

PREFACE

A growing marketplace and a combined need of ferrous and non-ferrous metals led to the founding of ACCRO-MET, Inc. in 1988. ACCRO-MET, Inc., a small, women-owned company, is looking to serve all industries such as shipbuilders, aerospace, gun manufacturing, nuclear and government contractors as well as the commercial marketplace.

Over the years, ACCRO-MET, Inc. has increased its inventory of special alloys, tempers, sizes and gauges to meet the growing demand of our customers. Our company's growth continues to surpass the ever increasing goals we set for ourselves.

Every item sold by ACCRO-MET, Inc. has complete traceability back to the mills. We believe in this to meet the highly critical applications our customers put before us. Quality control come first. All material leaving our warehouse are carefully checked for correct size, markings, tolerances and visible damage before leaving our facility. Our warehouse staff carefully inspects each shipment to see that it will be protected while in transit. In doing this we hope that when materials arrive at our customers' doors, it can be inspected and processed quickly without down time for damages. ACCRO-MET, Inc. will continue to grow with the attitude that we will strive to serve the ever-evolving needs of our customers. We would like to say thank you for giving us the opportunity to serve your metal requirements.



ACCRO-MET

The Company... a small, woman-owned business serving the metal industry.

Serving customers nationwide, we are a growing, dynamic metal distributorship dedicated to fast, courteous service, competitive pricing and quality materials.

Our warehouse staff maintains a wide variety of materials in inventory to respond quickly and efficiently to your requirements.

A partial list includes:

STAINLESS STEEL • ALLOY STEEL • CARBON STEEL
TOOL STEEL • TITANIUM • ALUMINUM
BRASS • COPPER • HI-TEMP ALLOYS

Most materials are offered in the following forms to best serve our customer's needs:

SHEETS • BARS • FLATS • ROUNDS • HEX'S
SQUARES • ANGLE • TUBING • PLATE
FLANGES • COILS • CHANNELS • PIPE

as well as

FORGINGS • RINGS • SQUARES and DISCS

made to your specifications.

We are thoroughly familiar with, and will certify to the following:

ASTM • ASME • AMS • MIL • QQ & DOD specs
BOEING • LOCKHEED • GENERAL ELECTRIC

Our philosophy is simple - large order or small, all are appreciated and treated courteously, economically and carefully. We would be happy to quote on your metal requirements and appreciate your consideration on your next opportunity.

For your next metal need:
Call Toll-Free:

800-543-4755

or FAX

704-283-2112

In New England
Toll-Free:

800-543-4756

or FAX

860-844-0180

Webpage: <http://www.accromet.com>

*COAST TO COAST SERVICE**



MATERIALS STOCKED

STAINLESS

PH-13-8-MO	AMS-5629, STM-05-602, CAP ASTM-A-564 Grade XM13, AMS-2300, DMS 2100, STO-160LB0013 HMS-6-1105	316 L 316/316-L Prec. Grd.	QQS-763, AMS-5653, ASTM-A-276, ASTM-A-479, ASME-SA-479 Same specs as regular 316/316-L
15-5 PH	AMS-5659, AMS-2300, CAP ASTM-A-564 Grade XM-12	316/315-L Vac. Melt 317	Same specs as regular 316/316-L QQS-763, ASTM-A-276
15-7	AMS 5657	317 L	QQS-763
17-4 PH	AMS-5643, AMS-2303, MBO-160-003 Exc. Sonic, LBO-160-133, CAP ASTM-A-564 Grade 630	317 LM 321	ASTM-A-276, ASTM-A-479 QQS-763, AMS-5645, ASTM-A-276, ASTM-A-193, ASTM-A-479,
17-4 PH "H-1150"	AMS-5643, Chems Only, ASTM-A-564 Cond H1150	330	ASME-SA-479, ASTM-A-320 AMS-5716
17-4 PH Prec. Grd.	Sames Specs as reg. 17-4	347	QQS-763, AMS-5646, ASTM-A-276,
17-7 PH	AMS-5644, ASTM-A-564 Type 631		ASTM-A-193, ASTM-A-479, ASME-SA-479, ASTM-A-320
302	ASME-SA-479, MIL-S-7720, QQS-763, ASTM-A-276, ASTM-A-479	AM-355	AMS-5743, ASTM-A-564 Type 634
302 Cond. "B"	MIL-S-7720, AMS-5637, CHEMS ONLY, QQS-763	403 410	ASTM-A-276, ASTM-A-479 QQS-763, AMS-5613, AMS-2303,
302 Prec. Grd.	MIL-S-7720, QQS-763		AMS-5612, ASTM-A-276, ASTM-A-479,
304	QQS-763, AMS-5639, ASTM-A-276 ASTM-A-479, ASME-SA-479 ASTM-A-193, ASTM-A-320	416	ASME-SA-479 QQS-763C, QQS-764, AMS-5610 MIL-W-52263, ASTM-A-582
304 Cond. "B"	QQS-763, ASTM-A-276 ASTM-A-193 GRD. B8 CL 2	416 Prec. Grd. 416 HT R.C. 26/32	QQS-763C, AMS-5610, MIL-W-52263 QQS-763C Cond. H. QQS-764 Cond. T,
304 Prec. Grd.	QQS-763, AMS-5639, ASTM-A-193, ASTM-A-320	418 (Greek Ascoloy)	ASTM-A-582 Cond. T, EMS-537A AMS-5616
304 L	QQS-763, AMS-5647, ASTM-A-276, DMS-2050, ASTM-A-479, ASME-SA-479	420	QQS-763, AMS-5621, ASTM-A-276,
304 L. Vac. Melt.	QQS-763, AMS-5647, ASTM-A-276. ASTM-A-479, MBO-160-037 Exc. Sonic & Tranv., DMS-2050	420F 422 430	AMS-5620 Type 2, ASTM-A-582 ASTM-A-565 (Grade 616), DOD-F-24669/7 QQS-763, AMS-5627, ASTM-A-276, ASTM-A-479
303 Sul	MIL-S-7720, MIL-W-52263, AMS-5640 Type 1, QQS-763, QQS-764, ASTM-A-582, ASTM-A-320	430 F	QQS-763C, QQS-764C, MIL-W-276 ASTM-A-582
303 Sul Cond. "B"	MIL-S-7720, MIL-W-52263, QQS-764 ASTM-A-320	431	MIL-S-18732, QQS-763, DMS-1565 ASTM-A-582
303 Sul Prec. Grd.	MIL-S-7729, MIL-W-55263, AMS-5640 Type 1, QQS-763C, ASTM-A-582, ASTM-A-320	440 A 440 C	QQS-763, AMS-5631, ASTM-A-276 QQS-763, AMS-5630, ASTM-A-276
303 Sel	MIL-S-7720, MIL-W-55263, AMS-5640 Type 2, AMS-5641, QQS-763C, QQS-764, ASTM-A-582, ASTM-A-320	440 C Prec. Grd. 440 C "Cutlery Supply"	QQS-763, AMS-5630, ASTM-A-276 QQS-763, AMS-5630, ASTM-A-276
303 Sel Cond. "B"	MIL-S-7729, MIL-W-55263, AMS-5640 GR B 8F CL2, AMS-5738, QQS-763C, QQS-764	440 C Vac. Melt.	QQS-763, AMS-5630, AMS-5618 (Except Phos. Content), ASTM-A-276, RHO-160-64, BEMS-25003D, AMS-5880
303 Sel Prec. Grd.	MIL-S-7720, MIL-W-52263, AMS-5640 Type 2, AMS-5641, QQS-763C, ASTM-A-320	440 F Se 446	QQS-764B, ASTM-A-582, AMS-5632, Type 2 QQS-763
309	QQS-763, AMS-5650, ASTM-A-276	Custom 455	AMS-5617
310	QQS-763, AMS-5651, ASTM-A-276, ASTM-A-479, ASME-SA-479	'Nitronic 40 'Nitronic 50	AMS-5656, ASTM-A-276 AMS-5764A, ASME-SA-479, ASTM-A-479, ASTM-A-193, GR-B8R, ASTM-A-276
316	MIL-S-7720, AMS-5648, QQS-763, ASTM-A-193, ASTM-A-276, ASTM-A-479, ASME-SA-479, ASTM-A-320	'Nitronic 60	ASTM-A-479, ASTM-A-276, (S21800) AMS-5848, ASTM-A-193 GR-B85
316 Cond. "B" (.03 Max. C)	MIL-S-7720A, QQS-763D, ASTM-A-273, ASTM-A-193, GRD. B8M CL-2	Alloy 20	ASTM-B-473

MATERIALS STOCKED

SUPER ALLOYS - ELECTRICAL STEEL

A-286 Age Hard (1650°)-Sol. Treated	AMS-5737, ASTM-A-638, Grade 660 Type 1, STM-A-453, Grade 660 CL.A	718 Cold Red Vac. Melt. (Cap. 220 KSI)	Chem AMS-5662, Cap. of C50-TF13
A-286 Age Hard (1800°)-Sol. Treated	AMS-5732 (Supersedes 5735), ASTM-A-453 Grade 660 CL.B, ASTM-A-638 Grade 660 Type w	X-750 L-605 Vac. Melt Maraging "300"	AMS-5667, B50YP44B-1-Rev. 5 AMS-5759, B50T26-S7 AMS-6514, MBO-160-006, HMS6-1404 Type 2, LBO-160-164, MIL-S-46850 Type 4 Exc. Para. 3.5.3.
A286 Sol. Treated A286 15% Cold Red. A-286 (Cap. 210 KSI) Cold Reduced	AMS-5731 (Supersedes 5736) SPS-M-118 Capable of AMS-5853 SPS-M-250, AMS 5726 CHEMS ONLY	*Waspaloy *Waspaloy *Cold Reduced"	AMS-5708 AMS-5708 Chems Only, SPS-M 175 Except Hardness
NICKEL "200" NICKEL "400"	ASTM-B-160, ASME-B-160 AMS-4675 Chems Only, QQN-281 CL A, ASTM-B-164-81T	*MP 35N *MP 159	AMS-5844, SPS M-646 AMS-5842
NICKEL "405"	AMS-4674, QQN-281 CL B, ASTM-B-164, ASME-B-164 CL.B, UNS-N-04405	Hastelloy Hastelloy	AMS-5754 AMS-5750, ASME-SB-574 ASTM-B-574
NICKEL "K-500" NICKEL "K-500" AGED	QQN-286 (FORM 1 ANN UNAGED) QQN-286-E (Form 2 SOL ANN & AGED)	*INVAR 36 "FM"	Chems. Meet MIL-S-16598
NICKEL "600"	AMS-5665, ASTM-B-166, MIL-N-6710	*Kovar	ASTM-F-15, AMS-7727, MIL-I-23011 CL1
NICKEL "625" 718 Vac. Melt	AMS-5666, ASTM-B-446 Grade 1 AMS-5662, B50-TF15A-S, Cap. of C50-TF-13, B50-T-69A, SPS-M-275, ASTM-B-637	*4750	AMS-7718 Exc. Hardness, Cap. of MIL-N-14411Comp. 3, ABO-170 014

AIRCRAFT ALLOYS

E-17-22A E-4130	AMS-6304, KAYNAR MS-103 MIL-S-6758, AMS-6370, AMS-2301, AMS-6348	E-6150 Vac. Melt. E-8740 E-9310 N&T	MIL-S-8503, AMS-6448, AMS-2300 MIL-S-6049, AMS-6322, AMS-2301 MIL-S-7393C, AMS-6260, AMS-2301 Aires, HT 5042
E-4130 H.T.R.C. 26/32 E-4140	MIL-S-6758, AMS-2301 MIL-S-5626, AMS-6382, AMS-2301 AMS-6349	E-9310 N&T Vac. Melt.	MIL-S-7393C, AMS-6265, AMS-6260, AMS-2300, Aires, HT-5042 BPS 299-947-032, EMS 56280 MIL-S-83030 Comp. 3, AMS 6267
E-4330 Mod, N&T	MIL S-8699, AMS-6427, AMS-2301, BMS-7-27	E-52100 Ann E-52100 Vac. Melt.	MIL-S-7420 AMS-6440 AMS-2301 MIL-S-7420 AMS-6444 AMS6440 AMS-2300
E-4330 Mod. Vac. Melt, N&T	MIL-S-8699, AMS-6411, AMS-6427, BMS-7-27, AMS-2300, BMS-7-122, EMS 96242, GM-1010, CE-0906, FMS-1012	D6AC Vac. Melt.	MIL-S-8949, AMS-6431, Gen. Dyn. FMS-1011-C, LCM-05-2190, AMS-2300, STM-05-500, GM-1013 AMS-6487, EMS 642, AMS-2300, AMS 6488
E 4340 N&T	MIL-S-5000, AMS-6415, AMS-2301, BMS 7-28, DMS-1555, AMS-6409	H-11 Vac. Melt.	MIL-S-7108, AMS-6418, AMS-2301, DMS-1841, GRB
E 4340 Vac. Melt. N&T	MIL-S-8844 CL 1, MIL-S-5000, AMS-6415, AMS-2300, AMS-6414 EMS-641, DMS-1555, BMS 7-28 BPS 299-947-055	HY-Tuf HY-Tuf Vac. Melt.	AMS 6418, MIL-S-7108, DMS 1841 GRA, AMS 2300 MILS-6709A, AMS-6470 Exc. Hardness, AMS-6472, AMS-2301
E-4840 Mod. Vac. Melt N&T "300M"	MIL-S-8844-CL 3, MIL-S-83135 AMS-6417, AMS-6419, AMS-2300, CE-0896, GM-1012, BMS 7-26 CL-1, DMS-1935, LC05-1190	Nitriding BHN 241-285	MIL-S-6709A, AMS-6471,135 Modified AMS-2300
E-4620	MIL-S-7493, AMS-6294, AMS-2301	Nitriding Vac. Melt.	AMS 6526, BMS-7-182B, STO-160LB 0012, MMS-2102 Exc. Fracture Test
E-6150	MIL-S-8503, AMS-6448, AMS-2301	9-4-30 Vac. Melt	

CARBON STEELS

*C-1018 *C-1018 DG&P *C-1040 *C-1095	*C-1045 TG&P *C-1117 (Chemicals Meet QQS-633 A - QQS-634 1010 thru 1050 - QQS-637 1109 thru 1215)	*C1137 *C-1144 EMS-630A (Chemicals Meet ASTM-A-108 1010 thru 1215)	*C12L14 *C-1215	*Stressproof EMS-630A *Ledloy A MIL-S-13433A1	ASTM-A-311 CLB EMS-648B-GR.1
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BRASS, COPPER, BRONZE

COLD FINISH, ALLOY 360, 1/2 HARD, FREE CUTTING, BRASS BAR
ALLOY 260, 464, 655, 110, 660, 101, 544, 510, 642

STAINLESS STEEL

301 ANN	301	410
301 1/4	304/304L	15-5
301 1/2	316/316L	17-4
301 FH	321	17-7
21-6-9	347	13-8

STRIP, SHEET AND PLATE. .002"-6.50" THK BAR
AND WIRE .051"-18" ROUND ALSO TUBING, PIPE AND SHAPES.

NICKEL

A-286	600	800
ALLOY20	601	825
200	617	L-605
400	625	188
405	718	
500	HX	

STRIP, SHEET AND PLATE. .002"-4.00" THK
ROUND BAR AND WIRE .051"-12.0" ROUND
ALSO TUBING, PIPE, FITTINGS AND FLANGES.

SPECIAL SERVICE:

- * REMNANTS FOR SMALL ORDERS
- * LEVELING COILS FOR ODD LENGTHS
- * RE-ROLLING FOR CLOSE THICKNESS NEEDS
- * CERTIFICATIONS WITH SHIPMENT
- * PRECISION GROUND AND CUT BARS

ALUMINUM

PLATE

6061 to 18" thk • 2024 to 6" thk • 7075 to 8" thk • Cast to 6" thk

Wide Plate 96" x 240" • Saws - Precision Cutting to 18" thk

Plasma Cutting All Shapes

ROD & BAR

*Precision Ground Also Available

2011 • 2014 • 2017 • 6061 • 6063

2024 -T351. T3511

7050, 7075-T651, T6511, T7351, T73511

Rounds to 16 dia. • Rectangles to 6 x 8 • Squares to 9"

TUBE

6061-T6511 EXTRUDED TO 12 O.D. • 6061-T6 DRAWN TO 4 O.D.

STRUCTURAL

Angles, Channels and I-Beams - Aluminum Association/American

Standard to 12"

PRECISION GROUND FLAT STOCK

AISI 0-1 OIL HARDENING

AISI A-2 AIR HARDENING

AISI 1018 LOW CARBON

AISI D-2 AIR HARDENING

DRILL ROD

AISI 0-1 Oil Hardening

AISI 0-1 Metric Oil Hardening

AISI W-1 Water Hardening

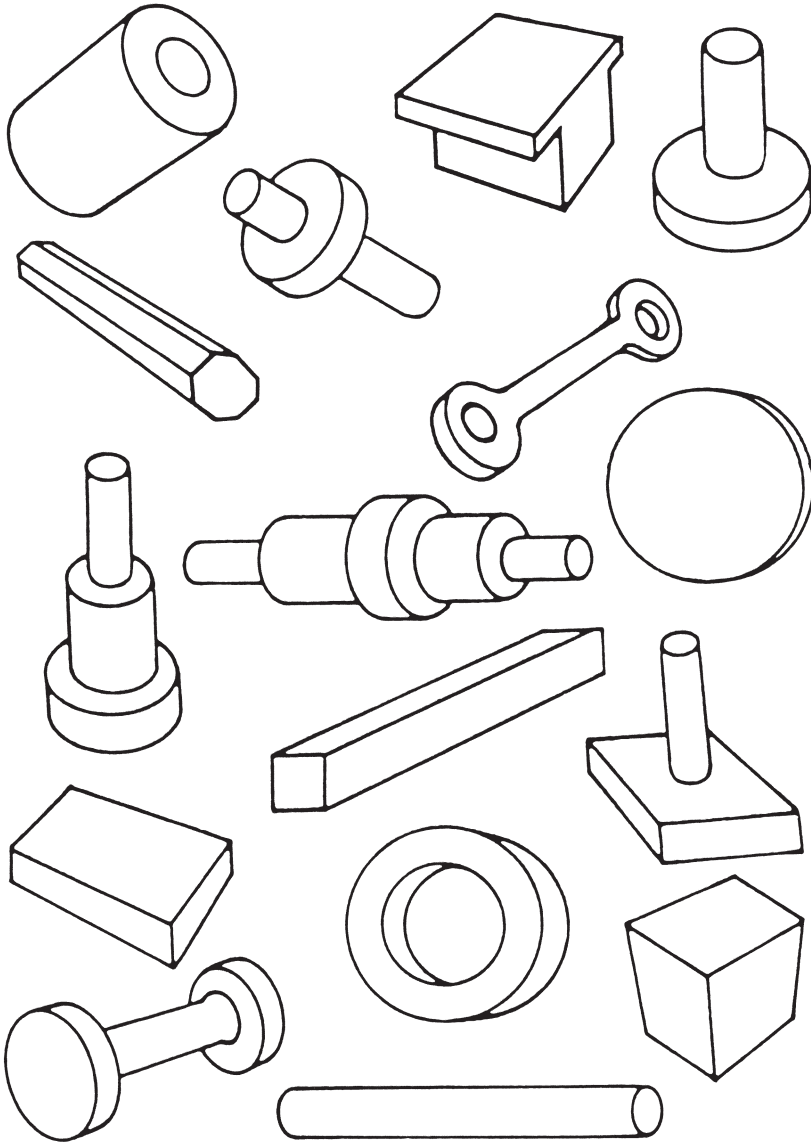
AISI A-2 Air Hardening

AISI S-7 Air Hardening Shock Steel

AISI D-2 Air Hardening High Chrome

CUSTOM FORGINGS:

MANY SIZES - SHAPES - MATERIAL
LARGE OR SMALL ORDERS



FORGINGS OFFER DURABILITY

The greatest qualities of steel are its tensile strength and long life through resistance to wear and corrosion. It is for these reasons that forged steel is the finest form of basic fabrication for a steel product.

FORGINGS OFFER VERSATILITY

Forgings are important in meeting the various military and industry specifications and they may also provide a maximum cost saving alternative to other material sources.

Accro-Met offers quality material, adherence to close designated tolerances, unique adaptability to size and shape and total service in virtually all grades of steel, alloy, copper and aluminum.

CALL ACCRO-MET FOR STAMPED • FORGED • ROLLED • MACHINED or ROUGH

FLANGES

Carbon Steel • Stainless • Monel • Aluminum • Nickel • Titanium
Brass • Inconel • Hi-Temp Alloys • Bronze

Military Specification

Titanium and titanium alloy, sheet, strip and plate
Mil-T-9046 H

Type I Commercially Pure Titanium

Composition A — Unalloyed (40 KSI-YS)
 Composition B — Unalloyed (70 KSI-YS)
 Composition C — Unalloyed (55 KSI-YS)

Type II Alpha Titanium Alloy

Composition A — 5Al - 2.5 Sn
 Composition B — 5Al - 2.5 Sn ELI
 Composition F — 8Al - 1Mo - 1V
 Composition G — 6 Al - 2CG - 1Ta -0.8Mo

Type III Alpha Beta Titanium Alloy

Composition C — 6Al - 4V
 Composition D — 6Al - 4V ELI
 Composition E — 6Al - 6V- 2Sn
 Composition G — 6Al - 2Sn - 4Zr - 2Mo
 Composition H — 6 Al - 4VSPL

Type IV Beta Titanium Alloys

A 13V - 11Cr - 3Al
 B 11.5Mo - 6Zr - 4.5Sn
 C 3Al - 8V - 6Cr - 4Mo - 4Zr
 D 8Mo - 8V - 2Fe - 3Al

Military Specifications

Titanium and Titanium Alloy Bars and Reforge Stock
 A Cross Reference by Revision and Composition Classifications

MIL-T-9047D Rev June 1967	MIL-T-9047E Rev June 1970 MIL-T009047F Rev March 1971 *MIL-T83142A Rev Dec 1967	MIL-T-9047G Rev Dec 1978
Type I Commercially Pure Ti Comp. A — Unalloyed	Alpha Alloys Comp. 1 — Unalloyed	Commercially Pure Ti CP-B
Type II Alpha Titanium Alloys Comp. A — 5Al - 2.5Sn Comp. B — 5Al - 2.5Sn (ELI) Comp. C — 5Al - 5Zr - 5Sn Comp. D — 8Al - 1Mo - 1V	Alpha Alloys Comp. 2 — 5Al-2.5Sn Comp. 3 — 5Al-2.5Sn (ELI) 2/ Comp. 5 — 8Al-1Mo-1V	Alpha Titanium Alloys 3Al-2.5V 5Al-2.5Sn 5Al-2.5Sn (ELI) 8Al-1Mo-1V 6Al-2Cb-1Ta-0.8Mo
Type III Alpha-Beta Ti Alloy Comp. A — 6Al - 4V Comp. B — 6Al - 4V(ELI) Comp. C — 6Al - 6V - 2Sn Comp. D — 7Al - 4Mo Comp. E — 4Al - 4Mn Comp. F—5Al-1.5Fe-1.5Cr-1.5Mo Comp. G — 11Sn - 5Zr -2Al -1Mo Comp. H — 4Al -3Mo -1V Comp. I — 6Al -2Sn - 4Zr - 2Mo	Alpha-Beta Alloys Comp. 6 — 6Al-4V Comp. 7 — 6Al-4v(ELI) Comp. 8 — 6Al-6V-2Sn Comp. 9 — 7Al-4Mo Comp. 10 — 11Sm-5Zr-2Al-1Mo Comp. 11 — 6Al-2Sn-4Zr-2Mo Comp. 14 — 6Al-2Sn-4Zr-6Mo	Alpha-Beta Ti Alloys 6Al-4V 6Al-4V (ELI) 6Al-6V-2Sn 7Al-4Mo 6Al-2Sn-4Zr-2Mo 6Al-2Sn-4Zr-6Mo
Type IV Beta Ti Alloys Comp. A — 13V - 11Cr -3Al	Beta Alloys Comp. 12 — 13V-11Cr-3Al Comp. 13 — 11.5Mo-6Zr-4.5Sn	Beta Titanium Alloys 13V-11Cr-3Al 11/5Mo-6Zr-4.5Sn 8Mo-8V-2Fe-3Al 3Al-8V-6Cr-4Mo-4Zr

*Titanium and titanium alloy forgings

Applicable Specifications

Mil-I-6866 Dye penetrant inspection
 Mil-I-8959 Ultrasonic inspection
 Mil-H-81200 Heat treatment of titanium and titanium alloys
 AMS 2631 Ultrasonic inspection

AMS4921 GRADE 4 BARS
 AMS4901 GRADE 4 PLATE & SHEET
 AMS4902 GRADE 2 PLATE & SHEET
 ASTM B348 GRADE 4 BARS
 ASTM B265 GRADE 4 PLATE & SHEET
 ASTM B348 GRADE 2 BARS
 ASTM B265 GRADE 2 PLATE & SHEET

TITANIUM

MILITARY SPECIFICATION MIL-T-9046 J

Alpha -beta titanium alloys (AB)

<u>Code designation</u>	<u>Composition</u>
AB-1	6Al-4V
AB-2	6Al-4V (ELI)
AB-3	6Al-6V-2Sn
AB-4	6Al-2Sn-4Zr-2Mo
AB-5	3Al-2.5V
AB-6	8Mn

Commercially pure titanium (CP) Yield Strength

<u>Code designation</u>	<u>minimum, ksi 1/</u>
CP-1 (GR#4)	70.0
CP-2 (GR#3)	55.0
CP-3 (GR#2)	40.0
CP-4 (GR#1)	25.0

Beta titanium alloys (B)

<u>Code designation</u>	<u>Composition</u>
B-1	13V-11Cr-3Al
B-2	11.5Mo-6Zr-4.5Sn
B-3	3Al-8V-6Cr-4Mo-4Zr
B-4	8Mo-8V-2Fe-3Al

Alpha titanium alloys (A)

<u>Code designation</u>	<u>Composition</u>
A-1	5Al-2.5Sn
A-2	5Al-2.5Sn (ELI) 2/
A-3	6Al-2Cb-1Ta-0.8Mo
A-4	8Al-1Mo-1V

ASTM Designation	Commercially Pure Titanium				Titanium Alloys						
	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 9	Grade 10	Grade 11	Grade 12
	25KSI-YS	40KSI-YS	55KSI-YS	70KSI-YS	6AL-4V	5AL-25SN	TI-PD	3AL-2.5V	1.5Mo-6Zr 4.5Sn	Ti-Pd	.3Mo-8Ni
B265	X	X	X	X	X	X	X		X	X	X
B337	X	X	X				X		X	X	X
B338	X	X	X				X	X	X	X	X
B348	X	X	X	X	X	X	X	X	X	X	X
B381 ^A	X	X	X	X	X	X	X			X	X

A - When forgings are required the Symbol shall be F rather than grade.

Scope

- ASTM B-265 Titanium and titanium alloy strip, sheet and plate.
- ASTM B-299 Titanium sponge.
- ASTM B-337 Seamless and welded titanium and titanium alloy pipe.
- ASTM B-338 Seamless and welded titanium and titanium alloy tubes for condensers and heat exchangers.
- ASTM B-348 Titanium and titanium bar and billet.
- ASTM B-363 Seamless and welded unalloyed titanium welded fittings.
- ASTM B-367 Titanium and titanium alloy casting.
- ASTM B-381 Titanium and titanium alloy forgings.
- ASTM F-67 Unalloyed titanium for surgical implants.
- ASTM F-136 Titanium 6Al-4V ELI alloy for use as surgical implant material.

WEIGHT TABLE

TITANIUM ROUNDS and SQUARES

Tables cover all grades based on density of .163 lbs/cu. in.

Weights shown are calculated on the basis of .163 pounds per cubic inch and based on a bar of exact dimensions. Titanium bar stock, especially larger sizes, run over-size. When estimating costs it is well to figure 6% heavier using .173 pounds per cubic inch.

Size Inches	Pounds Per Lineal Foot Rounds	Squares
5/16	0.150	0.192
3/8	0.216	0.276
7/16	0.294	0.375
1/2	0.384	0.489
9/16	0.487	0.619
5/8	0.600	0.764
11/16	0.726	0.924
3/4	0.864	1.100
13/16	1.015	1.291
7/8	1.177	1.497
15/16	1.351	1.719
1	1.536	1.956
1 1/16	1.734	2.207
1 1/8	1.944	2.476
1 3/16	2.166	2.759
1 1/4	2.400	3.056
1 5/16	2.645	3.369
1 3/8	2.904	3.699
1 7/16	3.175	4.042
1 1/2	3.456	4.401
1 9/16	3.750	4.775
1 5/8	4.056	5.165
1 11/16	4.374	5.570
1 3/4	4.705	5.990
1 13/16	5.047	6.425
1 7/8	5.400	6.876
1 15/16	5.766	7.342
2	6.144	7.824
2 1/16	6.534	8.320
2 1/8	6.937	8.832
2 3/16	7.350	9.359
2 1/4	7.777	9.902
2 5/16	8.215	10.460
2 3/8	8.665	11.034
2 7/16	9.128	11.621
2 1/2	9.601	12.225
2 9/16	10.087	12.844
2 5/8	10.585	13.478

Size Inches	Pounds Per Lineal Foot Rounds	Squares
2 1/16	11.096	14.127
2 3/4	11.618	14.792
2 13/16	12.152	15.471
2 7/8	12.698	16.167
2 15/16	13.255	16.877
3	13.826	17.604
3 1/16	14.408	18.345
3 1/8	15.002	19.101
3 3/16	15.608	19.873
3 1/4	16.226	20.660
3 5/16	16.857	21.462
3 3/8	17.499	22.280
3 7/16	18.153	23.113
3 1/2	18.819	23.961
3 9/16	19.498	24.824
3 5/8	20.188	25.703
3 11/16	20.890	26.596
3 3/4	21.604	27.506
3 13/16	22.330	28.430
3 7/8	23.067	29.370
3 15/16	23.817	30.324
4	24.579	31.296
4 1/8	26.140	33.283
4 1/4	27.748	35.330
4 3/8	29.404	37.440
4 1/2	31.108	39.609
4 9/16	31.974	40.716
4 5/8	32.861	41.840
4 3/4	34.662	44.132
4 7/8	36.509	46.485
5	38.406	48.900
5 1/8	40.350	51.376
5 1/4	42.343	53.912
5 3/8	44.384	56.510
5 1/2	46.471	59.168
5 5/8	48.607	61.888
5 3/4	50.791	64.670
5 7/8	53.025	67.521

Size Inches	Pounds Per Lineal Foot Rounds	Squares
6	55.304	70.416
6 1/8	57.634	73.380
6 1/4	60.010	76.406
6 3/8	62.434	79.493
6 1/2	64.906	82.641
6 5/8	67.427	85.850
6 3/4	69.995	89.120
6 7/8	72.611	92.451
7	75.275	95.844
7 1/8	77.988	99.298
7 1/4	80.748	102.812
7 3/8	83.556	106.388
7 1/2	86.412	110.025
7 5/8	89.317	113.723
7 3/4	92.269	117.482
7 7/8	95.271	121.303
8	98.318	125.184
8 1/8	101.360	127.150
8 1/4	104.560	133.130
8 3/8	107.736	137.194
8 1/2	110.993	141.321
8 5/8	114.264	145.509
8 3/4	117.618	149.756
8 7/8	120.984	154.065
9	124.435	158.436
9 1/4	138.645	176.529
9 1/2	138.645	176.529
10	153.622	196.600
10 1/2	169.370	215.649
11	185.885	236.676
11 1/2	203.150	258.681
12	221.224	281.664
12 1/2	240.021	305.625
13	259.620	330.564
13 1/2	279.962	356.481
14	301.087	383.376
14 1/2	322.994	411.249
15	346.645	440.100
15 1/2	369.078	469.929

To find the weight of Titanium, multiply the weight of plain steel by 0.5796.



**THEORETICAL WEIGHTS - HEXAGONS
CARBON, ALLOY, COPPER, BRASS,
STAINLESS STEEL**



Size in Estimated Weight, Lbs.				Size in Estimated Weight, Lbs.				Size in Estimated Weight, Lbs.			
Inches	Per Inch	Per Foot	12Ft. Bar	Inches	Per Inch	Per Foot	12Ft. Bar	Inches	Per inch	Per Foot	12Ft. Bar
1/8	.004	.046	.55	13/16	.16	1.944	23.33	1-13/16	.81	9.673	116.1
5/32	.006	.072	.864	7/8	.19	2.254	27.05	7/8	.86	10.35	124.2
3/16	.009	.104	1.25	15/16	.22	2.588	31.06				
7/32	.012	.140	1.68					2	.98	11.78	141.4
1/4	.015	.184	2.21	1	.25	2.945	35.34	1/8	1.11	13.30	159.6
9/32	.019	.232	2.79	1/16	.28	3.324	39.89	3/16	1.17	14.09	169.1
5/16	.02	.288	3.46	1/8	.31	3.727	44.72	1/4	1.24	14.91	178.9
11/32	.03	.348	4.14	3/16	.35	4.152	49.82	3/8	1.38	16.61	199.3
3/8	.04	.414	4.97	1/4	.38	4.601	55.21	1/2	1.53	18.40	220.8
13/32	.04	.4857	5.828	5/16	.42	5.072	60.86	5/8	1.69	20.29	243.5
7/16	.05	.564	6.77	3/8	.46	5.567	66.80	3/4	1.86	22.27	267.2
1/2	.06	.736	8.83	7/16	.51	6.085	73.02	7/8	2.03	24.33	292.0
9/16	.08	.932	11.18	1/2	.55	6.625	79.50				
5/8	.10	1.150	13.80	5/8	.65	7.775	93.30	3	2.21	26.50	318.0
11/16	.12	1.392	16.70	11/16	.70	8.385	100.60	1/2	3.01	36.07	432.8
3/4	.14	1.656	19.87	3/4	.75	9.019	108.23	4	3.93	47.12	565.4



**THEORETICAL WEIGHTS - SQUARES
CARBON, ALLOY, COPPER, BRASS,
STAINLESS STEEL**



Size in Estimated Weight, Lbs.				Size in Estimated Weight, Lbs.				Size in Estimated Weight, Lbs.			
Inches	Per Inch	Per Foot	12Ft. Bar	Inches	Per Inch	Per Foot	12Ft. Bar	Inches	Per inch	Per Foot	12Ft. Bar
1/8	.004	.053	.636	1	.28	3.400	40.80	2-3/8	1.60	19.18	230.4
5/32	.006	.083	.996	1/16	.32	3.840	46.06	1/2	1.77	21.25	255.0
3/16	.010	.120	1.436	1/8	.36	4.303	51.64	3/4	2.14	25.72	308.6
1/4	.012	.213	2.55	3/16	.40	4.795	57.54				
5/16	.03	.332	3.981	1/4	.44	5.313	63.76	3	2.55	30.6	367.2
3/8	.04	.478	5.736	5/16	.49	5.857	70.29	1/2	3.47	41.65	500.0
7/16	.05	.651	7.810	3/8	.54	6.428	77.14				
1/2	.07	.850	10.200	1/2	.64	7.650	91.80	4	4.53	54.4	652.8
9/16	.09	1.076	12.910	5/8	.75	8.980	107.74	1/2	5.74	68.85	826.2
5/8	.11	1.328	15.940	3/4	.87	10.410	124.95				
11/16	.12	1.607	19.29	7/8	1.00	11.950	143.44	5	7.08	85.0	1020.0
3/4	.16	1.913	22.960					1/2	8.58	102.9	1234.0
13/16	.19	2.245	26.940	2	1.13	13.600	163.20				
7/8	.22	2.603	31.240	1/8	1.28	13.353	184.24	6	10.2	122.4	1469.0
15/16	.25	2.988	35.856	1/4	1.43	17.21	206.6				

NOTE: Brass, add approximately 6% to weights shown.



**THEORETICAL WEIGHTS - ROUNDS
CARBON, ALLOY, COPPER, BRASS,
STAINLESS STEEL**



Size in Inches	Estimated Weight, Lbs.			Size in Inches	Estimated Weight, Lbs.			Size in Inches	Estimated Weight, Lbs.		
	Per Inch	Per Foot	12Ft. Bar		Per Inch	Per Foot	12Ft. Bar		Per Inch	Per Foot	12Ft. Bar
1/16	.001	.010	.12	.885	.174	2.091	25.09	3/8	2.54	30.42	365.0
5/64	.001	.016	.19	57/64	.177	2.118	25.42	7/16	2.64	31.55	378.6
3/32	.002	.023	.28	29/32	.183	2.193	26.32	1/2	2.73	32.71	392.5
7/64	.003	.032	.38	15/16	.196	2.347	28.16	3.520	2.76	33.082	396.99
1/8	.004	.042	.50	.9425	.196	2.372	28.46	3.530	2.77	33.273	399.25
.130	.004	.0451	.54	31/32	.209	2.506	30.07	5/8	2.93	35.09	421.1
9/64	.004	.053	.64	1	.22	2.670	32.04	11/16	3.03	36.31	435.7
5/32	.005	.065	.78	1.005	.22	2.696	32.38	3/4	3.14	37.55	450.6
11/64	.007	.079	.95	1.010	.23	2.732	32.67	3.770	3.16	37.948	455.39
3/16	.008	.094	1.13	1/64	.23	2.750	33.00	7/8	3.35	40.10	481.2
.1925	.008	.0989	1.186	1.020	.23	2.778	33.34	15/16	3.45	41.40	496.8
.1975	.009	.104	1.248	1/16	.25	3.014	36.17	4	3.56	42.73	512.6
13/64	.009	.110	1.32	3/32	.27	3.194	38.33	4.020	3.60	43.148	517.78
7/32	.011	.128	1.54	1/8	.28	3.379	40.55	4.030	3.61	43.363	520.36
15/64	.012	.147	1.76	1.135	.29	3.440	41.28	1/8	3.79	45.43	545.2
1/4	.014	.167	2.00	9/64	.29	3.470	41.64	1/4	4.02	48.23	578.7
.255	.014	.1736	2.083	1.145	.29	3.50	42.00	3/8	4.26	51.11	613.3
.260	.015	.1805	2.166	5/32	.30	3.570	42.84	7/16	4.39	52.58	630.9
17/64	.016	.188	2.256	3/16	.31	3.766	45.19	1/2	4.51	54.07	648.9
9/32	.018	.211	2.53	1/4	.35	4.173	50.08	4.530	4.57	54.795	657.49
19/64	.019	.235	2.82	1.260	.35	4.240	50.88	5/8	4.76	57.12	685.4
5/16	.022	.261	3.13	17/64	.36	4.276	51.31	3/4	5.03	60.25	723.0
.3175	.022	.269	3.228	1.275	.36	4.34	52.08	7/8	5.29	63.45	761.5
.3225	.023	.277	3.32	9/32	.37	4.384	52.60	15/16	5.42	65.10	781.2
21/64	.024	.287	3.44	5/16	.38	4.600	55.20	5	5.56	66.75	801.1
11/32	.026	.316	3.79	3/8	.42	5.049	60.59	1/8	5.84	70.13	841.6
23/64	.029	.345	4.14	1.385	.43	5.218	62.62	1/4	6.13	73.60	883.2
3/8	.031	.376	4.51	13/32	.44	5.279	63.35	3/8	6.43	77.15	925.7
.380	.032	.3855	4.62	7/16	.46	5.518	66.22	7/16	6.60	78.95	947.4
.385	.033	.395	4.74	1/2	.50	6.008	72.10	1/2	6.73	80.77	969.2
25/64	.034	.407	4.88	1.510	.52	6.21	74.52	5/8	7.04	84.48	1013.8
13/32	.037	.441	5.29	17/32	.52	6.261	75.13	3/4	7.36	88.29	1059.0
27/64	.039	.475	5.70	9/16	.54	6.520	78.24	15/16	7.84	94.14	1130.0
7/16	.043	.511	6.13	5/8	.59	7.051	84.61	6	8.01	96.12	115.5
.4425	.044	.5225	6.27	11/16	.64	7.604	91.25	1/8	8.35	100.2	1202.4
.4475	.045	.535	6.42	3/4	.68	8.178	98.14	1/4	8.71	104.3	1252.
29/64	.046	.548	6.576	1/770	.70	8.365	100.38	1/2	9.40	112.8	1353.8
15/32	.049	.587	7.04	13/16	.73	8.773	105.30	3/4	10.14	121.7	1460.
31/64	.052	.626	7.51	7/8	.78	9.388	112.70	7	10.90	130.8	1570.8
1/2	.056	.668	8.02	15/16	.84	10.02	120.20	1/4	11.70	140.4	1684.1
.505	.057	.680	8.16	2	.89	10.68	128.2	1/2	12.52	150.2	1802.2
.510	.058	.694	8.33	2.020	.91	10.896	130.75	3/4	13.36	160.4	1924.4
33/64	.059	.710	8.52	1/16	.95	11.36	136.3	8	14.24	170.9	2050.6
17/32	.063	.754	9.05	1/8	1.01	12.06	144.7	1/4	15.14	181.7	2180.7
9/16	.070	.845	10.14	3/16	1.07	12.78	153.4	1/2	16.08	192.9	2315.0
.5675	.072	.860	10.32	1/4	1.13	13.52	162.2	3/4	17.04	204.5	2453.1
.5725	.073	.875	10.50	2.270	1.15	13.76	165.12	9	18.02	216.3	2595.2
.5775	.074	.891	10.69	5/16	1.19	14.28	171.4	1/4	19.04	228.5	2741.4
37/64	.074	.892	10.70	3/8	1.26	15.06	180.7	1/2	20.08	241.0	2891.6
19/32	.078	.941	11.29	7/16	1.33	15.87	190.4	3/4	21.15	253.8	3045.8
5/8	.087	1.043	12.52	1/2	1.39	16.69	200.3	10	22.25	267.0	3204.0
.630	.088	1.06	12.72	2.520	1.41	16.957	203.48	1/2	24.53	294.4	3532.4
.635	.090	1.076	12.91	9/16	1.46	17.53	210.4	11	26.92	324.0	3876.8
.640	.091	1.093	13.12	5/8	1.54	18.40	220.8	1/2	29.43	354.0	4237.3
41/64	.092	1.096	13.15	11/16	1.61	19.29	231.5	12	32.04	384.48	4613.76
21/32	.096	1.150	13.80	3/4	1.69	20.20	242.4	1/2	34.77	417.2	5006.2
11/16	.105	1.262	15.14	2.770	1.71	20.489	245.87	13	37.60	451.23	5414.76
.6925	.107	1.280	15.37	13/16	1.76	21.12	253.4	1/2	40.55	487.0	5839.3
23/32	.115	1.379	16.55	7/8	1.84	22.07	264.8	14	43.61	523.32	6279.84
3/4	.125	1.502	18.02	15/16	1.92	23.04	276.5	15	50.06	601.0	7209.0
.755	.127	1.522	18.26	3	2.01	24.03	288.4	16	56.96	684.0	8202.2
.760	.128	1.54	18.48	3.020	2.03	24.354	292.25				
49/64	.131	1.565	18.78	1/16	2.09	25.05	300.6				
25/32	.136	1.630	19.56	1/8	2.18	26.08	312.9				
13/16	.147	1.763	21.16	3/16	2.27	27.13	325.6				
.8175	.149	1.784	21.42	1/4	2.36	28.21	338.5				
27/32	.158	1.901	22.81	3.270	2.38	28.551	342.61				
7/8	.170	2.044	24.53	5/16	2.45	29.30	351.6				
.880	.172	2.067	24.81								

• High Nickel grades, such as 600, 625, 718 and X-750, add approximately four per cent to weights shown
NOTE: Brass, add approximately 6% to weights shown.



**THEORETICAL WEIGHTS - FLATS
CARBON, ALLOY, COPPER, BRASS,
STAINLESS STEEL**



Size in Inches				Estimated Weight, Lbs.				Size in Inches				Estimated Weight, Lbs.				Size in Inches				Estimated Weight, Lbs.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Per Inch		Per Foot		Per Foot		12Ft. Bar		Per Inch		Per Foot		Per Foot		12Ft. Bar		Per Inch		Per Foot		Per Foot		12Ft. Bar																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
1/8 x 3/16	.007	.072	.864	1/4 x 7/8	.062	.744	8.93	3/8 x 1-5/8	.173	2.080	24.96	1-1/8	.040	.480	5.76	1-1/4	.044	.531	6.37	1-1/8	.080	.956	11.47	1-3/4	.124	1.488	17.86	1-3/4	.013	.160	1.92	1-3/4	.049	.588	7.06	1-3/4	.089	1.063	12.76	1-3/4	.115	1.380	16.56	1-3/4	.159	1.913	22.96	1-3/4	.213	2.550	30.60	1-3/4	.239	2.869	34.43	1-3/4	.266	3.188	38.26	1-3/4	.292	3.500	42.00	1-3/4	.319	3.825	45.90	1-3/4	.345	4.140	49.68	1-3/4	.372	4.463	53.56	1-3/4	.425	5.100	61.20	1-3/4	.478	5.738	68.86	1-3/4	.531	6.375	76.50	1-3/4	.584	7.010	84.10	1-3/4	.637	7.650	91.80	1-3/4	.690	8.288	100.00	1-3/4	.743	8.925	108.00	1-3/4	.796	9.563	116.00	1-3/4	.849	10.200	124.00	1-3/4	.902	10.838	132.00	1-3/4	.955	11.475	140.00	1-3/4	1.008	12.113	148.00	1-3/4	1.061	12.750	156.00	1-3/4	1.114	13.388	164.00	1-3/4	1.167	14.025	172.00	1-3/4	1.220	14.663	180.00	1-3/4	1.273	15.300	188.00	1-3/4	1.326	15.938	196.00	1-3/4	1.379	16.575	204.00	1-3/4	1.432	17.213	212.00	1-3/4	1.485	17.850	220.00	1-3/4	1.538	18.488	228.00	1-3/4	1.591	19.125	236.00	1-3/4	1.644	19.763	244.00	1-3/4	1.697	20.400	252.00	1-3/4	1.750	21.038	260.00	1-3/4	1.803	21.675	268.00	1-3/4	1.856	22.313	276.00	1-3/4	1.909	22.950	284.00	1-3/4	1.962	23.588	292.00	1-3/4	2.015	24.225	300.00	1-3/4	2.068	24.863	308.00	1-3/4	2.121	25.500	316.00	1-3/4	2.174	26.138	324.00	1-3/4	2.227	26.775	332.00	1-3/4	2.280	27.413	340.00	1-3/4	2.333	28.050	348.00	1-3/4	2.386	28.688	356.00	1-3/4	2.439	29.325	364.00	1-3/4	2.492	29.963	372.00	1-3/4	2.545	30.600	380.00	1-3/4	2.598	31.238	388.00	1-3/4	2.651	31.875	396.00	1-3/4	2.704	32.513	404.00	1-3/4	2.757	33.150	412.00	1-3/4	2.810	33.788	420.00	1-3/4	2.863	34.425	428.00	1-3/4	2.916	35.063	436.00	1-3/4	2.969	35.700	444.00	1-3/4	3.022	36.338	452.00	1-3/4	3.075	36.975	460.00	1-3/4	3.128	37.613	468.00	1-3/4	3.181	38.250	476.00	1-3/4	3.234	38.888	484.00	1-3/4	3.287	39.525	492.00	1-3/4	3.340	40.163	500.00	1-3/4	3.393	40.800	508.00	1-3/4	3.446	41.438	516.00	1-3/4	3.499	42.075	524.00	1-3/4	3.552	42.713	532.00	1-3/4	3.605	43.350	540.00	1-3/4	3.658	43.988	548.00	1-3/4	3.711	44.625	556.00	1-3/4	3.764	45.263	564.00	1-3/4	3.817	45.900	572.00	1-3/4	3.870	46.538	580.00	1-3/4	3.923	47.175	588.00	1-3/4	3.976	47.813	596.00	1-3/4	4.029	48.450	604.00	1-3/4	4.082	49.088	612.00	1-3/4	4.135	49.725	620.00	1-3/4	4.188	50.363	628.00	1-3/4	4.241	51.000	636.00	1-3/4	4.294	51.638	644.00	1-3/4	4.347	52.275	652.00	1-3/4	4.400	52.913	660.00	1-3/4	4.453	53.550	668.00	1-3/4	4.506	54.188	676.00	1-3/4	4.559	54.825	684.00	1-3/4	4.612	55.463	692.00	1-3/4	4.665	56.100	700.00	1-3/4	4.718	56.738	708.00	1-3/4	4.771	57.375	716.00	1-3/4	4.824	58.013	724.00	1-3/4	4.877	58.650	732.00	1-3/4	4.930	59.288	740.00	1-3/4	4.983	59.925	748.00	1-3/4	5.036	60.563	756.00	1-3/4	5.089	61.200	764.00	1-3/4	5.142	61.838	772.00	1-3/4	5.195	62.475	780.00	1-3/4	5.248	63.113	788.00	1-3/4	5.301	63.750	796.00	1-3/4	5.354	64.388	804.00	1-3/4	5.407	65.025	812.00	1-3/4	5.460	65.663	820.00	1-3/4	5.513	66.300	828.00	1-3/4	5.566	66.938	836.00	1-3/4	5.619	67.575	844.00	1-3/4	5.672	68.213	852.00	1-3/4	5.725	68.850	860.00	1-3/4	5.778	69.488	868.00	1-3/4	5.831	70.125	876.00	1-3/4	5.884	70.763	884.00	1-3/4	5.937	71.400	892.00	1-3/4	5.990	72.038	900.00	1-3/4	6.043	72.675	908.00	1-3/4	6.096	73.313	916.00	1-3/4	6.149	73.950	924.00	1-3/4	6.202	74.588	932.00	1-3/4	6.255	75.225	940.00	1-3/4	6.308	75.863	948.00	1-3/4	6.361	76.500	956.00	1-3/4	6.414	77.138	964.00	1-3/4	6.467	77.775	972.00	1-3/4	6.520	78.413	980.00	1-3/4	6.573	79.050	988.00	1-3/4	6.626	79.688	996.00	1-3/4	6.679	80.325	1004.00	1-3/4	6.732	80.963	1012.00	1-3/4	6.785	81.600	1020.00	1-3/4	6.838	82.238	1028.00	1-3/4	6.891	82.875	1036.00	1-3/4	6.944	83.513	1044.00	1-3/4	6.997	84.150	1052.00	1-3/4	7.050	84.788	1060.00	1-3/4	7.103	85.425	1068.00	1-3/4	7.156	86.063	1076.00	1-3/4	7.209	86.700	1084.00	1-3/4	7.262	87.338	1092.00	1-3/4	7.315	87.975	1100.00	1-3/4	7.368	88.613	1108.00	1-3/4	7.421	89.250	1116.00	1-3/4	7.474	89.888	1124.00	1-3/4	7.527	90.525	1132.00	1-3/4	7.580	91.163	1140.00	1-3/4	7.633	91.800	1148.00	1-3/4	7.686	92.438	1156.00	1-3/4	7.739	93.075	1164.00	1-3/4	7.792	93.713	1172.00	1-3/4	7.845	94.350	1180.00	1-3/4	7.898	94.988	1188.00	1-3/4	7.951	95.625	1196.00	1-3/4	8.004	96.263	1204.00	1-3/4	8.057	96.900	1212.00	1-3/4	8.110	97.538	1220.00	1-3/4	8.163	98.175	1228.00	1-3/4	8.216	98.813	1236.00	1-3/4	8.269	99.450	1244.00	1-3/4	8.322	100.088	1252.00	1-3/4	8.375	100.725	1260.00	1-3/4	8.428	101.363	1268.00	1-3/4	8.481	102.000	1276.00	1-3/4	8.534	102.638	1284.00	1-3/4	8.587	103.275	1292.00	1-3/4	8.640	103.913	1300.00	1-3/4	8.693	104.550	1308.00	1-3/4	8.746	105.188	1316.00	1-3/4	8.799	105.825	1324.00	1-3/4	8.852	106.463	1332.00	1-3/4	8.905	107.100	1340.00	1-3/4	8.958	107.738	1348.00	1-3/4	9.011	108.375	1356.00	1-3/4	9.064	109.013	1364.00	1-3/4	9.117	109.650	1372.00	1-3/4	9.170	110.288	1380.00	1-3/4	9.223	110.925	1388.00	1-3/4	9.276	111.563	1396.00	1-3/4	9.329	112.200	1404.00	1-3/4	9.382	112.838	1412.00	1-3/4	9.435	113.475	1420.00	1-3/4	9.488	114.113	1428.00	1-3/4	9.541	114.750	1436.00	1-3/4	9.594	115.388	1444.00	1-3/4	9.647	116.025	1452.00	1-3/4	9.700	116.663	1460.00	1-3/4	9.753	117.300	1468.00	1-3/4	9.806	117.938	1476.00	1-3/4	9.859	118.575	1484.00	1-3/4	9.912	119.213	1492.00	1-3/4	9.965	119.850	1500.00	1-3/4	10.018	120.488	1508.00	1-3/4	10.071	121.125	1516.00	1-3/4	10.124	121.763	1524.00	1-3/4	10.177	122.400	1532.00	1-3/4	10.230	123.038	1540.00	1-3/4	10.283	123.675	1548.00	1-3/4	10.336	124.313	1556.00	1-3/4	10.389	124.950	1564.00	1-3/4	10.442	125.588	1572.00	1-3/4	10.495	126.225	1580.00	1-3/4	10.548	126.863	1588.00	1-3/4	10.601	127.500	1596.00	1-3/4	10.654	128.138	1604.00	1-3/4	10.707	128.775	1612.00	1-3/4	10.760	129.413	1620.00	1-3/4	10.813	130.050	1628.00	1-3/4	10.866	130.688	1636.00	1-3/4	10.919	131.325	1644.00	1-3/4	10.972	131.963	1652.00	1-3/4	11.025	132.600	1660.00	1-3/4	11.078	133.238	1668.00	1-3/4	11.131	133.875	1676.00	1-3/4	11.184	134.513	1684.00	1-3/4	11.237	135.150	1692.00	1-3/4	11.290	135.788	1700.00	1-3/4	11.343	136.425	1708.00	1-3/4	11.396	137.063	1716.00	1-3/4	11.449	137.700	1724.00	1-3/4	11.502	138.338	1732.00	1-3/4	11.555	138.975	1740.00	1-3/4	11.608	139.613	1748.00	1-3/4	11.661	140.250	1756.00	1-3/4	11.714	140.888	1764.00	1-3/4	11.767	141.525	1772.00	1-3/4	11.820	142.163	1780.00	1-3/4	11.873	142.800	1788.00	1-3/4	11.926	143.438	1796.00	1-3/4	11.979	144.075	1804.00	1-3/4	12.032	144.713	1812.00	1-3/4	12.085	145.350	1820.00	1-3/4	12.138	145.988	1828.00	1-3/4	12.191	146.625	1836.00	1-3/4	12.244	147.263	1844.00	1-3/4	12.297	147.900	1852.00	1-3/4	12.350	148.538	1860.00	1-3/4	12.403	149.175	1868.00	1-3/4	12.456	149.813	1876.00	1-3/4	12.509	150.450	1884.00	1-3/4	12.562	151.088	1892.00	1-3/4	12.615	151.725	1900.00	1-3/4	12.668	152.363	1908.00	1-3/4	12.721	153.000	1916.00	1-3/4	12.774	153.638	1924.00	1-3/4	12.827	154.275	1932.00	1-3/4	12.880	154.913	1940.00	1-3/4	12.933	155.550	1948.00	1-3/4	12.986	156.188	1956.00	1-3/4	13.039	156.825	1964.00	1-3/4	13.092	157.463	1972.00	1-3/4	13.145	158.100	1980.00	1-3/4	13.198	158.738	1988.00	1-3/4	13.251	159.375	1996.00	1-3/4	13.304	160.013	2004.00	1-3/4	13.357	160.650	2012.00	1-3/4	13.410	161.288	2020.00	1-3/4	13.463	161.925	2028.00	1-3/4	13.516	162.563	2036.00	1-3/4	13.569	163.200	2044.00	1-3/4	13.622	163.838	2052.00	1-3/4	13.675	164.475	2060.00	1-3/4	13.728	165.113	2068.00	1-3/4	13.781	165.750	2076.00	1-3/4	13.834	166.388	2084.00	1-3/4	13.88

THEORETICAL WEIGHTS - FLATS Cont'd.
CARBON, ALLOY, COPPER, BRASS,
STAINLESS STEEL



Size in Inches				Estimated Weight, Lbs.				Size in Inches				Estimated Weight, Lbs.				Size in Inches				Estimated Weight, Lbs.									
		Per Inch	Per Foot	12Ft. Bar			Per Inch	Per Foot	12Ft. Bar			Per Inch	Per Foot	12Ft. Bar			Per Inch	Per Foot	12Ft. Bar			Per Inch	Per Foot	12Ft. Bar					
9/16x	5/8	.100	1.200	14.40	7/8x	1	.248	2.975	35.70	1-1/4x	1-3/8	.487	5.840	70.13	1-1/2x	1-3/4	.744	8.925	107.20	1-3/8x	1-1/2	.584	7.010	84.12					
	3/4	.120	1.440	17.28		1-1/8	.279	3.350	40.20		1-1/2	.531	6.375	76.50		1-3/8	.576	6.900	82.80										
	1	.159	1.908	22.90		1-1/4	.310	3.719	44.83		1-5/8	.576	6.900	82.80		2	.706	8.500	102.00		1-3/4	.620	7.438	89.26					
	1-1/4	.199	2.388	28.70		1-3/8	.341	4.090	49.00		2	.706	8.500	102.00		2-1/4	.797	9.563	114.80		3	1.06	12.750	153.00					
	1-1/2	.239	2.868	34.40		1-1/2	.372	4.463	53.56		2-1/2	.885	10.630	127.60		3-1/4	.974	11.690	140.00		3-1/2	1.24	14.880	178.60					
	2	.319	3.830	45.96		1-3/4	.434	5.206	62.47		3	1.06	12.750	153.00		4	1.42	17.000	204.00		4	1.42	17.000	204.00					
5/8x	3/4	.133	1.594	19.13		2	.496	5.950	71.40		4-1/2	1.59	19.126	229.51		5	1.77	21.250	255.00		5	1.77	21.250	255.00					
	7/8	.155	1.859	22.31		2-1/4	.558	6.696	80.35		5	1.77	21.250	255.00		6	2.13	25.500	306.00		6	2.13	25.500	306.00					
	1	.177	2.125	25.50		2-1/2	.620	7.438	89.26		6	2.48	29.760	357.00		7	2.48	29.760	357.00		7	2.48	29.760	357.00					
	1-1/8	.199	2.390	28.60		2-3/4	.682	8.180	98.16		8	2.83	34.000	408.00		8	2.83	34.000	408.00		8	2.83	34.000	408.00					
	1-1/4	.221	2.656	31.87		3	.744	8.925	107.20		10	3.54	42.500	510.00		10	3.54	42.500	510.00		10	3.54	42.500	510.00					
	1-3/8	.244	2.930	35.16		4	.992	11.900	142.80		12	4.25	51.000	612.00		12	4.25	51.000	612.00		12	4.25	51.000	612.00					
	1-1/2	.266	3.188	38.26		4-1/2	1.12	13.440	161.28		14	3.48	41.650	500.00		14	4.96	59.500	714.00		14	4.96	59.500	714.00					
	1-5/8	.288	3.454	41.45		5	1.24	14.880	178.50		1x	1-1/8	.319	3.828		45.93	1-1/2x	1-3/4	.744		8.92	107.10	1-1/2x	1-3/4	.744	8.92	107.10		
	1-3/4	.310	3.719	44.63	6	1.49	18.850	214.20	1-1/4	.354	4.250	51.00	2	.850	10.20	122.40	2	.850	10.20	122.40	2	.850	10.20	122.40					
	2	.354	4.250	51.00	7	1.73	20.880	250.56	1-3/8	.390	4.680	56.16	2-1/4	.956	11.48	137.80	2-1/4	.956	11.48	137.80	2-1/4	.956	11.48	137.80					
	2-1/4	.398	4.781	57.37	8	1.96	23.800	285.60	1-1/2	.425	5.100	61.20	2-1/2	1.06	12.75	153.00	2-1/2	1.06	12.75	153.00	2-1/2	1.06	12.75	153.00					
	2-1/2	.438	5.256	63.07	10	2.48	29.750	357.00	1-5/8	.460	5.523	66.27	2-3/4	1.17	14.04	168.48	3	1.28	15.30	183.60	3	1.28	15.30	183.60					
	2-3/4	.487	5.840	70.00	12	2.98	35.700	428.40	1-3/4	.496	5.950	71.40	3-1/4	1.38	17.50	198.90	3-1/4	1.38	17.50	198.90	3-1/4	1.38	17.50	198.90					
	3	.531	6.375	76.50	14	3.48	41.650	500.00	2	.567	6.800	81.60	3-1/2	1.49	17.85	214.20	3-1/2	1.49	17.85	214.20	3-1/2	1.49	17.85	214.20					
3-1/2	.620	7.438	89.26	1x	1-1/8	.319	3.828	45.93	2-1/4	.637	7.650	91.80	4	1.70	20.40	244.80	4	1.70	20.40	244.80	4	1.70	20.40	244.80					
4	.708	8.500	102.00	1x	1-1/4	.354	4.250	51.00	2-1/2	.708	8.500	102.00	4-1/2	1.91	22.92	275.04	4-1/2	1.91	22.92	275.04	4-1/2	1.91	22.92	275.04					
4-1/2	.797	9.560	114.70	1x	1-3/8	.390	4.680	56.16	2-3/4	.779	9.350	112.20	5	2.13	25.50	306.00	5	2.13	25.50	306.00	5	2.13	25.50	306.00					
5	.885	10.630	127.60	1x	1-1/2	.425	5.100	61.20	3	.850	10.200	122.40	5-1/2	2.34	28.08	336.96	5-1/2	2.34	28.08	336.96	5-1/2	2.34	28.08	336.96					
5-1/2	.974	11.690	140.30	1x	1-5/8	.460	5.523	66.27	3-1/4	.921	11.050	132.60	6	2.55	30.60	367.20	6	2.55	30.60	367.20	6	2.55	30.60	367.20					
6	1.06	12.750	153.00	1x	1-3/4	.496	5.950	71.40	3-1/2	.992	11.900	142.80	7	2.96	35.70	428.40	7	2.96	35.70	428.40	7	2.96	35.70	428.40					
7	1.24	14.880	178.56	1x	2	.567	6.800	81.60	4	1.13	13.600	163.20	8	3.40	40.80	489.60	8	3.40	40.80	489.60	8	3.40	40.80	489.60					
8	1.2	17.000	204.00	1x	2-1/4	.637	7.650	92.33	4-1/2	1.28	15.300	183.60	10	4.25	51.00	612.00	10	4.25	51.00	612.00	10	4.25	51.00	612.00					
9	1.59	19.080	228.96	1x	2-1/2	.708	8.500	102.00	5	1.42	17.000	204.00	12	5.10	61.20	734.00	12	5.10	61.20	734.00	12	5.10	61.20	734.00					
10	1.77	21.250	255.00	1x	2-3/4	.779	9.350	112.20	6-1/2	1.84	22.080	264.96	1-3/4x	2	.992	11.90	142.80	1-3/4x	2	.992	11.90	142.80	1-3/4x	2	.992	11.90	142.80		
12	2.13	25.500	306.00	1x	3	.850	10.200	122.40	7	1.98	23.800	285.60	2-1/4	1.12	13.44	161.28	2-1/4	1.12	13.44	161.28	2-1/4	1.12	13.44	161.28					
3/4x	7/8	.186	2.230	26.77	1x	3-1/4	.921	11.050	132.60	8	2.27	27.200	326.40	2-1/2	1.24	14.88	178.60	2-1/2	1.24	14.88	178.60	2-1/2	1.24	14.88	178.60				
	1	.213	2.550	30.60	1x	3-1/2	.992	11.900	142.80	9	2.55	30.600	367.20	3	1.36	16.32	195.80	3	1.36	16.32	195.80	3	1.36	16.32	195.80				
	1-1/8	.239	2.880	34.56	1x	4	1.13	13.600	163.20	10	2.83	34.000	408.00	3-1/2	1.74	20.88	250.60	3-1/2	1.74	20.88	250.60	3-1/2	1.74	20.88	250.60				
	1-1/4	.266	3.188	38.6	1x	4-1/2	1.28	15.300	183.60	12	3.40	40.800	489.60	4	1.98	23.80	285.60	4	1.98	23.80	285.60	4	1.98	23.80	285.60				
	1-3/8	.292	3.500	42.00	1x	5	1.42	17.000	204.00	14	3.97	47.600	571.20	5	2.48	29.76	357.20	5	2.48	29.76	357.20	5	2.48	29.76	357.20				
	1-1/2	.319	3.825	45.90	1x	5-1/2	1.56	18.720	224.64	1x	1-1/4	.399	4.780	57.38	6	2.98	35.70	428.40	6	2.98	35.70	428.40	6	2.98	35.70	428.40			
	1-5/8	.345	4.140	49.68	1x	6	1.70	20.400	244.80	1x	1-3/8	.438	5.260	63.12	7	3.97	47.60	571.00	7	3.97	47.60	571.00	7	3.97	47.60	571.00			
	1-3/4	.372	4.463	53.56	1x	6-1/2	1.84	22.080	264.96	1x	1-1/2	.478	5.740	68.85	8	4.96	59.52	714.24	8	4.96	59.52	714.24	8	4.96	59.52	714.24			
	2	.425	5.100	61.20	1x	7	1.98	23.800	285.60	1x	1-3/4	.558	6.694	80.33	10	5.95	71.40	856.80	10	5.95	71.40	856.80	10	5.95	71.40	856.80			
	2-1/4	.478	5.738	68.86	1x	8	2.27	27.200	326.40	1x	2	.638	7.650	91.80	12	7.14	85.68		12	7.14	85.68		12	7.14	85.68				
	2-1/2	.531	6.375	76.60	1x	9	2.55	30.600	367.20	1x	2-1/4	.717	8.606	103.28	1x	1-1/8	.319	3.828	45.93	1x	1-1/8	.319	3.828	45.93	1x	1-1/8	.319	3.828	45.93
	2-3/4	.584	7.000	84.00	1x	10	2.83	34.000	408.00	1x	2-1/2	.797	9.560	114.75	1x	1-1/4	.354	4.250	51.00	1x	1-1/4	.354	4.250	51.00	1x	1-1/4	.354	4.250	51.00
	3	.637	7.650	91.80	1x	12	3.40	40.800	489.60	1x	3	1.13	13.600	163.20	1x	1-1/2	.425	5.100	61.20	1x	1-1/2	.425	5.100	61.20	1x	1-1/2	.425	5.100	61.20
	3-1/4	.691	8.290	99.48	1x	14	3.97	47.600	571.20	1x	4	1.42	17.000	204.00	1x	1-5/8	.460	5.523	66.27	1x	1-5/8	.460	5.523	66.27	1x	1-5/8	.460	5.523	66.27
3-1/2	.744	8.925	107.00	1x	1x	1-1/8	.319	3.828	45.93	1x	5	1.77	21.250	255.00	1x	2	.706	8.500	102.00	1x	2	.706	8.500	102.00	1x	2	.706	8.500	102.00
4	.850	10.200	122.40	1x	1x	1-1/4	.354	4.250	51.00	1x	6	2.13	25.500	306.00	1x	2-1/4	.797	9.563	114.80	1x	2-1/4	.797							



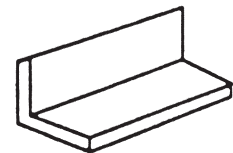
**THEORETICAL WEIGHTS - FLATS Cont'd.
CARBON, ALLOY, COPPER, BRASS,
STAINLESS STEEL**



Size in Inches	Estimated Weight, Lbs.			Size in Inches	Estimated Weight, Lbs.			Size in Inches	Estimated Weight, Lbs.						
	Per Inch	Per Foot	12Ft. Bar		Per Inch	Per Foot	12Ft. Bar		Per Inch	Per Foot	12Ft. Bar				
2x	2-1/4	1.28	15.36	184.30	2-1/4x2-1/2	1.59	19.13	229.50	3x	3-1/2	2.98	35.76	429.12		
	2-1/2	1.42	17.00	204.00	3	1.91	22.95	275.40		4	3.40	40.80	489.60		
	2-3/4	1.56	18.71	224.60	4	2.55	30.60	367.20		4-1/2	3.83	45.90	551.00		
	3	1.70	20.40	244.80	4-1/2	2.87	34.43	413.10		5	4.25	51.00	612.00		
	3-1/2	1.98	23.80	285.60	5	3.19	38.25	459.00		6	5.10	61.20	734.40		
	4	2.27	27.20	325.00	6	3.83	45.90	551.00		8	6.80	81.60	979.20		
	4-1/2	2.55	30.60	367.00	2-1/2x3	2.13	25.50	306.00		3-1/2x4	3.97	47.60	571.00		
	5	2.83	34.00	408.00		3-1/2	2.48	29.75		357.00	5	4.96	59.50	714.00	
	5-1/2	3.12	37.44	448.28		4	2.83	34.00		408.00	6	5.95	71.40	856.80	
	6	3.40	40.80	489.60		4-1/2	3.19	38.25		459.00	4x	5	5.67	68.04	816.48
	7	3.97	47.60	571.20		5	3.54	42.50		510.00		6	6.80	81.60	979.20
	8	4.53	54.40	652.80		6	4.25	51.00		612.00		8	9.07	108.84	1306.08
9	5.10	61.20	734.40	8	5.67	68.00	816.00								
10	5.67	68.00	816.00	12	8.50	102.00	1224.00								
12	6.80	81.60	979.20												



**THEORETICAL WEIGHTS - ANGLES
STAINLESS STEEL
Stock Length 20' to 22'**



Size in Inches	Estimated Weight, Lbs.		Size in Inches	Estimated Weight, Lbs.			
	Per Foot	20 Ft. Length		Per Foot	20 Ft. Length		
3/4 x 3/4	x1/8	.59	11.8	2 x 2	x1/8	1.65	33.0
					3/16	2.44	48.8
					1/4	3.19	63.8
1 x 1	x1/8	.80	16.0		3/8	4.70	94.0
	3/16	1.16	23.2	2-1/2x2-1/2	x1/8	3.07	61.4
	1/4	1.49	29.8		1/4	4.10	82.0
			3/8		5.90	118.0	
1-1/4x1-1/4	x1/8	1.01	20.2	3 x 3	x1/4	4.90	98.0
	3/16	1.48	29.6		3/8	7.20	144.0
	1/4	1.92	38.4		4 x 4	x1/4	6.60
1-1/2x1-1/2	x1/8	1.23	24.6	3/8		9.80	196.0
	3/16	1.80	36.0	1/2		12.80	256.0
	1/4	2.34	46.8				

NOTE: Brass, add approximately 6% to weights shown.



**THEORETICAL WEIGHTS - SHEETS
STAINLESS STEEL**



Thickness In Inches	Estimated Weight, Lbs.
	Per Sq. Foot
.012	.504
.016	.672
.0161	.676
.020	.840
.025	1.050
.032	1.344
.036	1.512
.040	1.680
.050	2.100
.063	2.646
.080	3.360
.090	3.780
.125	5.250

*AVAILABLE SHEET SIZES: 36 x 96; 36 x 144; 48 x 96; 48 x 120; 48 x 144; 60 x 120; 60 x 144; 72 x 144



**THEORETICAL WEIGHTS - PLATES
STAINLESS STEEL
Billing Weights**



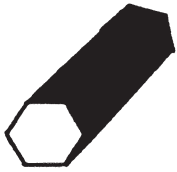
Thickness In Inches		Pounds Per Square Foot	Pounds Per Square Inch	Thickness In Inches		Pounds Per Square Foot	Pounds Per Square Inch
Fraction	Decimal			Fraction	Decimal		
3/16	.1875	8.579	.0596	15/16	.9375	39.875	.2769
1/4	.2500	11.162	.0775	1	1.000	43.665	.2963
5/16	.3125	13.746	.0955	1 1/8	1.125	47.633	.3322
3/8	.3750	16.496	.1146	1 1/4	1.250	53.001	.3681
7/16	.4375	19.080	.1325	1 3/8	1.375	58.176	.4040
1/2	.5000	21.663	.1504	1 1/2	1.500	63.337	.4398
9/16	.5625	24.247	.1684	1 3/4	1.750	73.672	.5116
5/8	.6250	26.831	.1863	2	2.000	84.008	.5834
11/16	.6875	29.415	.2043	2 1/4	2.250	94.778	.5582
3/4	.7500	32.123	.2231	2 1/2	2.500	105.113	.7300
13/16	.8125	34.707	.2410	2 3/4	2.750	115.449	.8017
7/8	.8750	37.291	.2590	3	3.000	126.301	.8771



ROUND ALUMINUM ROD
Standard 12 Foot Lengths



SIZES IN INCHES	LBS. PER FOOT	SIZES IN INCHES	LBS. PER FOOT
1/8	.0145	1 13/16	3.03
3/16	.0324	1 7/8	3.24
1/4	.0576	2	3.68
5/16	.0900	2 1/8	4.16
3/8	.130	2 1/4	4.66
7/16	.176	2 3/8	5.20
1/2	.230	2 1/2	5.76
9/16	.291	2 9/16	6.068
5/8	.360	2 5/8	6.35
11/16	.435	2 3/4	6.97
3/4	.518	2 7/8	7.61
13/16	.608	3	8.29
7/8	.705	3 1/8	9.214
15/16	.840	3 1/4	9.72
1	.921	3 3/8	10.74
1 1/16	1.04	3 1/2	11.3
1 1/8	1.17	3 3/4	13.0
1 3/16	1.30	4	14.7
1 1/4	1.44	4 1/4	17.13
1 5/16	1.59	4 1/2	18.7
1 3/8	1.74	4 3/4	21.28
1 7/16	1.90	5	23.1
1 1/2	2.07	5 1/4	23.78
1 9/16	2.25	5 1/2	29.0
1 5/8	2.43	6	33.2
1 3/4	2.82	6 1/2	38.9
		7	45.2
		7 1/2	51.9
		8	59.0
		9	74.8
		10	92.4
		11	111.8
		12	133.0



HEXAGON ALUMINUM ROD
Standard 12 Foot Lengths



SIZES IN INCHES	LBS. PER FOOT	SIZES IN INCHES	LBS. PER FOOT
3/16	.0369	1 1/8	1.28
1/4	.0629	1 3/16	1.43
5/16	.1025	1 1/4	1.58
3/8	1.43	1 3/8	1.92
7/16	.194	1 1/2	2.28
1/2	.254	1 5/8	2.69
9/16	.321	1 3/4	3.11
5/8	.397	1 7/8	3.57
11/16	.480		
3/4	.571	2	4.06
13/16	.671	2 1/8	4.59
7/8	.778	2 1/4	5.14
15/16	.892	2 1/2	6.35
		2 3/4	7.938
1	1.01		
		3	9.446



SQUARE ALUMINUM ROD
Standard 12 Foot Lengths



SIZES IN INCHES	LBS. PER FOOT	SIZES IN INCHES	LBS. PER FOOT
1/4	.073	2	4.69
5/16	.114	2 1/4	5.95
3/8	.165	2 1/2	7.32
7/16	.226	2 3/4	8.89
1/2	.293		
5/8	.458	3	10.58
3/4	.660	3 1/4	12.42
7/8	.900	3 1/2	14.40
1	1.17		
1 1/8	1.534	4	18.82
1 1/4	1.83	4 1/2	23.81
1 1/2	2.38		
1 3/4	3.66	5	29.40
		6	42.34



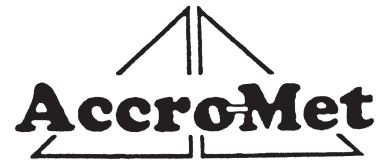
**RECTANGULAR
ALUMINUM BAR**
Standard 12 Foot Lengths



THICKNESS SIZE IN INCHES	WIDTH SIZE IN INCHES	POUNDS PER FOOT
1/8 x	1/2	.073
	3/4	.110
	1	.147
	1 1/4	.184
	1 1/2	.221
	1 3/4	.257
	2	.294
	2 1/2	.368
	3	.441
	3/16 x	3/4
1		.221
1 1/4		.276
1 1/2		.331
2		.441
2 1/2		.551
3		.662
1/4 x	1/2	.147
	3/4	.221
	1	.294
	1 1/4	.368
	1 1/2	.441
	2	.588
	2 1/2	.735
	3	.882
	3 1/2	1.032
	4	1.18
5/16 x	3/4	.276
	1	.368
	1 1/2	.551
	2	.735
	3	1.10
3/8 x	1/2	.221
	3/4	.331
	1	.441
	1 1/4	.551
	1 1/2	.661



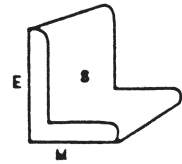
**RECTANGULAR
ALUMINUM BAR Cont'd.
Standard 12 Foot Lengths**



THICKNESS SIZE IN INCHES	WIDTH SIZE IN INCHES	POUNDS PER FOOT	THICKNESS SIZE IN INCHES	WIDTH SIZE IN INCHES	POUNDS PER FOOT			
3/8 x	1 3/4	.772	1 x	1 1/4	1.47			
	2	.882		1 1/2	1.76			
	2 1/2	1.10		1 3/4	2.06			
	3	1.32		2	2.35			
	4	1.76		2 1/2	2.94			
	6	2.65		3	3.53			
1/2 x	3/4	.441		3 1/2	4.12			
				4	4.70			
				5	5.88			
				6	7.06			
				8	9.41			
	2	1.18		1 1/4 x	1 1/2	2.21		
				2	2.94			
				3	4.41			
				4	5.88			
				2 1/2	1.47	1 1/2 x	1 3/4	3.09
2	3.53							
2 1/4	3.93							
2 1/2	4.41							
3	5.30							
5/8 x	3/4	.551	4	7.06				
			6	10.58				
			1 3/4 x	2	4.12			
				2 x	2 1/4	5.29		
					2 1/2	6.21		
			3		7.06			
4	9.41							
3/4 x	1	.882	6	14.11				
			2 1/2x	4	11.76			
				6	17.64			
			3 x	4	14.11			
				6	21.17			
			2	1.76	4x	6	28.22	
						3 1/2	3	2.65
							4	3.53
							5	4.04
			4	2.21	6	5.29		



**STRUCTURAL
ALUMINUM ANGLE**
Equal Leg
25 Foot Lengths



SIZE IN INCHES					APPROX. WT. PER LIN. FT.	SIZE IN INCHES					APPROX. WT. PER LIN. FT.
E	X	M	X	S		E	X	M	X	S	
3/4	X	3/4	X	1/8	.201	2 1/2	X	2 1/2	X	3/16	1.070
1	X	1	X	1/8	.280	2 1/2	X	2 1/2	X	1/4	1.404
1	X	1	X	3/16	.406	2 1/2	X	2 1/2	X	3/8	2.047
1	X	1	X	1/4	.570	3	X	3	X	3/16	1.275
1 1/4	X	1 1/4	X	1/8	.343	3	X	3	X	1/4	1.730
1 1/4	X	1 1/4	X	3/16	.522	3	X	3	X	3/8	2.474
1 1/4	X	1 1/4	X	1/4	.656	3	X	3	X	1/2	3.227
1 1/2	X	1 1/2	X	1/8	.440	3 1/2	X	3 1/2	X	1/4	1.989
1 1/2	X	1 1/2	X	3/16	.640	3 1/2	X	3 1/2	X	3/8	2.926
1 1/2	X	1 1/2	X	1/4	.830	3 1/2	X	3 1/2	X	1/2	3.826
1 1/2	X	1 1/2	X	3/8	1.176	4	X	4	X	1/4	2.350
1 3/4	X	1 3/4	X	1/8	.497	4	X	4	X	3/8	3.366
1 3/4	X	1 3/4	X	3/16	.731	4	X	4	X	1/2	4.414
1 3/4	X	1 3/4	X	1/4	.980	5	X	5	X	3/8	4.237
1 3/4	X	1 3/4	X	3/8	1.378	5	X	5	X	1/2	5.578
2	X	2	X	1/8	.588	6	X	6	X	3/8	5.119
2	X	2	X	3/16	.870	6	X	6	X	1/2	6.754
2	X	2	X	1/4	1.110	8	X	8	X	1/2	9.141
2	X	2	X	3/8	1.606	8	X	8	X	3/4	13.478
2 1/2	X	2 1/2	X	1/8	.724						

Custom Lengths & Finishes Available.
More Sizes Available.



ALUMINUM SHEETS



THICKNESS SIZE IN INCHES	POUNDS PER SQUARE FOOT
.010	.14
.012	.17
.016	.23
.020	.28
.025	.35
.032	.45
.040	.56
.050	.71
.063	.89
.071	1.00
.080	1.13
.090	1.27
.100	1.41
.125	1.76
.160	2.26
.190	2.68



ALUMINUM FLAT PLATE



SIZE IN INCHES	POUNDS PER SQUARE FOOT
1/4	3.53
5/16	4.42
3/8	5.29
7/16	6.18
1/2	7.06
5/8	8.82
3/4	10.6
7/8	12.4
1	14.1
1 1/8	15.88
1 1/4	17.7
1 1/2	21.1
1 3/4	24.7
2	28.22
2 1/4	31.75
2 1/2	35.27
3	42.33
3 1/2	49.39
4	56.45
4 1/2	63.50
5	70.55
5 1/2	77.61
6	84.67
7	112.88
10	141.10
12	169.32

GAGE DECIMAL EQUIVILANTS



GAGE NO.	NON-FERROUS		STEEL SHEETS		STRIP & TUBING		BASIC STEEL WIRE		
	WEIGHT Lbs Per Sq. Ft. 1100 8061 ALUMINUM	GAGE DECIMAL	WEIGHT Lbs Per Sq. Ft. Alloy 260 BRASS	GAGE DECIMAL	WEIGHT Lbs Per Sq. Ft. Sheet STEEL	GAGE DECIMAL	WEIGHT Lbs Per Sq. Ft. Steel STRIP	GAGE DECIMAL	WEIGHT Lbs Per 100 Ft. Steel WIRE
000000		.5800						.4615	56.87
00000		.5165				.500	20.40	.4305	49.48
0000		.4600				.454	18.52	.3938	41.41
000		.4096				.425	17.34	.3625	35.09
00		.3648				.380	15.50	.3310	29.25
0		.3249				.340	13.87	.3065	25.08
1		.2893				.300	12.24	.2830	21.38
2		.2576				.284	11.59	.2625	18.40
3		.2294		.2391	10.00	.259	10.57	.2437	15.86
4		.2043		.2242	9.375	.238	9.710	.2253	13.55
5		.1819		.2092	8.750	.220	8.975	.2070	11.44
6	2.286	.1620	7.185	.1943	8.125	.203	8.281	.1920	9.84
7	2.036	.1443	6.400	.1793	7.500	.180	7.343	.1770	8.36
8	1.813	.1285	5.699	.1644	6.875	.165	6.731	.1620	7.01
9	1.614	.1144	5.074	.1495	6.250	.148	6.038	.1483	5.87
10	1.438	.1019	4.520	.1345	5.625	.134	5.467	.1350	4.87
11	1.280	.0907	4.023	.1196	5.000	.120	4.895	.1205	3.88
12	1.140	.0808	3.584	.1046	4.375	.109	4.447	.1055	2.97
13	1.016	.0720	3.193	.0897	3.750	.095	3.876	.0915	2.24
14	.905	.0641	2.843	.0747	3.125	.083	3.386	.0800	1.71
15	.806	.0571	2.532	.0673	2.813	.072	2.937	.0720	1.38
16	.717	.0508	2.253	.0598	2.500	.065	2.652	.0625	1.04
17	.639	.0453	2.009	.0538	2.250	.058	2.366	.0540	.78
18	.569	.0403	1.787	.0478	2.000	.049	1.999	.0475	.60
19	.507	.0359	1.592	.0418	1.750	.042	1.713	.0410	.45
20	.452	.0320	1.419	.0359	1.500	.035	1.428	.0348	.32
21	.402	.0285	1.264	.0329	1.375	.032	1.305	.0317	.27
22	.357	.0253	1.122	.0299	1.250	.028	1.142	.0286	.22
23	.319	.0226	1.002	.0269	1.125	.025	1.020	.0258	.18
24	.284	.0201	.892	.0239	1.000	.022	.898	.0230	.14
25	.253	.0179	.794	.0209	.875	.020	.816	.0204	.11
26	.224	.0159	.705	.0179	.750	.018	.734	.0181	.09
27	.200	.0142	.630	.0164	.688	.016	.653	.0173	.08
28	.178	.0126	.559	.0149	.625	.014	.571	.0162	.07
29	.160	.0113	.501	.0135	.563	.013	.530	.0150	.06
30	.141	.0100	.444	.0120	.500	.012	.490	.0140	.052
31	.126	.0089	.395	.0105	.438	.010	.408	.0132	.047
32	.113	.0080	.355	.0097	.406	.009	.367	.0128	.044
33	.100	.0071	.315	.0090	.375	.008	.326	.0118	.037
34	.089	.0063	.279	.0082	.344	.007	.286	.0404	.029
35		.0056	.248	.0075	.313	.005	.204	.0095	.024
36		.0050	.222	.0067	.281	.004	.163	.0090	.022
37		.0045	.200	.0064	.266			.0085	.019
38		.0040	.177	.0060	.250			.0080	.017



FRACTIONS, DECIMALS, MILLIMETERS

	DECIMALS	MILLIMETERS	MILLIMETERS	DECIMALS		
	1/64	.0156	0.3969	13.0969	.5156	33/64
	1/32	.0313	0.7938	13.4938	.5313	17/32
	3/64	.0469	1.1906	13.8906	.5469	35/64
1/16		.0625	1.5875	14.2875	.5625	9/16
	5/64	.0781	1.9844	14.6844	.5781	37/64
	3/32	.0938	2.3813	15.0813	.5938	19/32
	7/64	.1094	2.7781	15.4781	.6094	39/64
1/8		.125	3.1750	15.8750	.625	5/8
	9/64	.1406	3.5719	16.2719	.6406	41/64
	5/32	.1563	3.9688	16.6688	.6563	21/32
	11/64	.1719	4.3656	17.0656	.6719	43/64
3/16		.1875	4.7625	17.4625	.6875	11/16
	13/64	.2031	5.1594	17.8594	.7031	45/64
	7/32	.2188	5.5563	18.2563	.7188	23/32
	15/64	.2344	5.9531	18.6531	.7344	47/64
1/4		.250	6.3500	19.0500	.750	3/4
	17/64	.2656	6.7469	19.4469	.7656	49/64
	9/32	.2813	7.1438	19.8438	.7813	25/32
	19/64	.2969	7.5406	20.2406	.7969	51/64
5/16		.3125	7.9375	20.6375	.8125	13/16
	21/64	.3281	8.3344	21.0344	.8281	53/64
	11/32	.3438	8.7313	21.4313	.8438	27/32
	23/64	.3594	9.1281	21.8281	.8594	55/64
3/8		.375	9.5250	22.2250	.875	7/8
	25/64	.3906	9.9219	22.6219	.8906	57/64
	13/32	.4063	10.3188	23.0188	.9063	29/32
	27/64	.4219	10.7156	23.4156	.9219	59/64
7/16		.4375	11.1125	23.8125	.9375	15/16
	29/64	.4531	11.5094	24.2094	.9531	61/64
	15/32	.4688	11.9063	24.6063	.9688	31/32
	31/64	.4844	12.3031	25.0031	.9844	63/64
1/2		.500	12.7000	25.4000	1.000	1

HARDNESS CONVERSION TABLE

(Approximate)

Brinell Hardness	Rockwell B Scale	Rockwell C Scale	Approximate Tensile Lbs. p.s.i.	Brinell Hardness	Rockwell B Scale	Approximate Tensile Lbs. p.s.i.
653	—	62	324,000	217	96	103,000
627	—	60	311,000	212	96	103,000
601	—	59	306,000	207	95	101,000
578	—	57	290,000	202	94	98,000
555	—	56	284,000	197	93	96,000
534	—	54	270,000	192	92	93,000
514	—	53	263,000	187	91	91,000
495	—	51	250,000	183	90	89,000
477	—	50	243,000	179	89	87,000
461	—	49	236,000	174	88	85,000
444	—	47	223,000	170	87	83,000
429	—	47	217,000	166	86	81,000
415	—	45	211,000	163	85	80,000
401	—	42	194,000	159	84	78,000
388	—	41	188,000	156	83	77,000
375	—	40	182,000	153	82	76,000
363	—	38	171,000	149	81	75,000
352	—	37	166,000	146	80	74,000
331	—	36	162,000	143	79	73,000
321	—	34	153,000	140	78	71,000
311	—	33	148,000	137	77	70,000
302	—	32	144,000	134	76	69,000
293	—	31	140,000	131	74	67,000
285	—	30	136,000	128	73	66,000
277	—	28	132,000	126	72	65,000
269	—	27	126,000	124	71	63,000
262	—	25	120,000	121	70	62,000
255	—	25	120,000	118	69	61,000
248	—	24	117,000	116	68	60,000
241	100	23	115,000	114	67	59,000
235	99	22	112,000	112	66	58,000
229	98	21	110,000	109	65	57,000
223	97	20	108,000	107	64	55,000

ALLOY CONDITIONS*

Physical Condition

A-As Forged
B-As Rolled
C-Annealed
D-Normalized
E-Normalized & Tempered
F- Heat Treated & Tempered

Surface Condition

1 – Black as Forged or Rolled
2 – Pickled or Blast Cleaned
3 – Rough Turned
4 – Cold Drawn
5 – Surface Ground

**RECOMMENDED STOCK REMOVAL FOR HOT ROLLED
OR COLD DRAWN ALLOY STEEL BARS SUBJECT TO
MAGNETIC PARTICLE INSPECTION**

Sizes, Inches

Up to 1/2" inclusive
Over 1/2" to 3/4" inclusive
Over 3/4" to 1" inclusive
Over 1" to 1 1/2" inclusive
Over 1 1/2" to 2" inclusive
Over 2" to 2 1/2" inclusive
Over 2 1/2" to 3 1/2" inclusive
Over 3 1/2" to 4 1/2" inclusive
Over 4 1/2" to 6" inclusive
Over 6" to 7 1/2" inclusive
Over 7 1/2" to 9" inclusive
Over 9" to 10" inclusive

**Minimum Stock Removal
from the Surface, Inches**

0 030
0 045
0 060
0 075
0 090
0 125
0 156
0 187
0 250
0 312
0 375
0 437

**RECOMMENDED STOCK REMOVAL
FOR COLD DRAWN OR CENTERLESS GROUND
STAINLESS STEEL BARS**

Up To 5/8" Rd inclusive
Over 5/8"

0 10
Add 001 per 1 1/16" Dia

**MACHINING ALLOWANCES
HOT ROLLED ALLOW BARS****

Up to 5/8" inclusive
Over 5/8" to 7/8" inclusive
Over 7/8" to 1" inclusive
Over 1" to 1 1/8" inclusive
Over 1 1/8" to 1 1/4" inclusive
Over 1 1/4" to 1 3/8" inclusive
Over 1 3/8" to 1 1/2" inclusive
Over 1 1/2" to 2" inclusive
Over 2" to 2 1/2" inclusive
Over 2 1/2" to 3 1/2" inclusive
Over 3 1/2" to 4 1/2" inclusive
Over 4 1/2" to 5 1/2" inclusive
Over 5 1/2" to 6 1/2" inclusive
Over 6 1/2" to 8 1/4" inclusive
Over 8 1/4" to 9 1/2" inclusive

0 016
0 021
0 023
0 025
0 028
0 030
0 033
0 042
0 052
0 072
0 090
0 110
0 125
0 155
0 203

PRESSED (FORGED) ROUND BARS

The amount of metal to be removed from the surface of Carbon and Alloy Pressed Round Bars over 8" in diameter in order to obtain a finished size varies because consideration must be given to several factors such as manufacturing practice, size of bar, length and straightness. As a guide, the usual allowances for bars 8 to 10 long are

Diameters through 13

1/2" on diameter, 1/4" on surface

Diameters over 13 to 19

5/8" on diameter, 5/16" on surface

**From the Steel Products Manual of the American Iron & Steel Institute

MACHINABILITY RATINGS

STAINLESS

GRADE	APPROXIMATE SURF. FT PER MIN.	% RELATIVE SPEED BASED ON C-1212 as 100%	GRADE	APPROXIMATE SURF. FT PER MIN.	% RELATIVE SPEED BASED ON C-1212 as 100% (165 SFM)
302	70	40	420	85	50
302/304*B*	55	28	420 F	125	68
303	150	75	422	85	50
303 High Tensile	80	43	430	110	66
304	70	40	430 F	150	75
304 L	70	40	431	80	48
309	60	36	440 A	65	40
310	60	36	440 C	65	40
316	60	36	440 F Se	80	48
316 *B*	50	22	446	60	36
316 L	60	36	*Custom 455(12-98-2)	55	28
317-317 L	60	36	PH-13-8 MO	60	36
317 LM	60	36	15-5 PH	75	45
321	60	36	15-7	75	45
330	45	20	17-4 PH	75	45
347	60	36	17-4 PH *H1150*	85	50
403	95	54	17-7 PH	75	45
410	95	54	AM355	72	42
416 Ann	150	75	*Nitronic 40	50	22
416 H.T.	85	50	*Nitronic 50	50	22
418 (Greek Ascology)	96	50	*Nitronic 60	50	22

STEEL ALLOYS - ELECTRICAL STEELS

Managing *300*	60	36	718	20	12
A-286	54	28	718 Cold Red	18	10
4750	60	36	X-750	20	12
L-605	15	9	INVAR 36 *FM*	92	55
Nickel *200*	110	66	*Waspaloy	45	20
Nickel *400*	80	48	*Waspaloy Cold Red	43	18
Nickel *405*	80	48	*MP 35N	45	20
Nickel *K-500*	60	36	*MP 159	45	20
Nickel K-500 Aged	40	25	*Kovar	60	22
Nickel *600*	50	22			
Nickel *625*	20	12			

ALLOY

E-17-22A	95	57	E-42100	65	40
E-4130	120	72	E-6150	100	60
E-4130 H.T.	65	40	E-8740	110	66
E-4140	110	66	E-9310	80	49
E-4330 Mod.	95	57	Nitriding	83	51
E-4340	95	57	H-11	75	45
E-4340			Hy-Tuf	75	45
Mod *300M*	95	57	DaAC	80	49
E.4620	110	66	9-4-30	75	45

CARBON

C-1018	130	78	C-12L14	325	198
C-1045	95	57	C-1215	225	136
C-1117	150	91	Ledloy		
C-1137	120	72	(A)	325	198
C-1144	125	76	Stressproof	125	76

SECTION TOLERANCES
STAINLESS BAR AND WIRE

SECTION TOLERANCES
STAINLESS BAR AND WIRE

COLD FINISHED BARS AND WIRE

HOT ROLLED BARS – Rounds and Squares

ROUND BARS - Cold Drawn, Centerless Ground and Ground and Polished (2)

Specified Size Inches	Variations from Size Inches (1) (2)	
	Over	Under
Over 1/2 to 1 exc	0.002	0.002
1 to 1 1/2 exc	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 1/2 to 6 incl	0.008	0.008

- (1) When it is necessary to heat treat or heat treat and pickle after cold finishing, because of special hardness or mechanical property requirements, tolerances are double those shown in the table.
 (2) Accuracy stock including 1" diameter is ± or 0005.*

ROUND WIRE - Cold Drawn, Centerless Ground and Centerless Ground and Polished (2)

Specified Size Inches	Tolerances, inches	
	Over	Under
1/2	0.002	0.002
Under 1/2 to 5/16 incl	0.0015	0.0015
Under 5/16 to 0.044 incl	0.001	0.001
Under 0.044 to 0.033 incl	0.0008	0.0008
Under 0.033 to 0.024 incl	0.0005	0.0005
Under 0.024 to 0.012 incl	0.0004	0.0004

- The maximum out-of-round tolerance for round wire is one-half of the total size tolerance shown in the above table.
 (2) Accuracy stock including 1" diameter is ± or 0005.*

HEXAGONS, OCTAGONS AND SQUARES - Cold Drawn*

Specified Size Inches	Variations from Size Inches (1)	
	Over	Under
1/8 to under 5/16	0	0.002
5/16 to under 1/2	0	0.003
1/2 to 1 incl	0	0.004
Over 1 to 2 incl	0	0.006
Over 2 to 3 incl	0	0.008
Over 3	0	0.010

- (1) When it is necessary to heat treat or heat treat and pickle after cold finishing, because of special hardness or mechanical property requirements, tolerances are double those shown in the table.
 (2) Accuracy stock including 1" diameter is ± or 0005.*

Specified Size Inches	Variations from Size Inches		Out of Round (1) or Square (2) Inches
	Over	Under	
1/4 to 5/16 incl (3)	(4)	(4)	(4)
Over 5/16 to 7/16 incl (3)	0.006	0.006	0.009
Over 7/16 to 5/8 incl (3)	0.007	0.007	0.010
Over 5/8 to 7/8 incl	0.008	0.008	0.012
Over 7/8 to 1 incl	0.009	0.009	0.013
Over 1 to 1 1/8 incl	0.010	0.010	0.015
Over 1 1/8 to 1 1/4 incl	0.011	0.011	0.016
Over 1 1/4 to 1 3/8 incl	0.012	0.012	0.018
Over 1 3/8 to 1 1/2 incl	0.014	0.014	0.021
Over 1 1/2 to 2 incl	1/64	1/64	0.023
Over 2 to 2 1/2 incl	1/32	0	0.023
Over 2 1/2 to 3 1/2 incl	3/64	0	0.035
Over 3 1/2 to 4 1/2 incl	1/16	0	0.046
Over 4 1/2 to 5 1/2 incl	5/64	0	0.058
Over 5 1/2 to 6 1/2 incl	1/8	0	0.070
Over 6 1/2 to 8 incl	5/32	0	0.085

- (1) Out-of-Round is the difference between the maximum and minimum diameters of the bar measured at the same cross section.
 (2) Out-of-Square is the difference in the two dimensions at the same cross section of a square bar each dimension being the distance between opposite faces.
 (3) Round sections in the size range of 1/2 to approximately 2" diameter are commonly produced on rod mills in coils. Tolerances on the product made this way have not been established. For such tolerances the producer should be consulted. Variations in size to coiled product made on rod mills are greater than size tolerances for product made on bar mills.
 (4) Squares in this size are not commonly produced as hot rolled product.

HOT ROLLED BARS – Hexagons and Octagons

Specified Size Inches	Variations from Size Inches		Maximum difference 3/4 Measurement for Hexagons only inches
	Under	Over	
1/4 to 1/2 incl	0.007	0.007	0.011
Over 1/2 to 1 incl	0.010	0.010	0.015
Over 1 to 1 1/2 incl	0.021	0.021	0.025
Over 1 1/2 to 2 incl	1/32	1/32	1/32
Over 2 to 2 1/2 incl	3/64	3/64	3/64
Over 2 1/2 to 3 1/2 incl	1/16	1/16	1/16

HOT ROLLED BARS – Flats

Specified widths Inches	Variations from Thickness for Thicknesses Given Over or Under Inches			Variations from Width Inches	
	1/8 to 1/2 Incl	Over 1/2 to 1 Incl	Over 1 to 2 Incl	Over	Under
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	1/32	1/32
Over 4 to 6 incl	0.015	0.020	1/32	1/32	1/32
Over 6 to 8 incl	0.016	0.016	1/32	1/8	5/16
Over 8 to 10 incl	0.021	0.031	1/32	5/32	3/16

ALLOY – SIZE TOLERANCES

HOT ROLLED BARS ROUNDS AND SQUARES				HOT ROLLED BARS ROUND-CORNERED SQUARES	
Specified Size In	Size Tolerances In		Out-of-Round or Square In	Corner Radii	
	Over	Under		Nominal Sizes* Inclusive, In	Nominal Corner Radii In
Over 7/8 to 1 incl	0.009	0.009	0.013	2 to 2 7/16	5/16
Over 1 to 1 1/8 incl	0.010	0.010	0.015	2 1/2 to 2 7/8	3/8
Over 1 1/8 to 1 1/4 incl	0.011	0.011	0.016	3 to 3 3/8	7/16
Over 1 1/4 to 1 3/8 incl	0.012	0.012	0.018	3 1/2 to 3 7/8	1/2
Over 1 3/8 to 1 1/2 incl	0.014	0.014	0.021	4 to 4 1/4	1 1/8
Over 1 1/2 to 2 incl	1/64	1/64	0.023	4 1/2 to 5 1/2	3/4
Over 2 to 2 1/2 incl	1/32	0	0.023		
Over 2 1/2 to 3 1/2 incl	1/64	0	0.035		
Over 3 1/2 to 4 1/2 incl	1/36	0	0.046		
Over 4 1/2 to 5 1/2 incl	5/64	0	0.058		
Over 5 1/2 to 6 1/2 incl	1/8	0	0.070		
Over 6 1/2 to 8 1/4 incl	5/32	0	0.085		
Over 8 1/4 to 9 1/2 incl	3/16	0	0.100		
Over 9 1/2* to 12" incl	1/4	0			

*Sizes are the distances between opposite sides. Round-cornered squares are rolled to dimensions, not to weights per linear foot.

HOT ROLLED BARS FLATS								
Specified Widths In	Tolerances for Thickness and Width						Width Tolerance In	
	Thickness Tolerance for Thickness Given Over or Under In						Over	Under
	Under 1/4	1/4 to 1/2 incl	Over 1/2 to 1 incl	Over 1 to 2 incl	Over 2 to 4 incl			
To 1 incl	0.007	0.008	0.010	—	—	1/64	1/64	
Over 1 to 2 incl	0.007	0.012	0.015	1/32	—	1/32	1/32	
Over 2 to 4 incl	0.008	0.015	0.020	1/32	3/64	1/16	1/32	
Over 4 to 6 incl	0.009	0.015	0.020	1/32	1/16	1/32	1/16	

COLD FINISHED BARS			
Size Inches	Maximum of Carbon Range 0.28 Per Cent or Less As Cold Finished and Without Any Thermal Treatment	Maximum of Carbon Range Over 0.28 to 0.55 Per Cent incl and All Carbons to 0.55 Per Cent Maximum Annealed or Normalized Before Cold Finishing	Maximum of Carbon Range Over 0.55 Per Cent or All Carbons Quenched and Tempered or Normalized and Tempered Before Cold Finishing, or All Carbons Stress Relieved After Cold Finishing

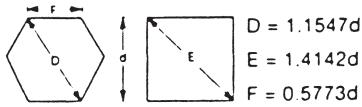
All Tolerances are in inch and are minus.

	ROUNDS		
Up to 1 1/2 incl.	0.003	0.004	0.005
Over 1 1/2 to 2 1/2 incl.	0.004	0.005	0.006
Over 2 1/2 to 4 incl	0.005	0.006	0.007
	HEXAGONS		
Up to 3/4 incl.	0.003	0.004	0.005
Over 3/4 to 1 1/2 incl	0.004	0.005	0.006
Over 1 1/2 to 2 1/2 incl.	0.005	0.006	0.007
Over 2 1/2 to 4 incl.	0.006		
	SQUARES		
Up to 3/4 incl.	0.003	0.005	0.006
Over 3/4 to 1 1/2 incl.	0.004	0.006	0.007
Over 1 1/2 to 2 1/2 incl.	0.005	0.007	0.008
Over 2 1/2 to 4 incl.	0.007	0.009	0.010
	FLATS		
Up to 3/4 incl.	0.004	0.005	0.007
Over 3/4 to 1 1/2 incl.	0.005	0.006	0.009
Over 1 1/2 to 2 1/2 Incl.	0.006	0.007	0.011
Over 3 to 4 incl.	0.007	0.009	0.012
Over 4 to 6 Incl.	0.009	0.011	0.013
Over 6	0.014	—	—

NOTE 1: The tolerances for flats apply to thickness as well as width for both cold drawn and rolled flats.

NOTE 2: Width governs the tolerances for both width and thickness for flats. For example, when the maximum of carbon range is 0.28 per cent or less for a flat 2 in. wide and 1 in. thick, the width tolerance is 0.006 in. and the thickness tolerance is the same, namely, 0.0006 in.

DISTANCES ACROSS CORNERS OF HEXAGONS AND SQUARES



RECTANGLE INSCRIBED IN A CIRCLE (DIAGONAL)

$\sqrt{W^2 + T^2}$
 W = WIDTH T = THICKNESS
 (Squares Root of Sum of Squares of Width and Thickness)

d	D	E	F
1/16	0.0721	0.0884	0.0361
1/8	0.1443	0.1767	0.0721
5/32	0.1804	0.2210	0.0902
3/16	0.2164	0.2651	0.1082
7/32	0.2526	0.3094	0.1263
1/4	0.2886	0.3535	0.1443
9/32	0.3247	0.3977	0.1623
5/16	0.3608	0.4419	0.1803
11/32	0.3968	0.4861	0.1983
3/8	0.4329	0.5303	0.2164
13/32	0.4690	0.5745	0.2344
7/16	0.5051	0.6187	0.2524
15/32	0.5412	0.6629	0.2705
1/2	0.5773	0.7071	0.2885
17/32	0.6133	0.7513	0.3065
9/16	0.6494	0.7955	0.3246
19/32	0.6855	0.8397	0.3426
5/8	0.7216	0.8839	0.3606
21/32	0.7576	0.9281	0.3787
11/16	0.7937	0.9723	0.3967
23/32	0.8298	1.0165	0.4147
3/4	0.8659	1.0606	0.4328
25/32	0.9020	1.1048	0.4508
13/16	0.9380	1.1490	0.4688
27/32	0.9741	1.1932	0.4869
7/8	1.0102	1.2374	0.5049
29/32	1.0463	1.2816	0.5229
15/16	1.0824	1.3258	0.5410
31/32	1.1184	1.3700	0.5590
1	1.1547	1.4142	0.5770
1-1/32	1.1907	1.4584	0.5950
1-1/16	1.2268	1.5026	0.6131
1-3/32	1.2629	1.5468	0.6311
1-1/8	1.2990	1.5910	0.6491
1-5/32	1.3351	1.6452	0.6672
1-3/16	1.3712	1.6793	0.6852
1-7/32	1.4073	1.7235	0.7032
1-1/4	1.4434	1.7677	0.7213
1-9/32	1.4794	1.8119	0.7393
1-5/16	1.5155	1.8561	0.7573
1-11/32	1.5516	1.9003	0.7754
1-3/8	1.5877	1.9445	0.7934
1-13/32	1.6238	1.9887	0.8114
1-7/16	1.6598	2.0329	0.8295
1-15/32	1.6959	2.0771	0.8475
1-1/2	1.7320	2.1213	0.8655
1-17/32	1.7681	2.1655	0.8836
1-9/16	1.8042	2.2097	0.9016
1-19/32	1.8403	2.2539	0.9196
1-5/8	1.8764	2.2981	0.9377
1-21/32	1.9124	2.3423	0.9557
1-11/16	1.9485	2.3865	0.9742
1-23/32	1.9846	2.4306	0.9918
1-3/4	2.0207	2.4708	1.0098

d	D	E	F
1-25/32	2.0568	2.5190	1.0278
1-13/16	2.0929	2.5632	1.0459
1-27/32	2.1289	2.6074	1.0639
1-7/8	2.1650	2.6516	1.0819
1-29/32	2.2011	2.6958	1.1000
1-15/16	2.2372	2.7400	1.1180
1-31/32	2.2733	2.7842	1.1360
2	2.3094	2.8284	1.1540
2-1/32	2.3453	2.8726	1.1720
2-1/16	2.3815	2.9168	1.1901
2-3/32	2.4176	2.9610	1.2081
2-1/8	2.4537	3.0052	1.2261
2-5/32	2.4898	3.0404	1.2442
2-3/16	2.5259	3.0936	1.2622
2-1/4	2.5981	3.1820	1.2983
2-5/16	2.670	3.2703	1.3343
2-3/8	2.7424	3.3587	1.3704
2-7/16	2.8145	3.4471	1.4065
2-1/2	2.8867	3.5355	1.4425
2-9/16	2.9583	3.6239	1.4786
2-5/8	3.0311	3.7123	1.5147
2-11/16	3.1032	3.8007	1.5507
2-3/4	3.1754	3.8891	1.5868
2-13/16	3.2476	3.9794	1.6229
2-7/8	3.3197	4.0658	1.6589
2-15/16	3.3919	4.1542	1.6950
3	3.4641	4.2426	1.7310
3-1/16	3.5362	4.3310	1.7671
3-1/8	3.6084	4.4194	1.8032
3-3/16	3.6806	4.5078	1.8392
3-1/4	3.7627	4.5962	1.8753
3-5/16	3.8249	4.6846	1.9114
3-3/8	3.8971	4.7729	1.9474
3-7/16	3.9692	4.8613	1.9835
3-1/2	4.0414	4.9497	2.0196
3-9/16	4.1136	5.0381	2.0556
3-5/8	4.1857	5.1265	2.0917
3-11/16	4.2579	5.2149	2.1277
3-3/4	4.3301	5.3033	2.1638
3-13/16	4.4023	5.3917	2.1999
3-7/8	4.4744	5.4801	2.2359
3-15/16	4.5466	5.5684	2.2720
4	4.6188	5.6568	2.3080
4-1/8	4.7631	5.8336	2.3801
4-1/4	4.9074	6.0104	2.4523
4-3/8	5.0518	6.1872	2.5244
4-1/2	5.1961	6.3639	2.5965
4-3/4	5.485	6.717	2.7400
5	5.774	7.071	2.8900
5-1/4	6.062	7.425	3.0300
5-1/2	6.351	7.778	3.1800
5-3/4	6.640	8.132	3.3200
6	6.928	8.485	3.4600

NOTE — These are theoretical distances for sharp corners only; in practice they are modified by slight deductions.

Military Specification Index

QQ-A-200	QQ-A-630	QQ-S-741	MIL-B-16261	MIL-N-22987	MIL-S-8840	MIL-S-24669
QQ-A-200 1	QQ-A-1876	QQ-S-763	MIL-B-21230	MIL-N-23228	MIL-S-8844	MIL-S-25043
QQ-A-200 2		QQ-S-764	MIL-B-23921	MIL-N-23229	MIL-S-8949	MIL-S-45203
QQ-A-200 3	QQ-B-370	QQ-S-766	MIL-B-24059	MIL-N-24106	MIL-S-8955	MIL-S-46033
QQ-A-200 4	QQ-B-613	QQ-S-775	MIL-B-24480	MIL-N-24114	MIL-S-11595	MIL-S-46042
QQ-A-200 5	QQ-B-626	QQ-T-570	MIL-B-5079	MIL-N-24469	MIL-S-12875	MIL-S-46044
QQ-A-200 6	QQ-B-637	QQ-T-580	MIL-C-50	MIL-N-46025	MIL-S-13040	MIL-S-46123
QQ-A-200 7	QQ-B-639	QQ-T-590	MIL-C-5541	MIL-N-46026	MIL-S-13336	MIL-S-46172
QQ-A-200 9	QQ-B-655	QQ-T-750	MIL-C-15345	MIL-P-1144	MIL-S-16113	MIL-S-46850
QQ-A-200 10	QQ-B-679	QQ-W-321	MIL-C-15726	MIL-P-11858	MIL-S-16216	MIL-S-81242
QQ-A-200 11	QQ-B-728	QQ-W-340	MIL-C-17112	MIL-P-25995	MIL-S-16410	MIL-S-81506
QQ-A-200 12	QQ-B-750	QQ-W-343	MIL-C-20159		MIL-S-16538	MIL-S-83135
QQ-A-200 13		QQ-W-390	MIL-C-21768	MIL-R-1223	MIL-S-16598	MIL-S-86213
QQ-A-200 14	QQ-B-825	QQ-W-401	MIL-C-24111	MIL-R-2327	MIL-S-16974	MIL-T-3520
QQ-A-200 15	QQ-C-390	QQ-W-414	MIL-C-24527	MIL-R-3390	MIL-S-17758	MIL-T-5066
QQ-A-200 16		QQ-W-423	MIL-C-24615	MIL-R-5031	MIL-S-17919	MIL-T-5695
QQ-A-200 17	QQ-C-450	QQ-W-428	MIL-C-60536	MIL-R-5632	MIL-S-18063	MIL-T-6721
	QQ-C-465	QQ-W-461	MIL-C-60539	MIL-R-6944	MIL-S-18170	MIL-T-6731
QQ-A-225		QQ-W-470		MIL-R-10185	MIL-S-18171	MIL-T-6734
QQ-A-225 1	QQ-C-502	QQ-Z-301	MIL-E-6844	MIL-R-18638	MIL-S-18410	MIL-T-6735
QQ-A-225 2	QQ-C-504	RR-T-650	MIL-E-16053	MIL-R-21248	MIL-S-18411	MIL-T-6735
QQ-A-225 3	QQ-C-530		MIL-E-16715		MIL-S-18728	MIL-T-6736
QQ-A-225 4	QQ-C-533	WW-C-00540	MIL-E-19933	MIL-S-853	MIL-S-18729	MIL-T-6737
QQ-A-225 5	QQ-C-576			MIL-S-854	MIL-S-18731	MIL-T-6845
QQ-A-225 6	QQ-C-585	WW-P-351	MIL-F-17132	MIL-S-860	MIL-S-18732	MIL-T-6945
QQ-A-225 7	QQ-C-586	WW-P-357	MIL-F-17280	MIL-S-861	MIL-S-19697	MIL-T-7081
QQ-A-225 8	QQ-C-591	WW-P-377	MIL-F-20138	MIL-S-862	MIL-S-19729	MIL-T-7840
QQ-A-225 9		WW-P-402	MIL-F-23467	MIL-S-86F	MIL-S-20138	MIL-T-7993
	QQ-C-671	WW-P-404	MIL-F-23508	MIL-S-869	MIL-S-20140	MIL-T-8504
QQ-A-250	QQ-E-450		MIL-F-23509	MIL-S-872	MIL-S-20145	MIL-T-8506
QQ-A-250 1		WW-T-700	MIL-F-23999	MIL-S-890	MIL-S-20146	MIL-T-8606
QQ-A-250 2	QQ-F-461	WW-T-700 1	MIL-F-24339	MIL-S-891	MIL-S-20154	MIL-T-8808
QQ-A-250 3	QQ-I-686	WW-T-700 2	MIL-F-24342	MIL-S-980	MIL-S-20166	MIL-T-8973
QQ-A-250 4		WW-T-700 3	MIL-F-83142	MIL-S-1144	MIL-S-20168	MIL-T-9046
QQ-A-250 5	QQ-L-171	WW-T-700 4	MIL-H-6088	MIL-S-1222	MIL-S-21515	MIL-T-9047
QQ-A-250 6	QQ-L-201	WW-T-700 5		MIL-S-1223	MIL-S-21952	MIL-T-9821
QQ-A-250 7		WW-T-700 6	MIL-I-8950	MIL-S-1796	MIL-S-21977	MIL-T-12117
QQ-A-250 8	QQ-M-31	WW-T-700 7	MIL-I-11444	MIL-S-4043	MIL-S-22141	MIL-T-15005
QQ-A-250 9	QQ-M-40	WW-T-756	MIL-I-11695	MIL-S-4174	MIL-S-22216	MIL-T-16286
QQ-A-250 10	QQ-M-44	WW-T-775	MIL-I-23011	MIL-S-5000	MIL-S-22499	MIL-T-16420
QQ-A-250 11	QQ-M-55	WW-T-791	MIL-I-24137	MIL-S-5031	MIL-S-22698	MIL-T-16992
QQ-A-250 12	QQ-M-56	WW-T-797	MIL-I-45208	MIL-S-5059	MIL-S-23009	MIL-T-17011
QQ-A-250 13	QQ-M-388	WW-T-799		MIL-S-5626		MIL-T-18291
QQ-A-250 14	QQ-N-281	WW-T-825	MIL-L-24128	MIL-S-5696	MIL-STD-129	MIL-T-19081
QQ-A-250 15	QQ-N-286			MIL-S-6049	MIL-STD-163	MIL-T-20157
QQ-A-250 16	QQ-N-288	MIL-A-8625	MIL-M-8916	MIL-S-6050	MIL-STD-649	MIL-T-20168
QQ-A-250 17		MIL-A-8923	MIL-M-8917	MIL-S-6098	MIL-STD-1276	MIL-T-20219
QQ-A-250 18	QQ-R-566	MIL-A-12545	MIL-M-16576	MIL-S-6709		MIL-T-22555
QQ-A-250 19		MIL-A-22771	MIL-M-24130	MIL-S-6721	MIL-T-842	MIL-T-23520
QQ-A-250 20	QQ-S-624	MIL-A-45225	MIL-M-26075	MIL-S-6758	MIL-T-1368	MIL-T-24107
QQ-A-250 21	QQ-S-628	MIL-A-46027	MIL-M-46039	MIL-S-7108		MIL-T-24108
QQ-A-250 22	QQ-S-630	MIL-A-46083	MIL-M-46062	MIL-S-7393	MIL-S-23192	MIL-T-38749
QQ-A-250 23	QQ-S-631	MIL-A-46100		MIL-S-7420	MIL-S-23194	MIL-T-46072
QQ-A-250 24	QQ-S-633	MIL-A-46104	MIL-N-894	MIL-S-7493	MIL-S-23195	MIL-T-81556
QQ-A-250 25	QQ-S-634	MIL-A-46118	MIL-N-6710	MIL-S-7720	MIL-S-23196	
QQ-A-250 26	QQ-S-635	MIL-A-50777	MIL-N-6840	MIL-S-7809	MIL-S-23284	MIL-W-3068
QQ-A-250 27	QQ-S-636	MIL-A-52174	MIL-N-6846	MIL-S-7809	MIL-S-23966	MIL-W-3314
QQ-A-250 28	QQ-S-637	MIL-A-81596	MIL-N-7786	MIL-S-7942	MIL-S-24093	MIL-W-3818
QQ-A-250 29	QQ-S-671		MIL-N-8550	MIL-S-7947	MIL-S-24282	MIL-W-3662
QQ-A-250 30	QQ-S-691	MIL-B-50	MIL-N-14411	MIL-S-7952	MIL-S-24287	MIL-W-4471
QQ-A-367	QQ-S-692	MIL-B-857	MIL-N-15721	MIL-S-8142	MIL-S-24354	MIL-W-4712
	QQ-S-693	MIL-B-5687	MIL-N-17506	MIL-S-8503	MIL-S-24371	MIL-W-6712
QQ-A-430	QQ-S-695	MIL-B-16033	MIL-N-19153	MIL-S-8559	MIL-S-24528	MIL-W-21081
QQ-A-435	QQ-S-713	MIL-B-16166	MIL-N-22840	MIL-S-8690	MIL-S-24538	MIL-W-21425
			MIL-N-22986	MIL-S-8699	MIL-S-24550	MIL-W-46078
						MIL-W-52263

ACCRO-MET WILL ALSO CERTIFY TO DOD SPECIFICATIONS

AMS Index

AMS 4000 - 4197	Aluminum Alloys
AMS 4350 - 4382	Magnesium Alloys
AMS 4500 - 4740	Copper Alloys
AMS 4900 - 4978	Titanium Alloys
AMS 5010 - 5132	Wrought Carbon Steels
AMS 5501 - 5900	Wrought Corrosion and Heat Resistant Steels and Alloys
AMS 6250 - 7205	Wrought Low Alloy Steels

LATEST REVISIONS ARE AVAILABLE

This partial AMS Index is furnished to quickly locate various alloys available through Accro-Met. Please call for availability of other AMS Alloys.

**ALUMINUM
ALLOYS**
Series 4000 - 4197

AMS ALLOY

4000E	1060-0
4001F	1100-0
4003F	1100-H14
4004B	5052-H191
4005B	5056-H191
4006G	3003-0
4007B	2024-0
4008G	3003-H14
4015H	5052-0
4016H	5052-H32
4017H	5050-H34
4021E	6061-0 (Clad)
4022E	6061-T4 (Clad)
4023E	6061-T6 (Clad)
4024C	7079-T6
4025H	6061-0
4026H	6061-T4
4027K	6061-T6
4028E	2014-0
4029G	2014-T6
4031D	2219-0
4035H	2024-0
4036G	2024-T3 (Clad)
4037L	2024-T3
4040K	2024-0 (Clad)
4041M	2024-T3 (Clad)
4044G	7075-0
4046D	7075-T6 (Clad)
4048H	7075-0 (Clad)
4049H	7075-T6 (Clad)
4050D	7050-T7451
4051E	7178-0 (Clad)
4056E	5083-0
4057D	5083-H323
4058D	5083-373
4059E	5083-H321
4062G	1100-H14
4065G	3003-0
4066H	2219-T8511
4067F	3003-H14
4068B	2219-T351
4069B	5052-0
4070J	5052-0
4071J	5052-0
4077D	2024-0 (Clad)
4078D	7075-T7351
4079D	6061-0
4080K	6061-0
4081F	6061-T4
4082L	6061-T6
4083H	6061-T6
4084C	7475-T61
4085B	7475-T761
4086L	2024-T3
4087E	2024-0
4088G	2024-T3
4089B	7475-T7651
4094A	2219-T81 (Clad)
4095A	2219-T31 (Clad)
4096A	2219-0 (Clad)
4100A	7475-T761
4101A	2124-T851
4102E	1100-F
4112B	2024-T6
4113B	6061-T6
4114F	5052-F
4115E	6061-0
4116D	6061-T4
4117F	6061-T6-T651
4118H	2017-T4
4120M	2024-T4
4121F	2014-T6
4122H	7075-T6
4123E	7075-T651
4124B	7075-T7351
4125G	6151-T6

AMS ALLOY

4126A	7075-T6
4127F	6061-T6
4128B	6061-T451
4129B	-
4130J	2025-T6
4131B	7075-T74
4132D	2618-T61
4133C	2014-T6
4134C	2014-T4
4136	7079-T611
4138A	7079-T6
4139G	7075-T6
4140F	2018-T61
4141D	7075-T73
4142B	2218-F
4143B	2219-T6
4144C	2219-T852
4146C	6061-T4
4147B	7075-T7352
4149B	7175-T44
4150H	6061-T6
4152K	2024-T3
4153H	2014-T6
4154L	7075-T6
4156G	6063-T6
4157B	7049-T73511
4159B	7049-T76511
4160E	6061-0
4161D	6061-T4
4162B	2219-T8511
4163B	2219-T3511
4164F	2024-T3510
4165E	2024-T3511
4166C	7075-T73
4167F	7075-T73511
4168F	7075-T6510
4169G	7075-T6511
4171B	7079-T6
4172B	6061-T4511
4173B	6061-T6511
4174B	7075-T73
4179B	7175-T7452
4180D	1100-H18
4181	4008
4182D	5056-0
4186B	7075-F
4187A	7075-0
4192	2024-T361
4193B	2024-T861
4194B	2024 (Clad)
4195B	2024 (Clad)
4156	7011 (Clad)
4197	7011 (Clad)

**MAGNESIUM
ALLOYS**
Series 4350 - 4382

4350K	AZ61A-F
4352F	ZK60A-T5
4360D	AZ80A-T5
4362D	ZK60A
4363D	HM21A-T5
4375H	AZ31B-0
4376E	AZ31B-H26
4377F	AZ31B-H24
4382B	AZ31B-0

**COPPER
ALLOYS**
Series 4500 - 4740

4500F	C110
4501B	C102
4505G	C260
4507F	C260
4508F	-
4510E	C510
4520G	C544
4530E	C172

AMS ALLOY

4532D	C172
4544D	Monel 400
4553	C230
4554	C330
4555F	050
4558E	H58
4574D	Monel 400
4575D	Monel 400
4602B	C102
4610L	C360
4611F	C464
4612G	C464
4614G	C377
4615E	C655
4616D	-
4619D	-
4625F	C510
4631D	637
4632D	617
4635D	C623
4640D	C630
4650H	C172
4651A	C172
4665A	C655
4674E	Monel R405
4675B	Monel 400
4676C	Monel K500
4677A	Monel 502
4700A	C101
4701D	C102
4710E	061
4712D	061
4713D	H00
4720D	H08
4725D	C17200
4730E	Monel 400
4731B	Monel 400
4732B	Cu-Ni
4740A	Cu

**TITANIUM
ALLOYS**
Series 4900 - 4978

4900J	CP
4901L	CP
4902E	CP
4907E	6-4
4908E	8Mn
4909D	5-2.5
4910J	5-2.5
4911F	6-4
4912A	4-3-1
4916F	8-1-1
4919C	6-2-4-2
4920A	6-4
4926H	5-2.5
4928L	6-4
4930C	6-4 ELI
4931	6-4 ELI
4956C	6-4
4957	3-8-6-4-4
4965E	6-4
4966J	5-2.5
4967F	6-4
4972D	8-1-1
4973C	8-1-1
4976D	6-2-4-2
4978C	6-6-2

**WROUGHT
CARBON STEEL**
Series 5010 - 5132

5010H	1212
5020C	11L37
5022K	1117
5024F	1137
5027B	D6AC
5028B	D6AC

AMS ALLOY

5032E	1020
5040J	1010
5042J	1010
5044G	1010
5045F	1020
5046A	1020
5047D	1010
5050J	1010
5053G	1010
5060F	1015
5061D	-
5062E	-
5069E	1018
5070G	1022
5075E	1025
5077E	1025
5080H	1035
5082E	1035
5085D	1050
5120J	1074
5121G	1095
5122G	1095
5132G	1095

**WROUGHT CORROSION
AND HEAT RESISTANT
STEEL**
Series 5501 - 5648

5501B	304
5503C	430
5504H	410
5505C	410 Mod
5506D	420
5507E	316L
5508D	Greek Ascology
5509	D-979
5510M	321
5511F	304L
5512H	347
5513D	304
5514D	305
5515H	302
5516J	302
5517H	301
5518G	301
5519J	301
5520D	PH 15-7Mo
5521F	30310S
5523D	309S
5524G	316
5525F	A286
5526G	19-9DL
5527A	19-9DL
5528E	17-7PH
5529D	17-7PH
5530F	Hastelloy C
5532E	N-155
5536K	Hastelloy X
5537E	L-605
5540K	Inconel 600
5541D	Inconel 722
5542K	Inconel X-750
5544F	Waspaloy
5545B	Rene 41
5546C	AM-350
5547E	AM-355
5548J	AM-350
5549E	AM-355
5550D	Inconel 702
5551A	M-252
5552D	Incoloy 801
5553D	Nickel 201
5554B	AM-350
5555B	Nickel 205
5556E	347
5557G	321
5558D	347
5559F	321

AMS ALLOY

5560G	304
5561B	21-6-9
5562B	21-6-9
5563	304
5564A	304
5565H	304
5566J	304
5567C	304
5568C	17-7PH
5570L	321
5571F	347
5572F	310S
5573H	316
5574C	309S
5575K	347
5576G	321
5577E	310
5580G	Inconel 600
5581B	Inconel 625
5582B	Inconel X750
5583B	Inconel X750
5585C	N-155
5586C	Waspaloy
5587C	Hastelloy X
5588D	Hastelloy X
5589B	Inconel 718
5590B	Inconel 718
5591G	410
5592B	RA 330
5593D	RA 333
5594	AM-355
5595D	21-6-9
5596G	Inconel 718
5597C	Inconel 718
5598B	Inconel X750
5599D	Inconel 625
5604C	17-4PH
5605B	Inconel 706
5606B	Inconel 706
5607C	Hastelloy N
5608B	Haynes 188
5609B	410 Mod
5610L	416
5611B	410 Mod
5612E	410 Modified
5613N	410
5615C	414
5616H	Greek Ascology
5617G	Custom 455
5618C	440C
5619	-
5620E	420 FSø
5621C	420
5622B	17-4PH
5623B	-
5624D	-
5625C	-
5626D	T1
5627D	430
5628D	431
5629C	PH13-8Mo
5630F	440C
5631B	440A
5632F	440F
5633C	CG 27
5634B	CG 27
5635C	3Pb
5636D	302
5637E	302
5638D	3MA
5639F	304
5640P	303
5641E	303 Se
5642H	-
5643M	17-4PH
5644C	17-7PH
5645M	321
5646J	347
5647F	304L
5648G	316

**WROUGHT CORROSION
AND HEAT RESISTANT
STEEL Cont'd.
Series 5649-5900**

AMS ALLOY

AMS ALLOY

**WROUGHT LOW
ALLOY STEEL
Series 6250-7205**

AMS ALLOY

AMS ALLOY

5649D	316FM
5650D	309S
5651G	310
5652E	314
5653C	316L
5654D	347
5655C	422
5656A	21-6-9
5657	PH15-7Mo
5658C	-
5659G	15-5PH
5660G	Incoloy 901
5661D	Incoloy 901 Mod
5662F	Inconel 718
5663G	Inconel 718
5664B	Inconel 718
5665K	Inconel 600
5666C	Inconel 625
5667J	Inconel X750
5668G	Inconel X750
5669	Inconel X750
5670B	Inconel X750
5671E	Inconel X750
5672B	Custom 455
5673D	-
5674C	347
5675C	FM92
5676C	Nichrome V
5677B	Nichrome V
5678B	17-7PH
5679E	FM62
5680F	347
5681D	347
5682C	Nichrome V
5683E	42
5684D	Inconel WE 132
5685H	305
5686E	305
5687J	Inconel 600
5688H	302
5689D	321
5690J	316
5691F	316
5692A	-
5693A	302
5694F	-
5695E	310
5696A	316
5697C	304
5698E	Inconel X750
5699E	Inconel X750
5700D	TPA
5701B	Inconel 706
5702B	Inconel 706
5703B	Inconel 706
5704D	Waspaloy
5705C	CNS
5706H	Waspaloy
5707G	Waspaloy
5708F	Waspaloy
5709E	Waspaloy
5710D	XB
5711B	Hastelloy S
5712F	Rene 41
5713F	Rene 41
5714B	Inconel 722
5715B	Inconel 601
5716E	RA-330
5717E	RA-333
5718A	Jethete M-152
5719B	Jethete M-152
5720	-
5721B	19-9 DL
5722	-
5723	-
5724	19-9 DX

5725B	-
5726B	A286
5727	-
5728	-
5729	-
5730	-
5731H	A286
5732F	A286
5733D	Discaloy
5734F	A286
5735J	-
5736G	-
5737L	A286
5738C	303F
5739C	Almar 362
5740C	Almar 362
5741	-
5742A	801
5743F	AM-355
5744C	AM-355
5745C	AM-350
5746E	D-979
5747A	Inconel X750
5748	AFC-77
5749B	BG-42
5750B	Hastelloy C
5751D	Udimet-500
5752	-
5753B	Udimet-500
5754J	Hastelloy X
5755D	Hastelloy W
5756C	-
5757B	M-252
5758E	MP-35N
5759G	L-605
5760	-
5761A	Pyromet X-15
5762D	203EZ
5763B	Custom 450
5764B	22-13-5
5765B	S-816
5766B	Incoloy 800
5767	-
5768H	N-155
5769D	N-155
5770C	-
5771C	Hastelloy N
5772B	188
5773C	Custom 450
5774C	AM-350
5775B	AM-350
5776C	410
5777C	410
5778C	FM69
5779B	Inconel X750
5780B	AM-355
5781B	AM-355
5782C	19-9 W Mo
5783D	19-9 W Mo
5784B	29-9
5785D	29-9
5786C	Hastelloy W
5787A	Hastelloy W
5788B	Stellite No. 6
5789B	Stellite 31
5790A	-
5791	-
5792	-
5793	-
5794C	N-155
5795D	N-155
5796B	L-605
5797B	L-605
5798C	Hastelloy X
5799C	Hastelloy X
5800C	Rene 41
5801B	Haynes 188
5802	-
5803A	-

5804D	A286
5805E	A286
5806A	Incoloy 903
5809	-
5811A	-
5812D	WPH-15-7 MO-VM
5813B	WPH-15-7 MO
5817C	Greek Ascology
5821C	410 Mod
5822	-
5823B	-
5824B	17-7PH
5825D	17-4PH
5826A	15-5PH
5827C	17-4PH
5828D	Waspaloy
5829B	Nimonic 90
5831	HS-556
5832C	Inconel 718
5833A	Elgiloy
5834A	Elgiloy
5835A	-
5836	Inconel FM-82
5837C	Inconel 625
5838B	Hastelloy S
5840B	PH13-8MO
5841B	MP159
5842B	MP159
5843B	MP159
5844D	MP-35N
5845D	MP-35N
5846	Co-Cr-Mo-Ni
5848	Nitronic 60
5850B	-
5851B	Astroloy M
5852B	Astroloy M
5853	A286
5855A	AF2-1DA
5856A	AF2-1DA
5857	304
5858A	A286
5859B	Custom 450
5860C	Custom 455
5861	22-13-5
5862B	15-5PH
5863B	Custom 450
5864	PH-13-8 Mo
5865B	-
5866	302
5870B	Inconel 601
5871B	Incoloy 800
5872B	Nimonic 263
5873B	Hastelloy S
5874A	HS-556
5875A	Elgiloy
5876A	Elgiloy
5877	-
5878	230
5880	440C
5881A	AF2-1DA
5882B	Astroloy M
5886	Nimonic 263
5887	Inconel 617
5888	Inconel 617
5889	Inconel 617
5890B	-
5895A	A286
5900A	-

6250H	3310
6255	CBS 600
6252A	CBS 1000M
6260K	9310
6263G	9315
6264G	9317
6265G	9310
6267C	9310
6270L	8615
6272G	8617
6274K	8620
6275E	94B17
6276F	8620
6277D	8620
6278	-
6280G	8630
6281F	£630
6282G	8735
6290F	4615
6292F	4617
6294F	4620
6299C	4320H
6300C	4037
6302E	17-22A(S)
6303D	17-22A(V)
6304G	17-22A
6304	17-22A
6305A	17-22A
6312E	4640
6317E	4640
6320J	8735
6321D	81B40
6322K	8740
6323G	8740
6324E	8740 Mod
6325F	8740
6327G	8740
6328H	8750
6330D	3135
6335	-
6342G	9840
6348A	4130
6349A	4140
6350G	4130
6351E	4130
6352E	4135
6354C	NAX 9115-AC
6355K	8630
6356D	4132
6357F	8735
6358F	8740
6359E	4340
6360J	4130
6361B	4130
6362D	4130
6365H	4135
6370J	4130
6371G	4130
6372G	4135
6373C	4130
6374A	4130
6378D	4142H Mod
6379A	4140 Mod
6381D	4140
6382J	4140
6385D	17-22A(SS)
6386B	-
6390C	4140
6395C	4140
6396B	-
6406C	X200
6407E	HS-220
6408	-
6409	4340
6411C	4330 Mod
6412J	4337
6413G	4337
6414E	4340
6415L	4340

6416B	-
6417C	300 M
6418F	Hy-Tuf
6419C	300 M
6420	-
6421C	98B37 Mod
6425	Hy-Tuf
6427G	4330 Mod
6428D	4335 Mod
6429C	4335 Mod
6430D	4335 Mod
6431G	D6AC
6432A	D6A
6433D	4335 Mod
6434D	4335 Mod
6435C	4335 Mod
6436B	17-22A(V)
6437D	H-11
6438C	D6AC
6439B	D6AC
6440J	5210
6444G	5210
6445E	5110
6447C	5210
6448F	6150
6449C	5110
6450E	6150
6454A	4340
6456	4340 Mod
6470J	135 Mod
6471C	135 Mod
6472B	135 Mod
6475E	-
6476	-
6477	-
6485F	H-11
£487F	H-11
6488D	H-11
6490D	M-50
6501	Maraging 250
6512B	Maraging 250
6514B	Maraging 300
6519A	-
6520B	Maraging 250
6521A	Maraging 300
6522A	AF-1410
6523C	HP 9-4-20
6524B	HP 9-4-30
6525A	HP 9-4-20
6526C	HP 9-4-30
6527A	AF 1410
6528	4130
6529	4140
6535G	8630
6550H	8630
7205E	1074

