 C464 C485	C110	C360 C464 C485	C110	C360 C464 C485	C110
Over 0.188 - 0.500, incl.	0.0030	0.0035	0.0030	0.0040	0.0035	0.0045	0.0040	0.0045	0.0045	0.0060	0.0055
Over 0.500 - 1.000, incl.			0.0040	0.0045	0.0040	0.0050	0.0045	0.0050	0.0050	0.0070	0.0060
Over 1.00 - 2.00, incl.			0.0045	0.0050	0.0045	0.0050	0.0050	0.0060	0.0060	0.0080	
Over 2.00 - 4.00, incl.							0.3000	0.3000			

### Width Tolerances for Copper Alloy

#### Rectangular Bar

Applicable to C110, C360, C464, C485

Width, In.	Tolerances, Plus & Minus, In.
Over 0.188 to 0.500, incl.	0.0035
Over 0.500 - 1.25, incl.	0.0050
Over 1.25 - 2.00, incl.	0.0080
Over 2.00 - 4.00	0.0120
Over 4.00 - 12.00	0.3000

### Straightness Tolerances for Copper Alloy Rod,

#### Bar and Shapes

Applicable to C110, C360, C464, C485

Form & Size, In.	Length, ft.	Maximum Curvature (Depth of Arc), In.
Rod: Drawn	up to 2	1/32
	Incl 2 to 5	1/32 in any 2 ft. portion
	Incl 5 to 10	1/8 in any 5 ft. portion
	10 and over	1/2 in any 10 ft. portion
Bar and Shapes	6 and over	1/2 in any 6 ft. portion

# METAL SPECIFICATIONS

## Metals Specifications Cont.

### Size Tolerances for Stainless Steel Rounds

Drawn, Smooth Turned, Ground, or Ground and Polished

Size, In.	Over	Under
.044 to 5/16 excl.	0.001	0.001
5/16 to 1/2 excl.	0.0015	0.0015
1/2 to 1 excl.	0.002	0.002
1 to 1-1/2 excl.	0.0025	0.0025
1-1/2 to 4 incl.	0.003	0.003
4-1/8 to 4-1/2 incl.	0.005	0.005
4-9/16 to 6 incl.	0.008	0.008

### Size Tolerances for Stainless Steel Hexagons and Squares

Size, In.	Over	Under
1/8 to 5/16 excl.	0.000	0.002
5/16 to 1/2 excl.	0.000	0.003
1/2 to 1 incl.	0.000	0.004
Over 1 to 2 incl.	0.000	0.006
Over 2 to 3 incl.	0.000	0.008
Over 3 to 4 incl.	0.000	0.010

### Size Tolerances for Stainless Steel Flats

Width, In.	Thickness, In., Over & Under		Width, In.		Over	Under
	Thru 1/2	Over 1/2 to 1	Over 1 thru 2	Over		
To 1 incl.	0.008	0.010		1/64	1/64	
Over 1 to 2 incl.	0.012	0.015	1/32	1/32	1/32	
Over 2 to 4 incl.	0.015	0.020	1/32	1/16	1/32	
Over 4 to 6 incl.	0.015	0.020	1/32	3/32	1/16	
Over 6 to 8 incl.	0.016	0.025	1/32	1/8	5/32	
Over 8 to 10 incl.	0.021	0.031	1/32	5/32	3/16	

### Straightness Tolerances for Stainless Steel Bars

Measurement is taken on the concave side of the bar with a straight edge.

#### Hot Finished

1/8" in any 5 feet; but may not exceed 1/8 x (no. of feet in length/5) inches.

#### Cold Finished

1/16" in any 5 feet; but may not exceed 1/16 x (no. of feet in length/5) inches.

### Wall Thickness Tolerance for D.O.M. Tubing

OD, Inches

3/8-7/8	Over 7/8-1-7/8	Over 1-7/8-3-3/4	Over 3-3/4-15					
Wall Thickness, in.	Plus	Minus	Plus	Minus	Plus	Minus	Plus	Minus
0.035	0.002	0.002	0.002	0.002	0.002	0.002		
0.049	0.002	0.002	0.002	0.003	0.002	0.003		
0.065	0.002	0.002	0.002	0.003	0.002	0.003	0.004	0.004
0.083	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.005
0.095	0.002	0.002	0.002	0.003	0.003	0.003	0.004	0.005
0.109	0.002	0.003	0.002	0.004	0.003	0.003	0.005	0.005
0.120	0.003	0.003	0.002	0.004	0.003	0.003	0.005	0.005
0.134			0.002	0.004	0.003	0.003	0.005	0.005
0.148			0.002	0.004	0.003	0.003	0.005	0.005
0.165			0.003	0.004	0.003	0.004	0.005	0.006
0.180			0.004	0.004	0.003	0.005	0.006	0.006
0.203			0.004	0.005	0.004	0.005	0.006	0.007
0.220			0.004	0.006	0.004	0.006	0.007	0.007
0.238			0.005	0.006	0.005	0.006	0.007	0.007
0.259			0.005	0.006	0.005	0.006	0.007	0.007
0.284			0.005	0.006	0.005	0.006	0.007	0.007
0.300			0.006	0.006	0.006	0.006	0.008	0.008
0.320			0.007	0.007	0.007	0.007	0.008	0.008
0.344			0.008	0.008	0.008	0.008	0.009	0.009
0.375				0.009	0.009	0.009	0.009	0.009
0.400				0.010	0.010	0.010	0.010	
0.438				0.011	0.011	0.011	0.011	
0.460				0.012	0.012	0.012	0.012	
0.480				0.013	0.013	0.013	0.013	
0.531				0.013	0.013	0.013	0.013	
0.563				0.013	0.013	0.013	0.013	
0.580				0.014	0.014	0.014	0.014	
0.600				0.015	0.015	0.015	0.015	
0.625				0.016	0.016	0.016	0.016	
0.065				0.017	0.017	0.017	0.017	

### Diameter Tolerances for D.O.M. Tubing

OD Size Range	OD (in.) Over	OD (in.) Under	ID (in.) Over	ID (in.) Under
Up to .499	0.004	0.000		
.500-1.699	0.005	0.000	0.000	0.005
1.700-2.099	0.006	0.000	0.000	0.006
2.100-2.499	0.007	0.000	0.000	0.007
2.500-2.899	0.008	0.000	0.000	0.008
2.900-3.299	0.009	0.000	0.000	0.009
3.300-3.699	0.010	0.000	0.000	0.010
3.700-4.099	0.011	0.000	0.000	0.011
4.100-4.499	0.012	0.000	0.000	0.012
4.500-4.899	0.013	0.000	0.000	0.013
4.900-5.299	0.014	0.000	0.000	0.014
5.300-5.549	0.015	0.000	0.000	0.015
5.550-5.999	0.010	0.010	0.010	0.010
6.000-6.499	0.013	0.013	0.013	0.013
6.500-6.999	0.015	0.015	0.015	0.015
7.000-7.499	0.018	0.018	0.018	0.018
7.500-7.999	0.020	0.020	0.020	0.020
8.000-8.499	0.023	0.023	0.023	0.023
8.500-8.999	0.025	0.025	0.025	0.025
9.000-9.499	0.028	0.028	0.028	0.028
9.500-9.999	0.030	0.030	0.030	0.030
10.000-10.999	0.034	0.034	0.034	0.034
11.000-11.999	0.035	0.035	0.035	0.035
12.000-12.999	0.036	0.036	0.036	0.036
13.000-13.999	0.037	0.037	0.037	0.037
14.000-14.999	0.038	0.038	0.038	0.038

### D.O.M. Tubing Ovality

Ovality shall be within the above tolerance except when wall thickness is less than 3% of the OD. In such cases the additional ovality shall be as follows, but the mean diameter shall be within the specified tolerance.

OD, In.	Additional Ovality Tolerance, In.
Up to 2.000	0.010
Over 2.000-3.000 incl.	0.15
Over 3.000-4.000 incl.	0.020
Over 4.000-5.000	0.025
Over 5.000-6.000 incl.	0.030
Over 6.000-7.000	0.035
Over 7.000-8.000	0.040
Over 8.000-9.000	0.045
Over 9.000-10.000	0.050
Over 10.000-11.000	0.055
Over 11.000-12.000	0.060
Over 12.000-13.000	0.065
Over 13.000-14.000	0.070
Over 14.000-15.000	0.075

### Diameter Tolerance for Round Aluminum Drawn Tube

Plus & Minus, Inches Per ANSI H35.2-1993, Table 11.1

Allowable Deviation of Mean Diam. From size	Allowable Deviation of Diam. From any Point	Not Treated	Heat Treated	Annl.
Up through 0.500	0.003	0.003	0.006	0.018
0.501-1.000	0.004	0.004	0.008	0.018
1.001-2.000	0.005	0.005	0.010	0.030
2.001-3.000	0.006	0.006	0.012	0.036
3.001-5.000	0.008	0.008	0.016	0.048
5.001-6.000	0.010	0.010	0.020	0.060
6.001-8.000	0.015	0.015	0.030	0.090
8.001-10.000	0.020	0.020	0.040	0.120
10.001-12.000	0.025	0.025	0.050	0.150

# METAL SPECIFICATIONS

## Metals Specifications Cont.

### Wall Tolerance for Round Aluminum Drawn Tube Plus & Minus, Inches Per ANSI H35.2-1993, Table 11.5

Allowable Deviation of Mean Diam. From size	Allowable Deviation of Diam. From Size at any Point		
0.010-0.035	0.002	Non-Heat-Treatable 0.002	Heat Treatable +/-10% of specified wall +/- .003 minimum
0.036-0.049	0.003	0.003	
0.050-0.083	0.004	0.004	
0.084-0.120	0.005	0.006	
0.121-0.300	0.008	0.012	
0.301-0.375	0.015	0.020	
0.376-0.500	0.020	0.030	

### Diameter Tolerance for Round Aluminum Extruded Tube

Plus & Minimum, Inches Per ANSI H35.2 - 1993, Table 12.1

Diam. Inches	Deviation from Size of Mean Diam.	Deviation of Diam. from Size at any Point			
			5083, 5086, 5454	Other Alloys	5083, 5086, 5454
0.500-0.0999	0.015	0.010	0.030	0.020	
1.000-1.999	0.018	0.012	0.038	0.025	
2.000-3.999	0.023	0.015	0.045	0.030	
4.000-5.999	0.038	0.025	0.075	0.050	
6.000-7.999	0.053	0.035	0.113	0.075	
8.000-9.999	0.068	0.045	0.150	0.100	
10.000-11.999	0.083	0.055	0.188	0.125	
12.000-13.999	0.098	0.065	0.225	0.150	
14.000-15.999	0.113	0.075	0.263	0.175	
16.000-17.999	0.127	0.085	0.300	0.200	

### Wall Tolerances for Round Aluminum Extruded Tube

Plus & Minus, Inches Allowable Deviation of Mean Wall from Specified Wall Per ANSI H35.2 - 1993, Table 12.3

Spec. Wall, In.	5083, 5086, 5454	Other Alloys	5083, 5086, 5454	Other Alloys	5083, 5086, 5454	Other Alloys	5083, 5086, 5454	Other Alloys
Under 0.047	0.009	0.006	1.250-2.999 OD		3.000-4.999 OD		5.000 OD and over	
0.047-0.061	0.011	0.007	0.012	0.008	0.012	0.008	0.015	0.010
0.062-0.077	0.012	0.008	0.012	0.008	0.014	0.009	0.018	0.012
0.078-0.124	0.014	0.009	0.014	0.009	0.015	0.010	0.023	0.015
0.125-0.249	0.014	0.009	0.014	0.009	0.020	0.013	0.030	0.020
0.250-0.374	0.017	0.011	0.017	0.011	0.024	0.016	0.038	0.025
0.375-0.499			0.023	0.015	0.032	0.021	0.053	0.035
0.500-0.749		0.030		0.020	0.042	0.028	0.068	0.045
0.750-0.999					0.053	0.035	0.083	0.055
1.000-1.499					0.068	0.045	0.098	0.065
1.500-2.000							0.113	0.075
2.001-2.499							0.128	0.085
2.500-2.999							0.143	0.095
3.000-3.499							0.158	0.105
3.500-4.000							0.173	0.115

### Keystock Size Tolerances

Size	Steel Square Zinc Plated	Steel Square Plain Finish	Steel Rectangular Plain Finish
3/4 and smaller	+.003≤ to -.000≤	+.002≤ to -.000≤	+.003≤ to -.000
7/8 thru 1-1/2≤	+.004≤ to -.000≤	+.003≤ to -.000≤	+.004≤ to -.000
1-5/8 thru 2≤	+.005≤ to -.000≤	+.004≤ to -.000≤	+.005≤ to -.000

Stainless Steel: +.002≤ to -.000≤

Metric Keystock: Pre-plated tolerance is +.002≤ to -.000≤ (+.508 to -.000mm). Plating may add up to +.001≤ (.025mm) to thickness, width

### Rebar Size Tolerances

Metric Size	Diameter (MM)	Area (MM <sup>2</sup> )	KG/M	KG/FT	Imperial Size	Fractional Size	Diameter Inches	Area (IN <sup>2</sup> )	LB/FT	LB/M
ASTM Standard Reinforcing Bars (REBAR)										
10	9.5	71	0.560	0.171	3	3/8≤	0.375	0.11	0.376	1.23
13	12.7	129	0.994	0.303	4	1/2≤	0.500	0.20	0.668	2.19
16	15.9	199	1.552	0.473	5	5/8≤	0.625	0.31	1.043	3.42
19	19.1	284	2.235	0.681	6	3/4≤	0.750	0.44	1.502	4.93
22	22.2	387	3.042	0.927	7	7/8≤	0.875	0.60	2.044	6.70
25	25.4	510	3.973	1.211	8	1≤	1.000	0.79	2.670	8.76
29	28.7	645	5.060	1.542	9	1-1/8≤	1.128	1.00	3.400	11.15
32	32.3	819	6.404	1.952	10	1-1/4≤	1.270	1.27	4.303	14.12
36	35.8	1006	7.907	2.410	11	1-1/2≤	1.410	1.56	5.313	17.43
43	43.0	1452	11.384	3.470	14	1-3/4≤	1.693	2.25	7.650	25.09
57	57.3	2581	20.239	6.169	18	2-1/4≤	2.257	4.00	13.600	44.62

### Comparisons of Steel Grades

Grade	Metric Psi	Grade	Imperial Psi
300	43,511	40	40,000
420	60,716	60	60,000
520	75,420	75	75,000

# METAL SPECIFICATIONS

## Metals Specifications Cont.

Specification	Description
AMS 4053	6061 T651 Plate
AMS 4505	Brass Sheet, Strip and Plate, Annealed
AMS 4507	Brass Sheet, Strip and plate, Half Hard
AMS 5906	Steel Corrosion Resistant, Sheet and Strip 18 Cr 9.0 ni (SAE 30302) Cold Rolled, Full Hard, 185 Ksi (1276 Mpa) Tensile Strength
ASTM A1008	Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low Alloy with Improved Formability
ASTM 1011	Steel, Sheet and Strip-Hot-Rolled, Carbon, Structural, High-Strength
ASTM A108	Steel Bars, Carbon, Cold-Finished, Standard Quality
ASTM A109	Steel, Strip, Carbon (0.25 Maximum Percent) Cold-Rolled
ASTM A167	Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip
ASTM A193 Gr. B7	Alloy-Steel and Stainless Steel Bolting Materials for high-Temperature Service
ASTM A213	Seamless Ferritic and Austenitic Alloy-Steel Boiler, Superheater, and Heat-Exchanger Tubes
ASTM A228	Steel Wire, Music Spring Quality
ASTM A240	Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
ASTM A249	Welded Austenitic Steel Boiler, Superheater, Heat-Exchanger, and Condenser Tubes
ASTM A269	Seamless and Welded Austenitic Stainless Steel Tubing for General Service
ASTM A276	Stainless Steel Bars and Shapes
ASTM A313	Stainless Steel Spring Wire
ASTM A322	Steel Bars, Alloy; Standard Grades
ASTM A331	Steel Bars, Alloy, Cold-Finished
ASTM A36: Carbon Structural Steel	
ASTM A479	Stainless Steel Bars and Shapes for Use in Boilers and Other Pressure Vessels
ASTM A500	Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
ASTM A511	Seamless Stainless Steel Mechanical Tube
ASTM A513	Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tube (ERW-DOM)
ASTM A519	Seamless Carbon and Alloy Steel Mechanical Tubing
ASTM A554	Welded Stainless Steel Mechanical Tube
ASTM A564	Hot-Rolled and Cold-Finished Age-Hardening Stainless Steel Bars and Shapes
ASTM A569 - Old	Supceeded by ASTM A1011
ASTM A580	Stainless Steel Wire
ASTM A582	Free Machining Stainless Steel Bars
ASTM A615	Deformed and Plain Billet-Steel Bars for Concrete Reinforcement
ASTM A666	Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
ASTM A681	Tool Steels Alloy
ASTM A686	Tool Steel Carbon
ASTM B133	Replaced by B187
ASTM B134	Brass Wire
ASTM B152	Copper Sheet, Strip, Plate, and Rolled Bar

Specification	Description
ASTM B16	Free Cutting Brass Rod, Bar and Shapes for Use in Screw Machines
ASTM B164	Nickel-Copper Alloy Rod, Bar and Wire
ASTM B166	Nickel-Chromium-Iron Alloys (UNS N06600, N06601, N06603, N06690, N06693, N06025, and N06045) and Nickel Chromium-Cobalt-Molybdenum Alloy (UNS N06617) Rod, Bar, and Wire
ASTM B187	Copper, Bus Bar, Rod, and Shapes and General Purpose Rod, Bar, and Shapes
ASTM B19	Cartridge Brass Sheet, Strip, Plate, Bar, and Disks (Blanks)
ASTM B209	Aluminum and Aluminum-Alloy Sheet and Plate
ASTM B21	Naval Brass, Rod, Bar, and Shapes
ASTM B210	Aluminum and Aluminum-Alloy Drawn Seamless Tube
ASTM B211	Aluminum and Aluminum-Alloy Bar, Rod, and Wire
ASTM B221	Extruded Aluminum Alloy Tubes for General Purpose Applications
ASTM B3	Soft or Annealed Copper Wire
ASTM B241	Seamless Extruded Aluminum Alloy Pipe and Tube for General Purpose and Pressure Applications
ASTM B3	Soft Annealed Copper Wire
ASTM B308	Aluminum-Alloy 6061-T6 Standard Structural Profiles
ASTM B36	Brass Plate, Sheet, Strip, and Rolled Bar
ASTM B373	Aluminum Foil for Capacitors
ASTM B863	Titanium and Titanium Alloy Wire
ASTM D1710	Extruded and Compression Molded Polytetrafluoroethylene (PTFE) Rod and Heavy-Walled Tubing
ASTM D4020	Ultra-High-Molecular-Weight Polyethylene Molding and Extrusions Materials
ASTM D4066	Classifications System for Nylon Injection and Extrusion Materials (PA)
ASTM D4181	Acetal (POM) Molding and Extrusion Materials
ASTM D5989	Extruded and Monomer Cast Shapes Made from Nylon (PA)
ASTM D6100	Extruded, Compression Molded and Injection Molded Acetal Shapes (POM)
MIL-S-5059	Steel, Corrosion Resistant (18-8) Plate, Sheet and Strip
FDA CFR21	Food and Drug Administration Code of Federal Regulations Title 21
QQ-A-1876	Aluminum Foil
QQ-A-2008	Aluminum Alloy 6061 Bar, Rod, Shapes, Tube and Wire, Extruded
QQ-A-2009	Aluminum Alloy 6063 Bar, Rod, Shapes, Tube and Wire, Extruded
QQ-A-2256	Aluminum Alloy 2024 Bar, Rod, and Wire; Rolled, Drawn or Cold Finished
QQ-A-25011	Aluminum Alloy 6061 Plate and Sheet
QQ-A-2504	Aluminum Alloy 2024 Plate and Sheet
QQ-S-698	(Shim Stock) Steel, Sheet and Strip, Low Carbon
WW-T-700/6	Tube, Aluminum, Alloy, Drawn, Seamless, 6061
UNS 26000	C260 Cartridge Brass