



# Coyote Steel & Co.

No. 1  
Handbook of  
**STEEL**  
**SIZES & WEIGHTS**  
For Industry

2030 Cross Street  
Eugene, Oregon 97402  
USA

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*"Good Steel, Good Service"*

# Coyote Steel & Co.

## ADDITIONAL PRODUCTS

### COLD FINISHED STEEL BARS

Round • Flat • Square • Hex  
C-1018 • C-1045 TG&P  
12L14 (Free Machining)  
StressProof® C.D. (Ebony) & G&P  
Chrome Rod • Nitro Bar

### DRILL ROD/ TOOL STEEL

Drill Rod: W-1 , 0-1 , A-2  
Square W-1  
Precision Ground Flat 0-1  
Metric Drill Rod 0-1 • A-2 Plate

### ALLOY STEELS

4140 H.R. Heat Treated • TG&P Heat Treated  
4140 H.R. Annealed Rod & Plate  
C.D. 41L40 Annealed  
H.R. 8620 • C.D. 86L20

### ALUMINUM

Round • Rectangle • Square • Hex  
Tubing • Pipe • Angle • Channel  
Sheet • Plate • Tread Plate (Diamond Pattern)  
Expanded Aluminum • Grating Products  
Embossed • Perforated • Special Extrusions

### STAINLESS STEEL

Round • Strip • Flat • Square • Hex  
Angle • Channel • Sheet • Plate  
Tubing: Round, Square, Rectangular  
Pipe • Wire • Perforated

### BRASS

Round • Flat • Square • Hex  
Sheet • Plate • Tubing • Pipe

### COPPER

Round • Bus Bar • Square  
Sheet • Plate • Pipe • Tubing

### BRONZE

Round • Bushing Stock

### THREADED ROD

Coarse • Fine • Plated • Plain  
Acme • Coil Rod • Stainless • Metric  
Grade: 5 • B-7  
NUTS & BOLTS —All Kinds

### MISC.

Music Wire • Brass & Stainless Wire  
Blue Tempered Clock Spring  
Shim Stock: Steel, Stainless, & Brass  
Spring Steel • Plow Steel • Tie Wire

### ORNAMENTAL IRON PRODUCTS

Spears & Finials: Cast Iron, Plastic • Rosettes  
Leaves: Cast Iron & Stamped • Newel Post  
Balls, Caps & Plugs • Decorative Rings & Baskets  
Malleable Iron Handrail & Fittings • Base Plate  
Door & Gate Hardware • Steel Lock Boxes  
Twisted & Hammered Bars

### INDUSTRIAL SUPPLIES

Welding Supplies • Chain  
Casters—All Kinds  
Hinges: Continuous, Butt, & Barrel  
Tie Down Accessories

### TRAILER RUNNING GEAR

Axles (New Factory)  
Straight • Drop • Idler • Electric • Hydraulic  
Torflex® Torsion Tube Axles  
Springs • Hanger Kits • Hubs & Spindles  
Fenders • Couplers (All Types) • Hitch Balls  
Jacks • Winches  
Lights, Wire & Accessories  
Wheels & Tires • Misc. Hardware  
(REPLACEMENT PARTS)

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**We have attempted to list the most general and commonly used steel items. However, for information on items not listed (aluminum, stainless, brass, copper, etc.), just phone our sales office.**

## — PUBLISHER'S WARNING —

*Every effort has been made to make this handbook as accurate as possible. However, there may be mistakes. This publication is designed to provide basic information for general reference. For more specific information see manufacturer specification sheets. If advice or assistance is required, the services of an expert in this field should be sought. The publisher, writer, or any and all distributors of this book make no express or implied warranties and take no responsibility for errors or omissions of the matter contained herein.*

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# H.R. ROUND BAR

\*HOT ROLLED MILD STEEL  
x 20' BAR LENGTH

1

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
3/16	.094	1.88	3	24.03	480.60
1/4	.167	3.34	3-1/4	28.21	564.20
5/16	.261	5.22	3-1/2	32.71	654.20
3/8	.376	7.52	3-5/8	35.09	701.80
7/16	.511	10.22	3-3/4	37.55	751.00
1/2	.668	13.36	4	42.73	854.60
9/16	.845	16.90	4-1/4	48.23	964.60
5/8	1.04	20.80	4-1/2	54.08	1081.60
3/4	1.50	30.00	4-3/4	60.25	1205.00
7/8	2.04	40.80	5	66.76	1335.20
1	2.67	53.40	5-1/4	73.60	1472.00
1-1/8	3.38	67.60	5-1/2	80.78	1615.60
1-1/4	4.17	83.40	5-3/4	88.29	1765.80
1-3/8	5.05	101.00	6	96.13	1922.60
1-1/2	6.01	120.20	6-1/4	104.31	2086.20
1-5/8	7.05	141.00	6-1/2	112.82	2256.40
1-3/4	8.18	163.60	6-3/4	121.67	2433.40
1-7/8	9.39	187.80	7	130.85	2617.00
2	10.68	213.60	7-1/4	140.36	2807.20
2-1/8	12.06	241.20	7-1/2	150.21	3004.20
2-1/4	13.52	270.40	7-3/4	160.40	3208.00
2-3/8	15.06	301.20	8	170.90	3418.00
2-1/2	16.69	333.80	8-1/2	192.93	3858.60
2-5/8	18.40	368.00	9	216.30	4326.00
2-3/4	20.19	403.80	9-1/2	241.00	4820.00
			10	267.04	5340.80

\*OTHER GRADES AVAILABLE



HALF OVAL/HALF ROUND— INQUIRE

2



# REBAR, ROUND

ROUND CONCRETE  
REINFORCING STEEL

BAR SIZE DESIGNA- TION	DIAMETER IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	CROSS SECTIONAL AREA SQ. INCHES	PERIMETER INCHES
#3	3/8	.376	7.52	.11	1.178
#4	1/2	.668	13.36	.20	1.571
#5	5/8	1.043	20.86	.31	1.963
#6	3/4	1.502	30.04	.44	2.356
#7	7/8	2.044	40.88	.60	2.749
#8	1	2.670	53.40	.79	3.142

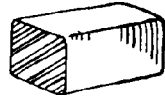
\* BAR SIZE DESIGNATION= THE NUMBER OF EIGHTHS  
OF AN INCH IN NOM. DIA. LARGER SIZES AVAILABLE

MESH/TIE WIRE— INQUIRE

REDI-BOLT/THREADED ROD— INQUIRE

# H.R. SQUARE BAR

HOT ROLLED  
MILD STEEL



3

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1/4	.213	4.26
3/8	.478	9.56
1/2	.850	17.02
5/8	1.33	26.60
3/4	1.91	38.20
7/8	2.60	52.06
1	3.40	68.00
1-1/8	4.30	86.00

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1-1/4	5.31	106.20
1-1/2	7.65	153.00
1-3/4	10.41	208.20
2	13.60	272.00
2-1/4	17.20	344.00
2-1/2	21.25	425.00
3	30.60	612.00

# H.R. STRIP (BANDS)

HOT ROLLED  
MILD STEEL



4

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1/8x		
3/8	.159	3.18
1/2	.213	4.26
5/8	.266	5.32
3/4	.319	6.38
7/8	.372	7.44
1	.425	8.50
1-1/4	.531	10.62
1-1/2	.638	12.76
1-3/4	.744	14.88
2	.850	17.00
2-1/4	.956	19.12
2-1/2	1.063	21.26
2-3/4	1.169	23.38
3	1.275	25.50
3-1/2	1.488	29.76
4	1.700	34.00
4-1/2	1.913	38.26
5	2.125	42.50
5-1/2	2.338	46.76
6	2.550	51.00
8	3.400	68.00
10	4.250	85.00
12	5.100	102.00

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
3/16x		
3/8	.239	4.78
1/2	.319	6.38
5/8	.398	7.96
3/4	.478	9.56
7/8	.558	11.16
1	.638	12.76
1-1/4	.797	15.94
1-1/2	.956	19.12
1-3/4	1.116	22.40
2	1.276	25.60
2-1/4	1.430	28.60
2-1/2	1.590	31.80
3	1.913	38.20
3-1/4	2.070	41.40
3-1/2	2.230	44.60
4	2.550	51.00
4-1/2	2.870	57.40
5	3.190	63.80
6	3.830	76.60
7	4.460	89.20
8	5.100	102.00
9	5.740	114.80
10	6.380	127.60
12	7.650	153.00



# H.R. FLAT BAR

**HOT ROLLED  
MILD STEEL**

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>1/4x</b>			<b>3/8x</b>		
1/2	.425	8.50	2	2.550	51.00
5/8	.531	10.62	2-1/4	2.869	57.38
3/4	.638	12.76	2-1/2	3.188	63.76
1	.850	17.00	3	3.825	76.50
1-1/4	1.063	21.26	3-1/2	4.463	89.26
1-1/2	1.275	25.50	4	5.100	102.00
1-3/4	1.488	29.76	4-1/2	5.738	114.76
2	1.700	34.00	5	6.375	127.50
2-1/4	1.913	38.26	5-1/2	7.013	140.26
2-1/2	2.125	42.50	6	7.650	153.00
2-3/4	2.338	46.76	8	10.200	204.00
3	2.550	51.00	<b>1/2x</b>		
3-1/2	2.975	59.50	3/4	1.275	25.50
4	3.400	68.00	1	1.700	34.00
4-1/2	3.825	76.50	1-1/4	2.125	42.50
5	4.250	85.00	1-1/2	2.550	51.00
6	5.100	102.00	1-3/4	2.975	59.50
7	5.950	119.00	2	3.400	68.00
8	6.800	136.00	2-1/4	3.825	76.50
<b>5/16x</b>			2-1/2	4.250	85.00
1/2	.531	10.62	2-3/4	4.675	93.50
3/4	.797	15.94	3	5.100	102.00
1	1.063	21.26	3-1/2	5.950	119.00
1-1/4	1.328	26.56	4	6.800	136.00
1-1/2	1.594	31.88	4-1/2	7.650	153.00
1-3/4	1.859	37.18	5	8.500	170.00
2	2.125	42.50	5-1/2	9.350	187.00
2-1/4	2.391	47.82	6	10.200	204.00
2-1/2	2.656	53.12	7	11.900	238.00
3	3.188	63.76	8	13.600	272.00
3-1/4	3.450	69.00	<b>5/8x</b>		
3-1/2	3.719	74.38	1	2.125	42.50
4	4.250	85.00	1-1/4	2.656	53.12
5	5.313	106.26	1-1/2	3.188	63.76
5-1/2	5.844	116.80	2	4.250	85.00
6	6.375	127.50	2-1/2	5.313	106.30
8	8.500	170.00	2-3/4	5.844	116.90
<b>3/8x</b>			3	6.375	127.50
1/2	.638	12.76	3-1/2	7.438	148.80
5/8	.797	15.94	4	8.500	170.00
3/4	.956	19.12	4-1/2	9.563	191.30
1	1.275	25.50	5	10.630	212.60
1-1/4	1.594	31.88	5-1/2	11.690	233.80
1-1/2	1.913	38.26	6	12.750	255.00
1-3/4	2.231	44.62	7	14.880	297.60
			8	17.000	340.00

# H.R. FLAT BAR

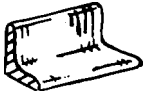
HOT ROLLED  
MILD STEEL



SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>3/4x</b>		
1	<b>2.550</b>	51.00
1-1/4	<b>3.188</b>	63.76
1-1/2	<b>3.825</b>	76.50
1-3/4	<b>4.463</b>	89.26
2	<b>5.100</b>	102.00
2-1/2	<b>6.375</b>	127.50
3	<b>7.650</b>	153.00
3-1/2	<b>8.925</b>	178.50
4	<b>10.200</b>	204.00
4-1/2	<b>11.480</b>	229.60
5	<b>12.750</b>	255.00
5-1/2	<b>14.030</b>	280.60
6	<b>15.300</b>	306.00
7	<b>17.850</b>	357.00
8	<b>20.400</b>	408.00
<b>7/8x</b>		
1	<b>2.975</b>	59.50
1-1/4	<b>3.719</b>	74.38
1-1/2	<b>4.463</b>	89.26
1-3/4	<b>5.206</b>	104.10
2	<b>5.950</b>	119.00
2-1/4	<b>6.694</b>	133.90
2-1/2	<b>7.438</b>	148.80
3	<b>8.925</b>	178.50
3-1/2	<b>10.410</b>	208.20
4	<b>11.900</b>	238.00
5	<b>14.800</b>	297.60
6	<b>17.850</b>	357.00
7	<b>20.830</b>	416.40
8	<b>23.800</b>	476.00
<b>1x</b>		
1-1/4	<b>4.250</b>	85.00
1-1/2	<b>5.100</b>	102.00
1-3/4	<b>5.950</b>	119.00
2	<b>6.800</b>	136.00
2-1/4	<b>7.650</b>	153.00
2-1/2	<b>8.500</b>	170.00
3	<b>10.200</b>	204.00
3-1/2	<b>11.900</b>	238.00
4	<b>13.600</b>	272.00
4-1/2	<b>15.300</b>	306.00
5	<b>17.000</b>	340.00
6	<b>20.400</b>	408.00
7	<b>23.800</b>	476.00
8	<b>27.200</b>	544.00

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>1-1/4x</b>		
2	<b>8.50</b>	170.00
2-1/2	<b>10.63</b>	212.60
3	<b>12.75</b>	255.00
3-1/2	<b>14.88</b>	297.60
4	<b>17.00</b>	340.00
4-1/2	<b>19.13</b>	382.60
5	<b>21.25</b>	425.00
6	<b>25.50</b>	510.00
7	<b>29.75</b>	595.20
8	<b>34.00</b>	680.00
<b>1-1/2x</b>		
2	<b>10.20</b>	204.00
2-1/2	<b>12.75</b>	255.00
3	<b>15.30</b>	306.00
3-1/2	<b>17.85</b>	357.00
4	<b>20.40</b>	408.00
4-1/2	<b>22.95</b>	459.00
5	<b>25.50</b>	510.00
6	<b>30.60</b>	612.00
7	<b>35.70</b>	714.00
8	<b>40.80</b>	816.00
<b>1-3/4x</b>		
2-1/2	<b>14.88</b>	297.60
3	<b>17.85</b>	357.00
3-1/2	<b>20.83</b>	416.60
4	<b>23.80</b>	476.00
4-1/2	<b>26.78</b>	535.60
5	<b>29.75</b>	595.00
6	<b>35.70</b>	714.00
8	<b>47.60</b>	952.00
<b>2x</b>		
2-1/2	<b>17.00</b>	340.00
3	<b>20.40</b>	408.00
3-1/2	<b>23.80</b>	476.00
4	<b>27.20</b>	544.00
4-1/2	<b>30.60</b>	612.00
5	<b>34.00</b>	680.00
6	<b>40.80</b>	816.00
8	<b>54.40</b>	1088.00
<b>2-1/2x</b>		
3	<b>25.50</b>	510.00
3-1/2	<b>29.75</b>	595.00
4	<b>34.00</b>	680.00
4-1/2	<b>38.26</b>	765.20
5	<b>42.50</b>	850.00
5-1/2	<b>46.75</b>	935.00
6	<b>51.00</b>	1020.00
8	<b>68.00</b>	1360.00
<b>3x</b>		
4	<b>40.80</b>	816.00
4-1/2	<b>45.90</b>	918.00
5	<b>51.00</b>	1020.00
6	<b>61.20</b>	1224.00
8	<b>81.60</b>	1632.00

Over 8" wide—see U.M. Plate



# ANGLE, BAR SIZE

SMALL ANGLE  
UNDER 3"

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>1/2x1/2x</b>		
1/8	<b>.38</b>	7.6
<b>3/4x3/4x</b>		
1/8	<b>.59</b>	11.8
<b>1x1x</b>		
1/8	<b>.80</b>	16.0
3/16	<b>1.16</b>	23.2
1/4	<b>1.49</b>	29.8
<b>1-1/4x1-1/4x</b>		
1/8	<b>1.01</b>	20.2
3/16	<b>1.48</b>	29.6
1/4	<b>1.92</b>	38.4
<b>1-1/2x1-1/2 x</b>		
1/8	<b>1.23</b>	24.6
3/16	<b>1.80</b>	36.0
1/4	<b>2.34</b>	46.8
5/16	<b>2.86</b>	57.2
3/8	<b>3.35</b>	67.0
<b>1-3/4x1-3/4x</b>		
1/8	<b>1.44</b>	28.8
3/16	<b>2.12</b>	42.4
1/4	<b>2.77</b>	55.4

**GALVANIZED AVAILABLE**

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>2x1-1/2x</b>		
1/8	<b>1.44</b>	28.8
3/16	<b>2.12</b>	42.4
1/4	<b>2.77</b>	55.4
<b>2x2x</b>		
1/8	<b>1.65</b>	33.0
3/16	<b>2.44</b>	48.8
1/4	<b>3.19</b>	63.8
5/16	<b>3.92</b>	78.4
3/8	<b>4.70</b>	94.0
<b>2-1/2x1-1/2x</b>		
3/16	<b>2.44</b>	48.8
1/4	<b>3.19</b>	63.8
5/16	<b>3.92</b>	78.4
<b>2-1/2x2x</b>		
3/16	<b>2.75</b>	55.0
1/4	<b>3.62</b>	72.4
5/16	<b>4.50</b>	90.0
3/8	<b>5.30</b>	106.00
<b>2-1/2x2-1/2x</b>		
3/16	<b>3.07</b>	61.4
1/4	<b>4.10</b>	82.0
5/16	<b>5.00</b>	100.0
3/8	<b>5.90</b>	118.0
1/2	<b>7.70</b>	154.0



# ANGLE, STRUCTURAL

STRUCTURAL ANGLE  
3" & OVER ASTM A-36

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>3x2x</b>		
3/16	<b>3.07</b>	61.4
1/4	<b>4.10</b>	82.0
5/16	<b>5.00</b>	100.0
3/8	<b>5.90</b>	118.0
1/2	<b>7.70</b>	154.0
	FORMED ANGLE INQUIRE	
<b>3x2-1/2x</b>		
1/4	<b>4.50</b>	90.0
5/16	<b>5.60</b>	112.0
3/8	<b>6.60</b>	132.0
1/2	<b>8.50</b>	170.0

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>3x3x</b>		
3/16	<b>3.71</b>	74.2
1/4	<b>4.90</b>	98.0
5/16	<b>6.10</b>	122.0
3/8	<b>7.20</b>	144.0
7/16	<b>8.30</b>	166.0
1/2	<b>9.40</b>	188.0
<b>3-1/2x2-1/2x</b>		
1/4	<b>4.90</b>	98.0
5/16	<b>6.10</b>	122.0
3/8	<b>7.20</b>	144.0
1/2	<b>9.40</b>	188.0

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# ANGLE, STRUCTURAL

STRUCTURAL ANGLE  
3" & OVER ASTM A-36



SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>3-1/2x3x</b>		
1/4	<b>5.40</b>	108.0
5/16	<b>6.60</b>	132.0
3/8	<b>7.90</b>	158.0
1/2	<b>10.20</b>	204.0
<b>3-1/2x3-1/2x</b>		
1/4	<b>5.80</b>	116.0
5/16	<b>7.20</b>	144.0
3/8	<b>8.50</b>	170.0
1/2	<b>11.10</b>	222.0
<b>4x3x</b>		
1/4	<b>5.80</b>	116.0
5/16	<b>7.20</b>	144.0
3/8	<b>8.50</b>	170.0
1/2	<b>11.10</b>	222.0
5/8	<b>13.60</b>	272.0
<b>4x3-1/2x</b>		
1/4	<b>6.20</b>	124.0
5/16	<b>7.70</b>	154.0
3/8	<b>9.10</b>	182.0
1/2	<b>11.90</b>	238.0
<b>4x4x</b>		
1/4	<b>6.60</b>	132.0
5/16	<b>8.20</b>	164.0
3/8	<b>9.80</b>	196.0
1/2	<b>12.80</b>	256.0
5/8	<b>15.70</b>	314.0
3/4	<b>18.50</b>	370.0
<b>5x3x</b>		
1/4	<b>6.60</b>	132.0
5/16	<b>8.20</b>	164.0
3/8	<b>9.80</b>	196.0
1/2	<b>12.80</b>	256.0
<b>5x3-1/2x</b>		
1/4	<b>7.00</b>	140.0
5/16	<b>8.70</b>	174.0
3/8	<b>10.40</b>	208.0
1/2	<b>13.60</b>	272.0
5/8	<b>16.80</b>	336.0
3/4	<b>19.80</b>	396.0

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>5x5x</b>		
5/16	<b>10.30</b>	206.0
3/8	<b>12.30</b>	246.0
1/2	<b>16.20</b>	324.0
5/8	<b>20.00</b>	400.0
3/4	<b>23.60</b>	472.0
<b>6x3-1/2x</b>		
1/4	<b>7.90</b>	158.0
5/16	<b>9.80</b>	196.0
3/8	<b>11.70</b>	234.0
1/2	<b>15.30</b>	306.0
<b>6x4x</b>		
5/16	<b>10.30</b>	206.0
3/8	<b>12.30</b>	246.0
1/2	<b>16.20</b>	324.0
5/8	<b>20.00</b>	400.0
3/4	<b>23.60</b>	472.0
<b>6x6x</b>		
5/16	<b>12.50</b>	250.0
3/8	<b>14.90</b>	298.0
1/2	<b>19.60</b>	392.0
5/8	<b>24.20</b>	484.0
3/4	<b>28.76</b>	574.0
7/8	<b>33.10</b>	662.0
1	<b>37.40</b>	748.0
<b>7x4x</b>		
3/8	<b>13.60</b>	272.0
1/2	<b>17.90</b>	358.0
<b>8x4x</b>		
1/2	<b>19.60</b>	392.0
5/8	<b>24.20</b>	484.0
3/4	<b>28.70</b>	574.0
<b>8x6x</b>		
1/2	<b>23.00</b>	460.0
5/8	<b>28.50</b>	570.0
<b>8x8x</b>		
1/2	<b>26.40</b>	528.0
5/8	<b>32.70</b>	654.0
3/4	<b>38.90</b>	778.0
1	<b>51.00</b>	1020.0
<b>9x4x</b>		
1/2	<b>21.30</b>	426.0





## CHANNEL, BAR SIZE SMALL CHANNEL UNDER 3"

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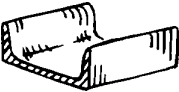
SIZE IN INCHES	WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	SIZE IN INCHES	WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
3/4x3/8x1/8	.56	11.2	1-3/4x1/2x3/16	1.55	31.0
1x1/2x1/8	.83	16.6	2x1/2x1/8	1.43	26.6
1-1/4x1/2x1/8	1.01	20.2	2x9/16x3/16	1.76	35.2
1-1/2x1/2x1/8	1.12	22.4	2x1x1/8	1.78	35.6
1-1/2x3/4x1/8	1.17	23.4	2x1x3/16	2.57	51.4



## CHANNEL, JUNIOR JUNIOR CHANNEL (STAIR STRINGERS) SPECIAL SHAPES

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CHANNEL DEPTH x WT./FT.	WEIGHT PER FT. POUNDS	WEB THICKNESS INCHES	FLANGE WIDTH IN INCHES	CHANNEL DEPTH x WT./FT.	WEIGHT PER FT. POUNDS	WEB THICKNESS INCHES	FLANGE WIDTH IN INCHES
8 x	8.5	*3/16	1-7/8	10 x	8.4	*3/16	1-1/2
10 x	6.5	*3/16	1-1/8	12 x	10.6	*3/16	1-1/2



## CHANNEL, STRUCTURAL STANDARD CHANNEL (AMERICAN STD.) C-SHAPES ASTM A-36

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DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus Sx In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
(Nominal Size) <b>C3 x</b>	<b>4.1</b>	<b>*3</b>	<b>1-3/8</b>	<b>1/4</b>	<b>3/16</b>	1.21	1.10	.89
(3x1-1/2)	<b>5.0</b>	<b>3</b>	<b>1-1/2</b>	<b>1/4</b>	<b>1/4</b>	1.47	1.24	.91
	<b>6.0</b>	<b>3</b>	<b>1-5/8</b>	<b>1/4</b>	<b>3/8</b>	1.76	1.38	.97
<b>C4 x</b>	<b>5.4</b>	<b>4</b>	<b>1-5/8</b>	<b>5/16</b>	<b>3/16</b>	1.59	1.93	1.11
(4x1-5/8)	<b>6.25</b>	<b>4</b>	<b>1-5/8</b>	<b>5/16</b>	<b>1/4</b>	1.82	2.10	1.12
	<b>7.25</b>	<b>4</b>	<b>1-3/4</b>	<b>5/16</b>	<b>5/16</b>	2.13	2.29	1.13
<b>C5 x</b>	<b>6.7</b>	<b>5</b>	<b>1-3/4</b>	<b>5/16</b>	<b>3/16</b>	1.97	3.00	1.33
(5x1-3/4)	<b>9.0</b>	<b>5</b>	<b>1-7/8</b>	<b>5/16</b>	<b>5/16</b>	2.64	3.56	1.35
<b>C6 x</b>	<b>8.2</b>	<b>6</b>	<b>1-7/8</b>	<b>5/16</b>	<b>3/16</b>	2.40	4.38	1.54
(6x2)	<b>10.5</b>	<b>6</b>	<b>2</b>	<b>5/16</b>	<b>5/16</b>	3.09	5.06	1.56
	<b>13.0</b>	<b>6</b>	<b>2-1/8</b>	<b>5/16</b>	<b>7/16</b>	3.83	5.80	1.58
<b>C7 x</b>	<b>9.8</b>	<b>7</b>	<b>2-1/8</b>	<b>3/8</b>	<b>3/16</b>	2.87	6.08	1.76
(7x2-1/8)	<b>12.25</b>	<b>7</b>	<b>2-1/4</b>	<b>3/8</b>	<b>5/16</b>	3.60	6.93	1.78
	<b>14.75</b>	<b>7</b>	<b>2-1/4</b>	<b>3/8</b>	<b>7/16</b>	4.33	7.78	1.83
<b>C8 x</b>	<b>11.5</b>	<b>8</b>	<b>2-1/4</b>	<b>3/8</b>	<b>1/4</b>	3.38	8.14	1.98
(8x2-1/4)	<b>13.75</b>	<b>8</b>	<b>2-3/8</b>	<b>3/8</b>	<b>5/16</b>	4.04	9.03	1.99
(CONTINUED)	<b>18.75</b>	<b>8</b>	<b>2-1/2</b>	<b>3/8</b>	<b>1/2</b>	5.51	11.00	2.02

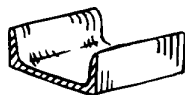
**\*APPROX. DIMENSIONS FOR DETAILING ONLY**  
THE ROUNDING OFF OF DECIMAL DIMENSIONS TO FRACTIONS CAN LEAD TO AN ACCUMULATION OF DIFFERENCES (SEE A.I.S.C. MANUAL)

**FORMED CHANNEL AVAILABLE** 

\*\*FOR PAINTING & SANDBLASTING SURFACE AREA (ALL AROUND) SQUARE FOOT Ft<sup>2</sup> PER FOOT OF LENGTH

# CHANNEL, STRUCTURAL

STANDARD CHANNEL  
(AMERICAN STD.)  
C-SHAPES ASTM A-36

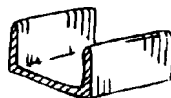


DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus Sx In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
(Nominal Size) <b>C9 x</b>	<b>13.4</b>	<b>*9</b>	<b>2-3/8</b>	<b>7/16</b>	<b>1/4</b>	3.94	10.6	2.19
(9x2-1/2)	<b>15.0</b>	<b>9</b>	<b>2-1/2</b>	<b>7/16</b>	<b>5/16</b>	4.41	11.3	2.20
	<b>20.0</b>	<b>9</b>	<b>2-5/8</b>	<b>7/16</b>	<b>7/16</b>	5.88	13.5	2.31
<b>C10 x</b>	<b>15.3</b>	<b>10</b>	<b>2-5/8</b>	<b>7/16</b>	<b>1/4</b>	4.49	13.5	2.41
(10x2-5/8)	<b>20.0</b>	<b>10</b>	<b>2-3/4</b>	<b>7/16</b>	<b>3/8</b>	5.88	15.8	2.43
	<b>25.0</b>	<b>10</b>	<b>2-7/8</b>	<b>7/16</b>	<b>1/2</b>	7.35	18.2	2.46
	<b>30.0</b>	<b>10</b>	<b>3</b>	<b>7/16</b>	<b>11/16</b>	8.82	20.7	2.46
<b>C12 x</b>	<b>20.7</b>	<b>12</b>	<b>3</b>	<b>1/2</b>	<b>5/16</b>	6.09	21.5	2.84
(12x3)	<b>25.0</b>	<b>12</b>	<b>3</b>	<b>1/2</b>	<b>3/8</b>	7.35	24.1	2.86
	<b>30.0</b>	<b>12</b>	<b>3-1/8</b>	<b>1/2</b>	<b>1/2</b>	8.82	27.0	2.88
<b>C15 x</b>	<b>33.9</b>	<b>15</b>	<b>3-3/8</b>	<b>5/8</b>	<b>3/8</b>	9.96	42.0	3.45
(15x3-3/8)	<b>40.0</b>	<b>15</b>	<b>3-1/2</b>	<b>5/8</b>	<b>1/2</b>	11.80	46.5	3.47
	<b>50.0</b>	<b>15</b>	<b>3-3/4</b>	<b>5/8</b>	<b>11/16</b>	14.70	53.8	3.51

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# CHANNEL, SHIP

CHANNEL, SHIP & CAR BUILDING  
MC - MISC. SHAPES  
ASTM A-36

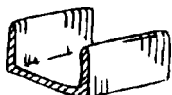


DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus Sx In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
(Nominal Size) <b>MC3 x</b>	<b>7.1</b>	<b>*3</b>	<b>2</b>	<b>3/8</b>	<b>5/16</b>	2.09	1.82	1.09
(3x1-15/16)	<b>9.0</b>	<b>3</b>	<b>2-1/8</b>	<b>3/8</b>	<b>1/2</b>	2.65	2.10	1.13
<b>MC4 x</b>	<b>13.8</b>	<b>4</b>	<b>2-1/2</b>	<b>1/2</b>	<b>1/2</b>	4.06	4.46	1.42
(4x2-1/2)								
<b>MC6 x</b>	<b>12.0</b>	<b>6</b>	<b>2-1/2</b>	<b>3/8</b>	<b>5/16</b>	3.53	6.24	1.73
(6x2-1/2)								
<b>MC6 x</b>	<b>15.1</b>	<b>6</b>	<b>3</b>	<b>1/2</b>	<b>5/16</b>	4.44	8.32	1.86
(6x3)	<b>16.3</b>	<b>6</b>	<b>3</b>	<b>1/2</b>	<b>3/8</b>	4.79	8.68	1.87
<b>MC6 x</b>	<b>15.3</b>	<b>6</b>	<b>3-1/2</b>	<b>3/8</b>	<b>5/16</b>	4.50	8.47	2.05
(6x3-1/2)	<b>18.0</b>	<b>6</b>	<b>3-1/2</b>	<b>1/2</b>	<b>3/8</b>	5.29	9.91	2.03
<b>MC7 x</b>	<b>17.6</b>	<b>7</b>	<b>3</b>	<b>1/2</b>	<b>3/8</b>	5.17	10.80	2.10
(7x3)								
<b>MC7 x</b>	<b>19.1</b>	<b>7</b>	<b>3-1/2</b>	<b>1/2</b>	<b>3/8</b>	5.61	12.30	2.18
(7x3-1/2)	<b>22.7</b>	<b>7</b>	<b>3-5/8</b>	<b>1/2</b>	<b>1/2</b>	6.67	13.60	2.21
<b>MC8 x</b>	<b>18.7</b>	<b>8</b>	<b>3</b>	<b>1/2</b>	<b>3/8</b>	5.50	13.10	2.20
(8x3) (CONT.)	<b>20.0</b>	<b>8</b>	<b>3</b>	<b>1/2</b>	<b>3/8</b>	5.88	13.60	2.20

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\*APPROX. DIMENSIONS FOR DETAILING ONLY  
THE ROUNDING OFF OF DECIMAL DIMENSIONS TO FRACTIONS CAN LEAD  
TO AN ACCUMULATION OF DIFFERENCES (SEE A.I.S.C. MANUAL)

\*\*FOR PAINTING & SANDBLASTING  
SURFACE AREA (ALL AROUND) SQUARE  
FOOT Ft<sup>2</sup> PER FOOT OF LENGTH



# CHANNEL, SHIP

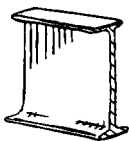
CHANNEL, SHIP & CAR BUILDING  
MC - MISC. SHAPES

ASTM A-36

DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus S <sub>x</sub> In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
(Nominal Size)								
<b>MC8 x</b>	<b>21.4</b>	<b>*8</b>	<b>3-1/2</b>	<b>1/2</b>	<b>3/8</b>	6.28	15.4	2.34
(8x3-1/2)	<b>22.8</b>	<b>8</b>	<b>3-1/2</b>	<b>1/2</b>	<b>7/16</b>	6.70	16.0	2.35
<b>MC9 x</b>	<b>23.9</b>	<b>9</b>	<b>3-1/2</b>	<b>9/16</b>	<b>3/8</b>	7.02	18.9	2.51
(9x3-1/2)	<b>25.4</b>	<b>9</b>	<b>3-1/2</b>	<b>9/16</b>	<b>7/16</b>	7.47	19.6	2.51
<b>MC10 x</b>	<b>22</b>	<b>10</b>	<b>3-3/8</b>	<b>9/16</b>	<b>5/16</b>	6.45	20.5	2.69
(10x3-1/2)	<b>25</b>	<b>10</b>	<b>3-3/8</b>	<b>9/16</b>	<b>3/8</b>	7.35	22.0	2.66
<b>MC10 x</b>	<b>28.5</b>	<b>10</b>	<b>4</b>	<b>9/16</b>	<b>7/16</b>	8.37	25.3	2.83
(10x4)	<b>33.6</b>	<b>10</b>	<b>4-1/8</b>	<b>9/16</b>	<b>9/16</b>	9.87	27.8	2.85
	<b>41.1</b>	<b>10</b>	<b>4-3/8</b>	<b>13/16</b>	<b>9/16</b>	12.1	31.5	
<b>MC12 x</b>	<b>31</b>	<b>12</b>	<b>3-5/8</b>	<b>11/16</b>	<b>3/8</b>	9.12	33.8	3.02
(12x3-1/2)								
<b>MC12 x</b>	<b>35.0</b>	<b>12</b>	<b>3-3/4</b>	<b>11/16</b>	<b>7/16</b>	10.30	36.1	3.11
(12x4)	<b>40.0</b>	<b>12</b>	<b>3-7/8</b>	<b>11/16</b>	<b>9/16</b>	11.80	39.0	3.13
	<b>45.0</b>	<b>12</b>	<b>4</b>	<b>11/16</b>	<b>11/16</b>	13.20	42.0	3.15
	<b>50.0</b>	<b>12</b>	<b>4-1/8</b>	<b>11/16</b>	<b>13/16</b>	14.70	44.9	3.17
<b>MC13 x</b>	<b>31.8</b>	<b>13</b>	<b>4</b>	<b>5/8</b>	<b>3/8</b>	9.35	36.8	3.32
(13x4)	<b>35.0</b>	<b>13</b>	<b>4-1/8</b>	<b>5/8</b>	<b>7/16</b>	10.30	38.8	3.33
	<b>40.0</b>	<b>13</b>	<b>4-1/8</b>	<b>5/8</b>	<b>9/16</b>	11.80	42.0	3.35
	<b>50.0</b>	<b>13</b>	<b>4-3/8</b>	<b>5/8</b>	<b>13/16</b>	14.70	48.4	3.39
<b>MC18 x</b>	<b>42.7</b>	<b>18</b>	<b>4</b>	<b>5/8</b>	<b>7/16</b>	12.60	61.6	3.33
(18x4)	<b>45.8</b>	<b>18</b>	<b>4</b>	<b>5/8</b>	<b>1/2</b>	13.50	64.3	3.33
	<b>51.9</b>	<b>18</b>	<b>4-1/8</b>	<b>5/8</b>	<b>5/8</b>	15.30	69.7	3.34
	<b>58.0</b>	<b>18</b>	<b>4-1/4</b>	<b>5/8</b>	<b>11/16</b>	17.10	75.1	3.35

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\*\*FOR PAINTING & SANDBLASTING  
SURFACE AREA (ALL AROUND) SQUARE  
FOOT FT<sup>2</sup> PER FOOT OF LENGTH



# "I"-BEAM, JR.

JUNIOR "I" BEAM  
(LIGHT WEIGHT)  
SPECIAL SHAPES

SECTION DEPTH x WT./FT.	WEIGHT PER FT. POUNDS	WEB THICKNESS INCHES	FLANGE WIDTH IN INCHES	SECTION DEPTH x WT./FT.	WEIGHT PER FT. POUNDS	WEB THICKNESS INCHES	FLANGE WIDTH IN INCHES
<b>6 x</b>	<b>4.4</b>	<b>*3/16</b>	<b>1-7/8</b>	<b>10 x</b>	<b>9.0</b>	<b>*3/16</b>	<b>2-5/8</b>
<b>8 x</b>	<b>6.5</b>	<b>3/16</b>	<b>2-1/4</b>	<b>12 x</b>	<b>11.8</b>	<b>3/16</b>	<b>3</b>

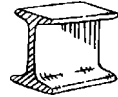
12

\*APPROX. DIMENSIONS FOR DETAILING ONLY

THE ROUNDING OFF OF DECIMAL DIMENSIONS TO FRACTIONS CAN  
LEAD TO AN ACCUMULATION OF DIFFERENCES (SEE A.I.S.C. MANUAL)

# "I"-BEAM, STANDARD

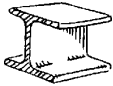
I-BEAM  
(AMERICAN STD.)  
S-SHAPES ASTM A-36



DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.(Nominal Size)	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus S <sub>x</sub> In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
<b>S3 x</b> (3x2-3/8)	<b>5.7</b>	<b>*3</b>	<b>2-3/8</b>	<b>1/4</b>	<b>3/16</b>	1.67	1.68	1.16
	<b>7.5</b>	<b>3</b>	<b>2-1/2</b>	<b>1/4</b>	<b>3/8</b>	2.21	1.95	1.19
<b>S4 x</b> (4x2-5/8)	<b>7.7</b>	<b>4</b>	<b>2-5/8</b>	<b>5/16</b>	<b>3/16</b>	2.26	3.04	1.42
	<b>9.5</b>	<b>4</b>	<b>2-3/4</b>	<b>5/16</b>	<b>5/16</b>	2.79	3.39	1.44
<b>S5 x</b> (5x3)	<b>10.00</b>	<b>5</b>	<b>3</b>	<b>5/16</b>	<b>3/16</b>	2.94	4.92	1.69
	<b>14.75</b>	<b>5</b>	<b>3-1/4</b>	<b>5/16</b>	<b>1/2</b>	4.34	6.09	1.85
<b>S6 x</b> (6x3-3/8)	<b>12.50</b>	<b>6</b>	<b>3-3/8</b>	<b>3/8</b>	<b>1/4</b>	3.67	7.37	1.95
	<b>17.25</b>	<b>6</b>	<b>3-5/8</b>	<b>3/8</b>	<b>7/16</b>	5.07	8.77	1.99
<b>S7 x</b> (7x3-5/8)	<b>15.3</b>	<b>7</b>	<b>3-5/8</b>	<b>3/8</b>	<b>1/4</b>	4.50	10.50	2.21
	<b>20.0</b>	<b>7</b>	<b>3-7/8</b>	<b>3/8</b>	<b>7/16</b>	5.88	12.10	2.38
<b>S8 x</b> (8x4)	<b>18.4</b>	<b>8</b>	<b>4</b>	<b>7/16</b>	<b>1/4</b>	5.41	14.40	2.48
	<b>23.0</b>	<b>8</b>	<b>4-1/8</b>	<b>7/16</b>	<b>7/16</b>	6.77	16.20	2.50
<b>S10 x</b> (10x4-5/8)	<b>25.4</b>	<b>10</b>	<b>4-5/8</b>	<b>1/2</b>	<b>5/16</b>	7.46	24.70	3.00
	<b>35.0</b>	<b>10</b>	<b>5</b>	<b>1/2</b>	<b>5/8</b>	10.30	29.40	3.05
<b>S12 x</b> (12x5)	<b>31.8</b>	<b>12</b>	<b>5</b>	<b>9/16</b>	<b>3/8</b>	9.35	36.40	3.43
	<b>35.0</b>	<b>12</b>	<b>5-1/8</b>	<b>9/16</b>	<b>7/16</b>	10.30	38.20	3.44
<b>S12 x</b> (12x5-1/4)	<b>40.8</b>	<b>12</b>	<b>5-1/4</b>	<b>11/16</b>	<b>7/16</b>	12.00	45.40	3.47
	<b>50.0</b>	<b>12</b>	<b>5-1/2</b>	<b>11/16</b>	<b>11/16</b>	14.70	50.80	3.51
<b>S15 x</b> (15x5-1/2)	<b>42.9</b>	<b>15</b>	<b>5-1/2</b>	<b>5/8</b>	<b>7/16</b>	12.60	59.60	4.06
	<b>50.0</b>	<b>15</b>	<b>5-5/8</b>	<b>5/8</b>	<b>9/16</b>	14.70	64.80	4.09
<b>S18 x</b> (18x6)	<b>54.7</b>	<b>18</b>	<b>6</b>	<b>11/16</b>	<b>7/16</b>	16.10	89.40	4.70
	<b>70.0</b>	<b>18</b>	<b>6-1/4</b>	<b>11/16</b>	<b>11/16</b>	20.60	103.00	4.74
<b>S20 x</b> (20x6-1/4)	<b>66.0</b>	<b>20</b>	<b>6-1/4</b>	<b>13/16</b>	<b>1/2</b>	19.40	119.00	5.10
	<b>75.0</b>	<b>20</b>	<b>6-3/8</b>	<b>13/16</b>	<b>5/8</b>	22.00	128.00	5.12
<b>S20 x</b> (20x7)	<b>86.0</b>	<b>20-1/4</b>	<b>7</b>	<b>15/16</b>	<b>11/16</b>	25.30	155.00	5.38
	<b>96.0</b>	<b>20-1/4</b>	<b>7-1/4</b>	<b>15/16</b>	<b>13/16</b>	28.20	165.00	5.40
<b>S24 x</b> (24x7)	<b>80.0</b>	<b>24</b>	<b>7</b>	<b>7/8</b>	<b>1/2</b>	23.50	175.00	6.00
	<b>90.0</b>	<b>24</b>	<b>7-1/8</b>	<b>7/8</b>	<b>5/8</b>	26.50	187.00	6.02
	<b>100.00</b>	<b>24</b>	<b>7-1/4</b>	<b>7/8</b>	<b>3/4</b>	29.30	199.00	6.04
<b>S24 x</b> (24x7-7/8)	<b>106.00</b>	<b>24-1/2</b>	<b>7-7/8</b>	<b>1-1/8</b>	<b>5/8</b>	31.20	240.00	6.33
	<b>121.00</b>	<b>24-1/2</b>	<b>8</b>	<b>1-1/8</b>	<b>13/16</b>	35.60	258.00	6.36

\*APPROX. DIMENSIONS FOR DETAILING ONLY  
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LEAD TO AN ACCUMULATION OF DIFFERENCES (SEE A.I.S.C. MANUAL)

\*\*FOR PAINTING & SANDBLASTING  
SURFACE AREA (ALL AROUND) SQUARE  
FOOT FT<sup>2</sup> PER FOOT OF LENGTH



# WIDE FLANGE BEAM

## W-SHAPES

ASTM A-36

DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.(Nominal Size)	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus S <sub>x</sub> In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
<b>W4 x</b> (4x4)	<b>13</b>	<b>*4-1/8</b>	<b>4</b>	<b>3/8</b>	<b>1/4</b>	3.83	5.46	1.96
<b>W5 x</b> (5x5)	<b>16</b>	<b>5</b>	<b>5</b>	<b>3/8</b>	<b>1/4</b>	4.68	8.51	2.42
<b>W6 x</b> (6x4)	<b>9</b>	<b>5-7/8</b>	<b>4</b>	<b>3/16</b>	<b>3/16</b>	2.68	5.56	2.23
	<b>12</b>	<b>6</b>	<b>4</b>	<b>1/4</b>	<b>1/4</b>	3.55	7.31	2.26
	<b>16</b>	<b>6-1/4</b>	<b>4</b>	<b>3/8</b>	<b>1/4</b>	4.74	10.20	2.31
<b>W6 x</b> (6x6)	<b>15</b>	<b>6</b>	<b>6</b>	<b>1/4</b>	<b>1/4</b>	4.43	9.72	2.92
	<b>20</b>	<b>6-1/4</b>	<b>6</b>	<b>3/8</b>	<b>1/4</b>	5.87	13.40	2.96
	<b>25</b>	<b>6-3/8</b>	<b>6-1/8</b>	<b>7/16</b>	<b>5/16</b>	7.34	16.70	3.00
<b>W8 x</b> (8x4)	<b>10</b>	<b>7-7/8</b>	<b>4</b>	<b>3/16</b>	<b>3/16</b>	2.96	7.81	2.56
	<b>13</b>	<b>8</b>	<b>4</b>	<b>1/4</b>	<b>1/4</b>	3.84	9.91	2.58
	<b>15</b>	<b>8-1/8</b>	<b>4</b>	<b>5/16</b>	<b>1/4</b>	4.44	11.80	2.61
<b>W8 x</b> (8x5-1/4)	<b>18</b>	<b>8-1/8</b>	<b>5-1/4</b>	<b>5/16</b>	<b>1/4</b>	5.26	15.20	3.03
	<b>21</b>	<b>8-1/4</b>	<b>5-1/4</b>	<b>3/8</b>	<b>1/4</b>	6.16	18.20	3.05
<b>W8 x</b> (8x6-1/2)	<b>24</b>	<b>7-7/8</b>	<b>6-1/2</b>	<b>3/8</b>	<b>1/4</b>	7.08	20.90	3.39
	<b>28</b>	<b>8</b>	<b>6-1/2</b>	<b>7/16</b>	<b>5/16</b>	8.25	24.30	3.42
<b>W8 x</b> (8x8)	<b>31</b>	<b>8</b>	<b>8</b>	<b>7/16</b>	<b>5/16</b>	9.13	27.50	3.89
	<b>35</b>	<b>8-1/8</b>	<b>8</b>	<b>1/2</b>	<b>5/16</b>	10.30	31.20	3.92
	<b>40</b>	<b>8-1/4</b>	<b>8-1/8</b>	<b>9/16</b>	<b>3/8</b>	11.70	35.50	3.95
	<b>48</b>	<b>8-1/2</b>	<b>8-1/8</b>	<b>11/16</b>	<b>3/8</b>	14.10	43.30	4.00
	<b>58</b>	<b>8-3/4</b>	<b>8-1/4</b>	<b>13/16</b>	<b>1/2</b>	17.10	52.00	4.06
	<b>67</b>	<b>9</b>	<b>8-1/4</b>	<b>15/16</b>	<b>9/16</b>	19.70	60.40	4.11
<b>W10 x</b> (10x4)	<b>12</b>	<b>9-7/8</b>	<b>4</b>	<b>3/16</b>	<b>3/16</b>	3.54	10.90	2.89
	<b>15</b>	<b>10</b>	<b>4</b>	<b>1/4</b>	<b>1/4</b>	4.41	13.80	2.92
	<b>17</b>	<b>10-1/8</b>	<b>4</b>	<b>5/16</b>	<b>1/4</b>	4.99	16.20	2.94
	<b>19</b>	<b>10-1/4</b>	<b>4</b>	<b>3/8</b>	<b>1/4</b>	5.62	18.80	2.96
<b>W10 x</b> (10x5-3/4)	<b>22</b>	<b>10-1/8</b>	<b>5-3/4</b>	<b>3/8</b>	<b>1/4</b>	6.49	23.20	3.53
	<b>26</b>	<b>10-3/8</b>	<b>5-3/4</b>	<b>7/16</b>	<b>1/4</b>	7.61	27.90	3.56
	<b>30</b>	<b>10-1/2</b>	<b>5-3/4</b>	<b>1/2</b>	<b>5/16</b>	8.84	32.40	3.59
<b>W10 x</b> (10x8)	<b>33</b>	<b>9-3/4</b>	<b>8</b>	<b>7/16</b>	<b>5/16</b>	9.71	35.00	4.16
	<b>39</b>	<b>9-7/8</b>	<b>8</b>	<b>1/2</b>	<b>5/16</b>	11.50	42.10	4.19
	<b>45</b>	<b>10-1/8</b>	<b>8</b>	<b>5/8</b>	<b>3/8</b>	13.30	49.10	4.23
<b>W10 x</b> (10x10)	<b>49</b>	<b>10</b>	<b>10</b>	<b>9/16</b>	<b>5/16</b>	14.40	54.60	4.87
	<b>54</b>	<b>10-1/8</b>	<b>10</b>	<b>5/8</b>	<b>3/8</b>	13.30	49.10	4.23
	<b>60</b>	<b>10-1/4</b>	<b>10-1/8</b>	<b>11/16</b>	<b>7/16</b>	17.60	66.70	4.92
	<b>68</b>	<b>10-3/8</b>	<b>10-1/8</b>	<b>3/4</b>	<b>1/2</b>	20.00	75.70	4.96
	<b>77</b>	<b>10-5/8</b>	<b>10-1/4</b>	<b>7/8</b>	<b>1/2</b>	22.60	85.90	5.00
	<b>88</b>	<b>10-7/8</b>	<b>10-1/4</b>	<b>1</b>	<b>5/8</b>	25.90	98.50	5.06
	<b>100</b>	<b>11-1/8</b>	<b>10-3/8</b>	<b>1-1/8</b>	<b>11/16</b>	29.40	112.00	5.11
	<b>112</b>	<b>11-3/8</b>	<b>10-3/8</b>	<b>1-1/4</b>	<b>3/4</b>	32.90	126.00	5.17
<b>W12 x</b> (12x4)	<b>14</b>	<b>11-7/8</b>	<b>4</b>	<b>1/4</b>	<b>3/16</b>	4.16	14.90	3.23
	<b>16</b>	<b>12</b>	<b>4</b>	<b>1/4</b>	<b>1/4</b>	4.71	17.10	3.25
<b>SPLITTEES INQUIRE</b>	<b>19</b>	<b>12-1/8</b>	<b>4</b>	<b>3/8</b>	<b>1/4</b>	5.57	21.30	3.28
	<b>22</b>	<b>12-1/4</b>	<b>4</b>	<b>7/16</b>	<b>1/4</b>	6.48	25.40	3.31

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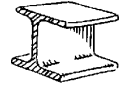
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\*\*FOR PAINTING & SANDBLASTING  
SURFACE AREA (ALL AROUND) SQUARE  
FOOT F<sup>2</sup> PER FOOT OF LENGTH

# WIDE FLANGE BEAM

## W-SHAPES

ASTM A-36



DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.(Nominal Size)	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus S <sub>x</sub> In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>	
<b>W12x</b> (12x6-1/2)	<b>26</b>	*12-1/4	6-1/2	3/8	1/4	7.65	33.40	4.12	
	<b>30</b>	12-3/8	6-1/2	7/16	1/4	8.79	38.60	4.14	
	<b>35</b>	12-1/2	6-1/2	1/2	5/16	10.30	45.60	4.18	
<b>W12 x</b> (12x8)	<b>40</b>	12	8	1/2	5/16	11.80	51.90	4.52	
	<b>45</b>	12	8	9/16	5/16	13.20	58.10	4.55	
	<b>50</b>	12-1/4	8-1/8	5/8	3/8	14.70	64.70	4.58	
<b>W12 x</b> (12x10)	<b>53</b>	12	10	9/16	3/8	15.60	70.60	5.20	
	<b>58</b>	12-1/4	10	5/8	3/8	17.00	78.00	5.22	
<b>W12 x</b> (12x12)	<b>65</b>	12-1/8	12	5/8	3/8	19.10	87.90	5.87	
	<b>72</b>	12-1/4	12	11/16	7/16	21.10	97.40	5.90	
	<b>79</b>	12-3/8	12-1/8	3/4	1/2	23.20	107.00	5.93	
	<b>87</b>	12-1/2	12-1/8	13/16	1/2	25.60	118.00	5.96	
	<b>96</b>	12-3/4	12-1/8	7/8	9/16	28.20	131.00	5.99	
	<b>106</b>	12-7/8	12-1/4	1	5/8	31.20	145.00	6.03	
	<b>120</b>	13-1/8	12-3/8	1-1/8	11/16	35.30	163.00	6.09	
	<b>136</b>	13-3/8	12-3/8	1-1/4	13/16	39.90	186.00	6.15	
	<b>152</b>	13-3/4	12-1/2	1-3/8	7/8	44.70	209.00	6.21	
	<b>170</b>	14	12-5/8	1-9/16	15/16	50.00	235.00	6.28	
<b>W14 x</b> (14x5)	<b>22</b>	13-3/4	5	5/16	1/4	6.49	29.00	3.86	
	<b>26</b>	13-7/8	5	7/16	1/4	7.69	35.30	3.89	
<b>W14 x</b> (14x6-3/4)	<b>30</b>	13-7/8	6-3/4	3/8	1/4	8.85	42.00	4.45	
	<b>34</b>	14	6-3/4	7/16	5/16	10.00	48.60	4.47	
	<b>38</b>	14-1/8	6-3/4	1/2	5/16	11.20	54.60	4.50	
<b>W14 x</b> (14x8)	<b>43</b>	13-5/8	8	1/2	5/16	12.60	62.70	4.81	
	<b>48</b>	13-3/4	8	5/8	5/16	14.10	70.30	4.83	
	<b>53</b>	13-7/8	8	11/16	3/8	15.60	77.80	4.86	
	<b>61</b>	13-7/8	10	5/8	3/8	17.90	92.20	5.50	
<b>W14 x</b> (14x8)	<b>68</b>	14	10	3/4	7/16	20.00	103.00	5.53	
	<b>74</b>	14-1/8	10-1/8	13/16	7/16	21.80	112.00	5.56	
	<b>82</b>	14-1/4	10-1/8	7/8	1/2	24.10	123.00	5.59	
	<b>90</b>	14	14-1/2	11/16	7/16	26.50	143.00	7.02	
	<b>W14 x</b> (14x14-1/2)	<b>99</b>	14-1/8	14-5/8	3/4	1/2	29.10	157.00	7.05
		<b>109</b>	14-3/8	14-5/8	7/8	1/2	32.00	173.00	7.08
<b>120</b>		14-1/2	14-5/8	15/16	9/16	35.30	190.00	7.12	
<b>132</b>		14-5/8	14-3/4	1	5/8	38.80	209.00	7.16	
<b>W14 x</b> (14x16)		<b>145</b>	14-3/4	15-1/2	1-1/16	11/16	42.70	232.00	7.43
	<b>159</b>	15	15-5/8	1-3/16	3/4	46.70	254.00	7.48	
	<b>176</b>	15-1/4	15-5/8	1-5/16	13/16	51.80	281.00	7.53	
	<b>193</b>	15-1/2	15-3/4	1-7/16	7/8	56.80	310.00	7.58	
	<b>211</b>	15-3/4	15-3/4	1-9/16	1	62.00	338.00	7.64	
	<b>233</b>	16	15-7/8	1-3/4	1-1/16	68.50	375.00	7.71	
<b>W14 x</b> (14x16)	<b>257</b>	16-3/8	16	1-7/8	1-3/16	75.60	415.00	7.78	
	<b>283</b>	16-3/4	16-1/8	2-1/16	1-5/16	83.30	459.00	7.86	
	<b>311</b>	17-1/8	16-1/4	2-1/4	1-7/16	91.40	506.00	7.94	



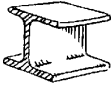
BEARING  
PILE HP  
INQUIRE

(CONT.)

**\*APPROX. DIMENSIONS FOR DETAILING ONLY**

THE ROUNDING OFF OF DECIMAL DIMENSIONS TO FRACTIONS CAN LEAD TO AN ACCUMULATION OF DIFFERENCES (SEE A.I.S.C. MANUAL)

\*\*FOR PAINTING & SANDBLASTING SURFACE AREA (ALL AROUND) SQUARE FOOT Ft<sup>2</sup> PER FOOT OF LENGTH



# WIDE FLANGE BEAM

W-SHAPES

ASTM A-36

DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.(Nominal Size)	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus S <sub>x</sub> In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
<b>W14 x</b> (14x16)	<b>342</b>	<b>*17-1/2</b>	<b>16-3/8</b>	<b>2-1/2</b>	<b>1-9/16</b>	101.00	559.00	8.03
	<b>370</b>	<b>17-7/8</b>	<b>16-1/2</b>	<b>2-11/16</b>	<b>1-5/8</b>	109.00	607.00	8.12
	<b>398</b>	<b>18-1/4</b>	<b>16-5/8</b>	<b>2-7/8</b>	<b>1-3/4</b>	117.00	656.00	8.20
	<b>426</b>	<b>18-5/8</b>	<b>16-3/4</b>	<b>3-1/16</b>	<b>1-7/8</b>	125.00	707.00	8.28
	<b>455</b>	<b>19</b>	<b>16-7/8</b>	<b>3-3/16</b>	<b>2</b>	134.00	756.00	8.36
	<b>500</b>	<b>19-5/8</b>	<b>17</b>	<b>3-1/2</b>	<b>2-3/16</b>	147.00	838.00	8.49
	<b>550</b>	<b>20-1/4</b>	<b>17-1/4</b>	<b>3-13/16</b>	<b>2-3/8</b>	162.00	931.00	8.62
	<b>605</b>	<b>20-7/8</b>	<b>17-3/8</b>	<b>4-3/16</b>	<b>2-5/8</b>	178.00	1040.00	8.77
	<b>665</b>	<b>21-5/8</b>	<b>17-5/8</b>	<b>4-1/2</b>	<b>2-13/16</b>	196.00	1150.00	8.93
	<b>730</b>	<b>22-3/8</b>	<b>17-7/8</b>	<b>4-15/16</b>	<b>3-1/16</b>	215.00	1280.00	9.10
<b>W16 x</b> (16x5-1/2)	<b>26</b>	<b>15-3/4</b>	<b>5-1/2</b>	<b>3/8</b>	<b>1/4</b>	7.68	38.40	4.35
	<b>31</b>	<b>15-7/8</b>	<b>5-1/2</b>	<b>7/16</b>	<b>1/4</b>	9.12	47.20	4.39
<b>W16 x</b> (16x7)	<b>36</b>	<b>15-7/8</b>	<b>7</b>	<b>7/16</b>	<b>5/16</b>	10.60	56.50	4.87
	<b>40</b>	<b>16</b>	<b>7</b>	<b>1/2</b>	<b>5/16</b>	11.80	64.70	4.89
<b>W16 x</b> (16x7)	<b>45</b>	<b>16-1/8</b>	<b>7</b>	<b>9/16</b>	<b>3/8</b>	13.30	72.70	4.92
	<b>50</b>	<b>16-1/4</b>	<b>7-1/8</b>	<b>5/8</b>	<b>3/8</b>	14.70	81.00	4.95
	<b>57</b>	<b>16-3/8</b>	<b>7-1/8</b>	<b>11/16</b>	<b>7/16</b>	16.80	92.20	4.98
	<b>67</b>	<b>16-3/8</b>	<b>10-1/4</b>	<b>11/16</b>	<b>3/8</b>	19.70	117.00	6.01
	<b>77</b>	<b>16-1/2</b>	<b>10-1/4</b>	<b>3/4</b>	<b>7/16</b>	22.60	134.00	6.05
<b>W16 x</b> (16x10-1/4)	<b>89</b>	<b>16-3/4</b>	<b>10-3/8</b>	<b>7/8</b>	<b>1/2</b>	26.20	155.00	6.10
	<b>100</b>	<b>17</b>	<b>10-3/8</b>	<b>1</b>	<b>9/16</b>	29.40	175.00	6.15
	<b>119</b>	<b>17-1/2</b>	<b>10-3/8</b>	<b>1-1/4</b>	<b>5/8</b>	35.10	231.00	6.75
<b>W18 x</b> (18x6)	<b>35</b>	<b>17-3/4</b>	<b>6</b>	<b>7/16</b>	<b>5/16</b>	10.30	57.60	4.84
	<b>40</b>	<b>17-7/8</b>	<b>6</b>	<b>1/2</b>	<b>5/16</b>	11.80	68.40	4.88
<b>W18 x</b> (18x7)	<b>46</b>	<b>18</b>	<b>6</b>	<b>5/8</b>	<b>3/8</b>	13.50	78.80	4.91
	<b>50</b>	<b>18</b>	<b>7-1/2</b>	<b>9/16</b>	<b>3/8</b>	14.70	88.90	5.38
	<b>55</b>	<b>18-1/8</b>	<b>7-1/2</b>	<b>5/8</b>	<b>3/8</b>	16.20	98.30	5.41
	<b>60</b>	<b>18-1/4</b>	<b>7-1/2</b>	<b>11/16</b>	<b>7/16</b>	17.60	108.00	5.43
	<b>65</b>	<b>18-3/8</b>	<b>7-5/8</b>	<b>3/4</b>	<b>7/16</b>	19.10	117.00	5.46
	<b>71</b>	<b>18-1/2</b>	<b>7-5/8</b>	<b>13/16</b>	<b>1/2</b>	20.80	127.00	5.48
	<b>76</b>	<b>18-1/4</b>	<b>11</b>	<b>11/16</b>	<b>7/16</b>	22.30	146.00	6.59
<b>W18 x</b> (18x11)	<b>86</b>	<b>18-3/8</b>	<b>11-1/8</b>	<b>3/4</b>	<b>1/2</b>	25.30	166.00	6.62
	<b>97</b>	<b>18-5/8</b>	<b>11-1/8</b>	<b>7/8</b>	<b>9/16</b>	28.50	188.00	6.67
	<b>106</b>	<b>18-3/4</b>	<b>11-1/4</b>	<b>15/16</b>	<b>9/16</b>	31.10	204.00	6.70
	<b>119</b>	<b>19</b>	<b>11-1/4</b>	<b>1-1/16</b>	<b>5/8</b>	35.10	231.00	6.75
	<b>132</b>	<b>21-7/8</b>	<b>12-1/2</b>	<b>1-1/16</b>	<b>5/8</b>	38.80	295.00	7.61
<b>W21 x</b> (21x6-1/2)	<b>44</b>	<b>20-5/8</b>	<b>6-1/2</b>	<b>7/16</b>	<b>3/8</b>	13.00	81.60	5.48
	<b>50</b>	<b>20-7/8</b>	<b>6-1/2</b>	<b>9/16</b>	<b>3/8</b>	14.70	94.50	5.51
<b>W21 x</b> (21x7)	<b>57</b>	<b>21</b>	<b>6-1/2</b>	<b>5/8</b>	<b>3/8</b>	16.70	111.00	5.56
	<b>62</b>	<b>21</b>	<b>8-1/4</b>	<b>5/8</b>	<b>3/8</b>	18.30	127.00	6.11
	<b>68</b>	<b>21-1/8</b>	<b>8-1/4</b>	<b>11/16</b>	<b>7/16</b>	20.00	140.00	6.14
<b>W21 x</b> (21x8-1/4)	<b>73</b>	<b>21-1/4</b>	<b>8-1/4</b>	<b>3/4</b>	<b>7/16</b>	21.50	151.00	6.16
	<b>83</b>	<b>21-3/8</b>	<b>8-3/8</b>	<b>13/16</b>	<b>1/2</b>	24.30	171.00	6.20
	<b>93</b>	<b>21-5/8</b>	<b>8-3/8</b>	<b>15/16</b>	<b>9/16</b>	27.30	192.00	6.24
	<b>101</b>	<b>21-3/8</b>	<b>12-1/4</b>	<b>13/16</b>	<b>1/2</b>	29.80	227.00	7.50
	<b>111</b>	<b>21-1/2</b>	<b>12-3/8</b>	<b>7/8</b>	<b>9/16</b>	32.70	249.00	7.54
<b>W21 x</b> (21x12-1/4)	<b>122</b>	<b>21-5/8</b>	<b>12-3/8</b>	<b>15/16</b>	<b>5/8</b>	35.90	273.00	7.57
	<b>132</b>	<b>21-7/8</b>	<b>12-1/2</b>	<b>1-1/16</b>	<b>5/8</b>	38.80	295.00	7.61
GALVANIZED BARS INQUIRE	<b>147</b>	<b>22</b>	<b>12-1/2</b>	<b>1-1/8</b>	<b>3/4</b>	43.20	329.00	7.66

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THE ROUNDING OFF OF DECIMAL DIMENSIONS TO FRACTIONS CAN  
LEAD TO AN ACCUMULATION OF DIFFERENCES (SEE A.I.S.C. MANUAL)

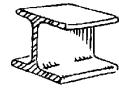
**\*\*FOR PAINTING & SANDBLASTING**  
SURFACE AREA (ALL AROUND) SQUARE  
FOOT FT<sup>2</sup> PER FOOT OF LENGTH



# WIDE FLANGE BEAM

## W-SHAPES

ASTM A-36

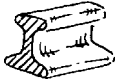


DESIGNATION DEPTH in Inches x WEIGHT Per Ft. Lbs.(Nominal Size)	WEIGHT Per Foot Lbs.	DEPTH Section in Inches	WIDTH Flange in Inches	FLANGE Thickness (Average) in Inches	WEB Thickness in Inches	Area of Section In. <sup>2</sup>	Section Modulus S <sub>x</sub> In. <sup>3</sup>	**Surface Area Foot of Length. <sup>2</sup>
<b>W24 x</b>	<b>55</b>	<b>*23-5/8</b>	<b>7</b>	<b>1/2</b>	<b>3/8</b>	16.20	114.00	6.13
(24x7)	<b>62</b>	<b>23-3/4</b>	<b>7</b>	<b>9/16</b>	<b>7/16</b>	18.20	131.00	6.16
<b>W24 x</b>	<b>68</b>	<b>23-3/4</b>	<b>9</b>	<b>9/16</b>	<b>7/16</b>	20.10	154.00	6.80
(24x9)	<b>76</b>	<b>23-7/8</b>	<b>9</b>	<b>11/16</b>	<b>7/16</b>	22.40	176.00	6.84
	<b>84</b>	<b>24-1/8</b>	<b>9</b>	<b>3/4</b>	<b>1/2</b>	24.70	196.00	6.87
	<b>94</b>	<b>24-1/4</b>	<b>9-1/8</b>	<b>7/8</b>	<b>1/2</b>	27.70	222.00	6.97
<b>W24 x</b>	<b>104</b>	<b>24</b>	<b>12-3/4</b>	<b>3/4</b>	<b>1/2</b>	30.60	258.00	8.11
(24x12-3/4)	<b>117</b>	<b>24-1/4</b>	<b>12-3/4</b>	<b>7/8</b>	<b>9/16</b>	34.40	291.00	8.15
	<b>131</b>	<b>24-1/2</b>	<b>12-7/8</b>	<b>15/16</b>	<b>5/8</b>	38.50	329.00	8.19
	<b>146</b>	<b>24-3/4</b>	<b>12-7/8</b>	<b>1-1/16</b>	<b>5/8</b>	43.00	371.00	8.24
	<b>162</b>	<b>25</b>	<b>13</b>	<b>1-1/4</b>	<b>11/16</b>	47.70	414.00	8.30
<b>W27 x</b>	<b>84</b>	<b>26-3/4</b>	<b>10</b>	<b>5/8</b>	<b>7/16</b>	24.80	213.00	7.61
(27x10)	<b>94</b>	<b>26-7/8</b>	<b>10</b>	<b>3/4</b>	<b>1/2</b>	27.70	243.00	7.65
	<b>102</b>	<b>27-1/8</b>	<b>10</b>	<b>13/16</b>	<b>1/2</b>	30.00	267.00	7.68
	<b>114</b>	<b>27-1/4</b>	<b>10-1/8</b>	<b>15/16</b>	<b>9/16</b>	33.50	299.00	7.72
<b>W27 x</b>	<b>146</b>	<b>27-3/8</b>	<b>14</b>	<b>1</b>	<b>5/8</b>	42.90	411.00	9.03
(27x14)	<b>161</b>	<b>27-5/8</b>	<b>14</b>	<b>1-1/16</b>	<b>11/16</b>	47.40	455.00	9.08
	<b>178</b>	<b>27-3/4</b>	<b>14-1/8</b>	<b>1-3/16</b>	<b>3/4</b>	52.30	502.00	9.12
W30 x	<b>99</b>	<b>29-5/8</b>	<b>10-1/2</b>	<b>11/16</b>	<b>1/2</b>	29.10	269.00	8.25
(30x10-1/2)	<b>108</b>	<b>29-7/8</b>	<b>10-1/2</b>	<b>3/4</b>	<b>9/16</b>	31.70	299.00	8.28
	<b>116</b>	<b>30</b>	<b>10-1/2</b>	<b>7/8</b>	<b>9/16</b>	34.20	329.00	8.31
	<b>124</b>	<b>30-1/8</b>	<b>10-1/2</b>	<b>15/16</b>	<b>9/16</b>	36.50	355.00	8.34
	<b>132</b>	<b>30-1/4</b>	<b>10-1/2</b>	<b>1</b>	<b>5/8</b>	38.90	380.00	8.37
<b>W30 x</b>	<b>173</b>	<b>30-1/2</b>	<b>15</b>	<b>1-1/16</b>	<b>5/8</b>	50.80	539.00	9.87
(30x15)	<b>191</b>	<b>30-5/8</b>	<b>15</b>	<b>1-3/16</b>	<b>11/16</b>	56.10	598.00	9.92
	<b>211</b>	<b>31</b>	<b>15-1/8</b>	<b>1-5/16</b>	<b>3/4</b>	62.00	663.00	9.97
<b>W33 x</b>	<b>118</b>	<b>32-7/8</b>	<b>11-1/2</b>	<b>3/4</b>	<b>9/16</b>	34.70	359.00	9.11
(33x11-1/2)	<b>130</b>	<b>33-1/8</b>	<b>11-1/2</b>	<b>7/8</b>	<b>9/16</b>	38.30	406.00	9.15
	<b>141</b>	<b>33-1/4</b>	<b>11-1/2</b>	<b>15/16</b>	<b>5/8</b>	41.60	448.00	9.19
	<b>152</b>	<b>33-1/2</b>	<b>11-5/8</b>	<b>1-1/16</b>	<b>5/8</b>	44.70	487.00	9.23
<b>W33 x</b>	<b>201</b>	<b>33-5/8</b>	<b>15-3/4</b>	<b>1-1/8</b>	<b>11/16</b>	59.10	684.00	10.64
(33x15-3/4)	<b>221</b>	<b>33-7/8</b>	<b>15-3/4</b>	<b>1-1/4</b>	<b>3/4</b>	65.00	757.00	10.69
	<b>241</b>	<b>34-1/8</b>	<b>15-7/8</b>	<b>1-3/8</b>	<b>13/16</b>	70.90	829.00	10.74
<b>W36 x</b>	<b>135</b>	<b>35-1/2</b>	<b>12</b>	<b>13/16</b>	<b>5/8</b>	39.70	439.00	9.70
(36x12)	<b>150</b>	<b>35-7/8</b>	<b>12</b>	<b>15/16</b>	<b>5/8</b>	44.20	504.00	9.76
	<b>160</b>	<b>36</b>	<b>12</b>	<b>1</b>	<b>5/8</b>	47.00	542.00	9.79
	<b>170</b>	<b>36-1/8</b>	<b>12</b>	<b>1-1/8</b>	<b>11/16</b>	50.00	580.00	9.82
	<b>182</b>	<b>36-3/8</b>	<b>12-1/8</b>	<b>1-3/16</b>	<b>3/4</b>	53.60	623.00	9.85
	<b>194</b>	<b>36-1/2</b>	<b>12-1/8</b>	<b>1-1/4</b>	<b>3/4</b>	57.00	664.00	9.89
	<b>210</b>	<b>36-3/4</b>	<b>12-1/8</b>	<b>1-3/8</b>	<b>13/16</b>	61.80	719.00	9.93
<b>W36 x</b>	<b>230</b>	<b>35-7/8</b>	<b>16-1/2</b>	<b>1-1/4</b>	<b>3/4</b>	67.60	837.00	11.21
(36x16-1/2)	<b>245</b>	<b>36-1/8</b>	<b>16-1/2</b>	<b>1-3/8</b>	<b>13/16</b>	72.10	895.00	11.25
	<b>260</b>	<b>36-1/4</b>	<b>16-1/2</b>	<b>1-7/16</b>	<b>13/16</b>	76.50	953.00	11.28
	<b>280</b>	<b>36-1/2</b>	<b>16-5/8</b>	<b>1-9/16</b>	<b>7/8</b>	82.40	1030.00	11.33
	<b>300</b>	<b>36-3/4</b>	<b>16-5/8</b>	<b>1-11/16</b>	<b>15/16</b>	88.30	1110.00	11.83

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\*\*FOR PAINTING & SANDBLASTING SURFACE AREA (ALL AROUND) SQUARE FOOT F<sup>2</sup> PER FOOT OF LENGTH



# RAILS

A.S.C.E. SECTIONS  
RAIL DIMENSIONS / DESIG. NO.

## DESIGNATION

SECTION NO.	WEIGHT PER YARD	HEIGHT IN INCHES	BASE WIDTH IN INCHES	HEAD WIDTH IN INCHES
1640	16#	2-3/8	2-3/8	1-11/64
2040	20	2-5/8	2-5/8	1-11/32
2540	25	2-3/4	2-3/4	1-1/2
3040	30	3-1/8	3-1/8	1-11/16
3540	35	3-5/16	3-5/16	1-3/4
4040	40	3-1/2	3-1/2	1-7/8
4540	45	3-11/16	3-11/16	2
5040	50	3-7/8	3-7/8	2-1/8
52 lbs.	52	3-15/16	3-7/8	2-3/16
5540	55	4-1/16	4-1/16	2-1/4
5608	56	4-1/16	4	2-7/32
56(512)	56	4-1/4	4-13/16	2-9/64
6001	60	4-1/4	4-1/16	2-5/16
6040	60	4-1/4	4-1/4	2-3/8
6540	65	4-7/16	4-7/16	2-13/32
7040	70	4-5/8	4-5/8	2-7/16
7540	75	4-13/16	4-13/16	2-15/32

## DESIGNATION

SECTION NO.	WEIGHT PER YARD	HEIGHT IN INCHES	BASE WIDTH IN INCHES	HEAD WIDTH IN INCHES
801	80#	5-1/8	5	2-21/32
8030	80	4-15/16	4-7/16	2-7/16
8040	80	5	5	2-1/2
8531	85	5-1/8	4-5/8	2-1/2
8533	85	5	5	2-9/16
8540	85	5-3/16	5-3/16	2-9/16
9020	90	5-5/8	5-1/8	2-9/16
9030	90	5-17/64	4-49/64	2-9/16
9040	90	5-3/8	5-3/8	2-5/8
10020	100	6	5-1/2	2-3/4
10025	100	6	5-3/8	2-11/16
10030	100	5-11/64	5-9/64	2-21/32
10031	100	5-11/16	5	2-43/64
10040	100	5-3/4	5-3/4	2-3/4
10524	105	6	5-1/2	3
11025	110	6-1/4	5-1/2	2-25/32
13031	130	6-5/8	5-1/2	3

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\*WEIGHT DESIGNATION / **POUNDS PER YARD** — OTHER TYPES/SIZES INQUIRE

# PLATE, U.M. x 20' LENGTHS

UNIVERSAL  
MILL EDGE



SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
<b>1/4x</b>			<b>5/8 x</b>		
9	<b>7.65</b>	153.0	9	<b>19.13</b>	382.6
10	<b>8.50</b>	170.0	10	<b>21.25</b>	425.0
12	<b>10.20</b>	204.0	12	<b>25.50</b>	510.0
<b>5/16x</b>			<b>3/4 x</b>		
9	<b>9.56</b>	191.2	9	<b>22.95</b>	459.0
10	<b>10.63</b>	212.6	10	<b>25.50</b>	510.0
12	<b>12.75</b>	255.0	12	<b>30.60</b>	612.0
<b>3/8 x</b>			<b>1 x</b>		
9	<b>11.48</b>	229.6	9	<b>30.60</b>	612.0
10	<b>12.75</b>	255.0	10	<b>34.00</b>	680.0
12	<b>15.30</b>	306.0	12	<b>40.80</b>	816.0
<b>1/2 x</b>			<b>1-1/4 x</b>		
9	<b>15.31</b>	306.0	10	<b>42.50</b>	850.0
10	<b>17.00</b>	340.0	12	<b>51.00</b>	1020.0
12	<b>20.40</b>	408.0	<b>1-1/2 x</b>		
			10	<b>51.00</b>	1020.0
			12	<b>61.20</b>	1225.0

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# PLATE, H.R.

SIZES  
INQUIRE

HOT ROLLED  
MILD STEEL

(OTHER GRADES AVAIL.)



PLATE THICK- NESS	WEIGHT PER SQUARE FOOT	WEIGHT PER SQUARE INCH	PLATE THICK- NESS	WEIGHT PER SQUARE FOOT	WEIGHT PER SQUARE INCH
<b>3/16</b>	<b>7.66</b>	.0532	<b>2-1/4</b>	<b>91.89</b>	.6381
<b>1/4</b>	<b>10.21</b>	.0709	<b>2-1/2</b>	<b>102.10</b>	.7090
<b>5/16</b>	<b>12.76</b>	.0886	<b>2-3/4</b>	<b>112.31</b>	.7799
<b>3/8</b>	<b>15.31</b>	.1064	<b>3</b>	<b>122.52</b>	.8508
<b>7/16</b>	<b>17.87</b>	.1241	<b>3-1/4</b>	<b>132.72</b>	.9217
<b>1/2</b>	<b>20.42</b>	.1418	<b>3-1/2</b>	<b>142.93</b>	.9926
<b>9/16</b>	<b>22.97</b>	.1595	<b>3-3/4</b>	<b>153.14</b>	1.0635
<b>5/8</b>	<b>25.52</b>	.1773	<b>4</b>	<b>163.35</b>	1.1344
<b>11/16</b>	<b>28.08</b>	.1950	<b>4-1/4</b>	<b>173.56</b>	1.2053
<b>3/4</b>	<b>30.63</b>	.2127	<b>4-1/2</b>	<b>183.77</b>	1.2762
<b>7/8</b>	<b>35.73</b>	.2481	<b>5</b>	<b>204.19</b>	1.4180
<b>1</b>	<b>40.84</b>	.2836	<b>5-1/2</b>	<b>224.61</b>	1.5598
<b>1-1/8</b>	<b>45.94</b>	.3191	<b>6</b>	<b>245.03</b>	1.7016
<b>1-1/4</b>	<b>51.05</b>	.3545	<b>6-1/2</b>	<b>265.45</b>	1.8434
<b>1-3/8</b>	<b>56.16</b>	.3900	<b>7</b>	<b>285.87</b>	1.9852
<b>1-1/2</b>	<b>61.26</b>	.4254	<b>7-1/2</b>	<b>306.29</b>	2.1270
<b>1-5/8</b>	<b>66.36</b>	.4609	<b>8</b>	<b>326.71</b>	2.2688
<b>1-3/4</b>	<b>71.47</b>	.4963	<b>8-1/2</b>	<b>347.13</b>	2.4106
<b>1-7/8</b>	<b>76.57</b>	.5318	<b>9</b>	<b>367.55</b>	2.5524
<b>2</b>	<b>81.68</b>	.5672	<b>10</b>	<b>408.38</b>	2.8360
<b>2-1/8</b>	<b>86.78</b>	.6027	<b>12</b>	<b>490.06</b>	3.4032

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# FLOOR PLATE

**DIAMOND**  
FLOOR PLATE  
(RAISED LUG PATTERN)

19

GAUGE/ THICK- NESS	WEIGHT PER SQ. FT. POUNDS	GAUGE/ THICK- NESS	WEIGHT PER SQ. FT. POUNDS	GAUGE/ THICK- NESS	WEIGHT PER SQ. FT. POUNDS
<b>16 Gauge</b>	<b>3.00</b>	<b>1/8</b>	<b>6.15</b>	<b>5/16</b>	<b>13.81</b>
<b>14 Gauge</b>	<b>3.75</b>	<b>3/16</b>	<b>8.71</b>	<b>3/8</b>	<b>16.37</b>
<b>12 Gauge</b>	<b>5.25</b>	<b>1/4</b>	<b>11.26</b>	<b>1/2</b>	<b>21.47</b>

WIDTHS & LENGTHS— INQUIRE. THICKNESS INDICATED IS EXCLUSIVE OF PROJECTING LUGS.  
16 Ga.- 1/8 SMALL PATTERN; 3/16 & HEAVIER LARGE PATTERN.



# H.R. SHEET

**HOT ROLLED**  
\*COMMERCIAL QUALITY LOW CARBON

20

SIZE IN INCHES	EST. WT. PER FT. POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS
<b>10 Gauge (.1345")</b>	<b>5.625# Sq. Ft.</b>	<b>12 Gauge (.1046")</b>	<b>4.375# Sq. Ft.</b>
48 x 96	<b>180.0</b>	48 x 96	<b>140.0</b>
48 x 120	<b>225.0</b>	48 x 120	<b>175.0</b>
48 x 144	<b>270.0</b>	48 x 144	<b>210.0</b>
48 x 240	<b>450.0</b>	48 x 240	<b>350.0</b>
60 x 96	<b>225.0</b>	60 x 96	<b>175.0</b>
60 x 120	<b>281.3</b>	60 x 120	<b>218.8</b>
60 x 144	<b>337.5</b>	60 x 144	<b>262.5</b>
60 x 240	<b>562.5</b>	60 x 240	<b>437.5</b>
72 x 96	<b>270.0</b>	72 x 96	<b>210.0</b>
72 x 120	<b>337.5</b>	72 x 120	<b>262.5</b>
72 x 144	<b>405.0</b>	72 x 144	<b>315.0</b>
72 x 240	<b>675.0</b>	72 x 240	<b>525.0</b>
84 x 120	<b>393.8</b>	<b>14 Gauge (.0747")</b>	<b>3.125# Sq. Ft.</b>
84 x 144	<b>472.5</b>	48 x 96	<b>100.0</b>
84 x 240	<b>787.5</b>	48 x 120	<b>125.0</b>
<b>11 Gauge (.1196")</b>	<b>5.0# Sq. Ft.</b>	48 x 144	<b>150.0</b>
48 x 96	160.0	48 x 240	<b>250.0</b>
48 x 120	200.0	60 x 96	<b>125.0</b>
48 x 144	240.0	60 x 120	<b>156.3</b>
48 x 240	400.0	60 x 144	<b>187.5</b>
60 x 96	200.0	60 x 240	<b>312.5</b>
60 x 120	250.0	72 x 120	<b>187.5</b>
60 x 144	300.0	72 x 144	<b>225.0</b>
60 x 240	500.0	72 x 240	<b>375.0</b>
72 x 96	240.0	<b>16 Gauge (.0598")</b>	<b>2.5# Sq. Ft.</b>
72 x 120	300.0	48 x 96	<b>80.0</b>
72 x 144	360.0	48 x 120	<b>100.0</b>
72 x 240	600.0	48 x 144	<b>120.0</b>
		60 x 120	<b>125.0</b>
		60 x 144	<b>150.0</b>

P. & O. Pickled & Oiled— Available Some Sizes  
Perforated Metal Inquire.



\*ASTM A-569-H.R. C.Q. 15 Max. Carbon

# SHEETS, C.R.

**COLD ROLLED**  
BRIGHT FINISH  
\*COMMERCIAL QUALITY, OILED



STANDARD GAUGE & SIZE	EST. WT. PER SHEET
<b>10 Gauge</b> (.1345") <b>5.625# Sq. Ft.</b>	
36 x 96	135.00
36 x 120	168.80
48 x 96	180.00
48 x 120	225.00
60 x 120	281.30
<b>11 Gauge</b> (.1196") <b>5.0# Sq. Ft.</b>	
36 x 96	120.00
36 x 120	150.00
48 x 96	160.00
48 x 120	200.00
48 x 144	240.00
60 x 96	200.00
60 x 120	250.00
60 x 144	300.00
<b>12 Gauge</b> (.1046") <b>4.375# Sq. Ft.</b>	
36 x 96	105.00
36 x 120	150.00
48 x 96	140.0
48 x 120	175.0
60 x 120	218.8
<b>14 Gauge</b> (.0747") <b>3.125# Sq. Ft.</b>	
36 x 96	75.00
36 x 120	93.80
48 x 96	100.0
48 x 120	125.0
48 x 144	150.0
60 x 120	156.3
60 x 144	187.5
<b>16 Gauge</b> (.0598") <b>2.5# Sq. Ft.</b>	
36 x 96	60.00
36 x 120	75.00
48 x 96	80.00
48 x 120	100.00
48 x 144	120.00

(CONT.)

STANDARD GAUGE & SIZE	EST. WT. PER SHEET
<b>16 Gauge</b> (.0598") <b>2.5# Sq. Ft.</b>	
60 x 120	125.00
60 x 144	150.00
<b>18 Gauge</b> (.0478") <b>2.0# Sq. Ft.</b>	
36 x 96	48.00
36 x 120	60.00
48 x 96	64.00
48 x 120	60.00
48 x 144	72.00
<b>20 Gauge</b> (.0359") <b>1.5# Sq. Ft.</b>	
36 x 96	36.00
36 x 120	45.00
36 x 144	54.00
48 x 96	48.00
48 x 120	60.00
48 x 144	72.00
<b>22 Gauge</b> (.0299") <b>1.25# Sq. Ft.</b>	
36 x 96	30.00
36 x 120	37.50
36 x 144	45.00
48 x 96	40.00
48 x 120	50.00
48 x 144	60.00
<b>24 Gauge</b> (.0239") <b>1.0# Sq. Ft.</b>	
36 x 96	24.00
36 x 120	30.00
36 x 144	36.00
48 x 96	32.00
48 x 120	40.00
<b>26 Gauge</b> (.0179") <b>.750# Sq. Ft.</b>	
36 x 96	18.00
36 x 120	22.50
<b>28 Gauge</b> (.0149") <b>.625# Sq. Ft.</b>	
36 x 96	15.00
36 x 120	18.75

20

# SHEET, GALVANIZED

**ZINC COATED- HOT DIPPED**  
ZINC COATING .90 OZ. PER SQ. FT.  
LOCK FORMING 18 GA. & LIGHTER



STANDARD GAUGE & SIZE	EST. WT. PER SHEET
<b>10 Gauge</b> <b>5.781# Sq. Ft.</b>	
30 x 96	115.63
30 x 120	144.54
36 x 96	138.75
36 x 120	173.44
48 x 96	185.00
48 x 120	231.26
<b>12 Gauge</b> <b>4.531# Sq. Ft.</b>	
30 x 96	90.63
36 x 120	113.28

(CONT.)

STANDARD GAUGE & SIZE	EST. WT. PER SHEET
<b>12 Gauge</b> <b>4.531# Sq. Ft.</b>	
36 x 96	108.75
36 x 120	135.94
48 x 96	145.00
48 x 120	181.24
<b>14 Gauge</b> <b>3.281# Sq. Ft.</b>	
30 x 96	65.63
30 x 120	82.03
36 x 96	78.75
36 x 120	98.44

(CONT.)

22



# SHEET, GALVANIZED

ZINC COATED- HOT DIPPED

ZINC COATING .90 OZ. PER SQ. FT.  
LOCK FORMING 18 GA. & LIGHTER

22

**STANDARD  
GAUGE & SIZE**

**14 Gauge 3.281# Sq. Ft.**

48 x 96  
48 x 120  
60 x 120

**16 Gauge 2.656# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120  
48 x 96  
48 x 120  
60 x 120

**18 Gauge 2.156# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120  
48 x 96  
48 x 120  
60 x 120

**20 Gauge 1.656# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120  
48 x 96  
48 x 120  
60 x 120

\* ELECTRO GALVANIZED  
(PAINTABLE SHEET) INQUIRE.

**EST. WT.  
PER SHEET**

105.00  
131.26  
164.05

53.12  
66.41  
63.75  
79.69  
85.00  
106.25  
132.80

43.12  
53.91  
51.75  
64.69  
68.99  
86.24  
107.80

43.12  
41.41  
51.75  
64.69  
68.99  
86.24  
107.80

STAINLESS STEEL  
INQUIRE.

**STANDARD  
GAUGE & SIZE**

**22 Gauge 1.406# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120  
48 x 96  
48 x 120  
60 x 120

**24 Gauge 1.156# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120  
48 x 96  
48 x 120

**26 Gauge .906# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120  
48 x 96  
48 x 120

**28 Gauge .781# Sq. Ft.**

30 x 96  
30 x 120  
36 x 96  
36 x 120

**30 Gauge .656# Sq. Ft.**

36 x 96  
36 x 120

**EST. WT.  
PER SHEET**

28.12  
35.16  
33.75  
42.19  
45.00  
56.25  
70.30

23.13  
28.91  
27.75  
34.69  
37.00  
46.25

18.13  
22.66  
21.75  
27.19  
29.00  
36.20

15.63  
19.53  
18.75  
23.44

15.75  
16.69

23

# EXPANDED METAL

## RAISED TYPE (REGULAR)



*STYLE DESIGNATION	% OPEN AREA	GAUGE THICKNESS	WEIGHT SQ. FT. LBS.	*DIAMOND SIZE SWDxLWD	**OPENING SIZE SWOxLWO	STRAND SIZE WIDTH x THICKNESS	OVERALL WIDTH x THICKNESS
<b>1/4 No. 20</b>	40	<b>20</b>	<b>.86</b>	.26 x 1.00	<b>.13 x .69</b>	.076 x .036	<b>.125</b>
<b>18</b>	40	<b>18</b>	<b>1.14</b>	.26 x 1.00	<b>.13 x .69</b>	.076 x .047	<b>.125</b>
<b>1/2 No. 20</b>	71	<b>20</b>	<b>.43</b>	.46 x 1.20	<b>.38 x .88</b>	.066 x .036	<b>.134</b>
<b>18</b>	65	<b>18</b>	<b>.70</b>	.51 x 1.20	<b>.38 x .95</b>	.089 x .047	<b>.161</b>
<b>16</b>	65	<b>16</b>	<b>.86</b>	.51 x 1.20	<b>.38 x .89</b>	.089 x .059	<b>.159</b>
<b>13</b>	61	<b>13</b>	<b>1.47</b>	.50 x 1.20	<b>.35 x .90</b>	.098 x .089	<b>.199</b>
<b>3/4 No. 16</b>	76	<b>16</b>	<b>.54</b>	.88 x 2.0	<b>.70 x 1.64</b>	.095 x .059	<b>.183</b>
<b>13</b>	76	<b>13</b>	<b>.80</b>	.88 x 2.0	<b>.76 x 1.64</b>	.095 x .089	<b>.185</b>
<b>10</b>	69	<b>10</b>	<b>1.20</b>	.89 x 2.0	<b>.68 x 1.56</b>	.141 x .089	<b>.277</b>
<b>9</b>	68	<b>9</b>	<b>1.80</b>	.86 x 2.0	<b>.60 x 1.45</b>	.137 x .134	<b>.290</b>
<b>1 No. 16</b>	82	<b>16</b>	<b>.47</b>	1.01 x 2.38	<b>.88 x 1.94</b>	.095 x .059	<b>.210</b>
<b>1-1/2 No. 16</b>	85	<b>16</b>	<b>.40</b>	1.35 x 3.00	<b>1.18 x 2.60</b>	.112 x .059	<b>.210</b>
<b>13</b>	85	<b>13</b>	<b>.60</b>	1.35 x 3.00	<b>1.20 x 2.60</b>	.112 x .089	<b>.213</b>
<b>10</b>	81	<b>10</b>	<b>.79</b>	1.35 x 3.00	<b>1.16 x 2.52</b>	.140 x .089	<b>.248</b>
<b>9</b>	76	<b>9</b>	<b>1.19</b>	1.33 x 3.00	<b>1.14 x 2.43</b>	.141 x .134	<b>.289</b>
<b>6</b>	70	<b>6</b>	<b>2.50</b>	1.33 x 3.00	<b>1.00 x 2.31</b>	.203 x .198	<b>.410</b>

DIAMOND DIRECTION— LONG WAY OF DIAMOND RUNS LONG WAY OF SHEET

# EXPANDED METAL

## FLATTENED



*STYLE DESIGNATION	% OPEN AREA	GAUGE THICKNESS	WEIGHT SQ. FT. LBS.	*DIAMOND SIZE SWDxLWD	**OPENING SIZE SWOxLWO	STRAND SIZE WIDTH x THICKNESS	OVERALL WIDTH x THICKNESS
<b>1/4 No. 20</b>	34	<b>20</b>	<b>.83</b>	.26 X 1.03	<b>.09 x .70</b>	.086 x .031	<b>.031</b>
<b>18</b>	34	<b>18</b>	<b>1.11</b>	.26 x 1.03	<b>.09 x .70</b>	.086 x .042	<b>.042</b>
<b>1/2 No. 20</b>	64	<b>20</b>	<b>.41</b>	.44 x 1.25	<b>.31 x .94</b>	.070 x .032	<b>.032</b>
<b>18</b>	58	<b>18</b>	<b>.66</b>	.51 x 1.26	<b>.29 x 1.00</b>	.109 x .038	<b>.038</b>
<b>16</b>	60	<b>16</b>	<b>.82</b>	.51 x 1.26	<b>.30 x 1.00</b>	.103 x .050	<b>.050</b>
<b>13</b>	52	<b>13</b>	<b>1.38</b>	.50 x 1.26	<b>.26 x .97</b>	.122 x .070	<b>.070</b>
<b>3/4 No. 16</b>	74	<b>16</b>	<b>.51</b>	.88 x 2.10	<b>.65 x 1.75</b>	.115 x .048	<b>.048</b>
<b>13</b>	73	<b>13</b>	<b>.76</b>	.88 x 2.10	<b>.64 x 1.75</b>	.119 x .070	<b>.070</b>
<b>10</b>	69	<b>10</b>	<b>1.20</b>	.89 x 2.0	<b>.68 x 1.56</b>	.141 x .089	<b>.277</b>
<b>9</b>	62	<b>9</b>	<b>1.71</b>	.86 x 2.10	<b>.53 x 1.63</b>	.164 x .110	<b>.110</b>
<b>1 No. 16</b>	78	<b>16</b>	<b>.45</b>	1.01 x 2.50	<b>.78 x 2.06</b>	.115 x .048	<b>.048</b>
<b>1-1/2 No. 16</b>	85	<b>16</b>	<b>.38</b>	1.35 x 3.19	<b>1.13 x 2.69</b>	.123 x .048	<b>.048</b>
<b>13</b>	80	<b>13</b>	<b>.57</b>	1.35 x 3.15	<b>1.07 x 2.68</b>	.138 x .070	<b>.070</b>
<b>9</b>	74	<b>9</b>	<b>1.13</b>	1.35 x 3.25	<b>1.00 x 2.62</b>	.175 x .106	<b>.110</b>

NOTE: Diamond direction— long way of diamond runs long way of sheet.

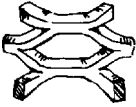
\*Style designation— the first number normally indicates nominal dimension SWD (short way of design) and second number normally indicates GAUGE— EXCEPTION no. 9 and no. 10.

\* SWD = Short Way of Design  
LWD = Long Way of Design

\*\*SWO = Short Way of Opening  
LWO = Long Way of Opening

ALUMINUM INQUIRE

PERFORATED, WOVEN WIRE & BAR GRATING AVAILABLE



# EXPANDED METAL

**GRATING**  
(GRATE-X)

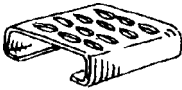
26

STYLE DESIGNATION (Lbs. Sq. Ft.)	% OPEN AREA	MATERIAL THICKNESS	WEIGHT SQ. FT. LBS.	*DIAMOND SIZE SWDxLWD	**OPENING SIZE SWOxLWO	STRAND SIZE WIDTH x THICKNESS	OVERALL THICKNESS
<b>3.0 lb.</b>	60	<b>3/16</b>	<b>3.00</b>	1.33 x 5.33	<b>.95 x 3.50</b>	.264 x .183	<b>9/16</b>
<b>3.14lb.</b>	69	<b>1/4</b>	<b>3.14</b>	2.00 x 6.00	<b>1.63 x 4.88</b>	.312 x .250	<b>11/16</b>
<b>4.0 lb.</b>	62	<b>7/32</b>	<b>4.00</b>	1.33 x 5.33	<b>.83 x 3.30</b>	.300 x .215	<b>5/8</b>
<b>4.27lb.</b>	58	<b>1/4</b>	<b>4.27</b>	1.41 x 4.00	<b>1.00 x 2.88</b>	.300 x .250	<b>5/8</b>
<b>5.0 lb.</b>	57	<b>1/4</b>	<b>5.00</b>	1.33 x 5.33	<b>.76 x 3.20</b>	.331 x .250	<b>11/16</b>
<b>6.25lb.</b>	53	<b>5/16</b>	<b>6.25</b>	1.41 x 5.33	<b>.75 x 3.10</b>	.350 x .312	<b>3/4</b>
<b>7.0 lb.</b>	49	<b>5/16</b>	<b>7.00</b>	1.41 x 5.33	<b>.69 x 3.05</b>	.391 x .312	<b>3/4</b>

DIAMOND DIRECTION— LONG WAY OF DIAMOND RUNS LONG WAY OF SHEET / SOME SIZES AVAILABLE LONG WAY DIAMOND, SHORT WAY SHEET.

\* SWD = Short Way of Design  
LWD = Long Way of Design

\*\*SWO = Short Way of Opening  
LWO = Long Way of Opening



# SAFETY GRATING

**DIAMOND TREAD PLANKS**  
X 10' & 12' GALVANIZED & BLACK

27

DESIGNATION WIDTH-DIAMOND NUMBER/ GAUGE & HEIGHT	CHANNEL SIZE HEIGHT INCHES	WEIGHT PER FOOT LBS.	DESIGNATION WIDTH-DIAMOND NUMBER/ GAUGE & HEIGHT	CHANNEL SIZE HEIGHT INCHES	WEIGHT PER FOOT LBS.
<b>4-3/4 Wide x 2 Diamond</b>			<b>11-3/4 Wide x 5 Diamond</b>		
14 Gauge	1-1/2	2.3	14 Gauge	1-1/2	4.2
" "	2	2.6	" "	2	4.4
" "	2-1/2	2.8	" "	2-1/2	4.7
12 Gauge	1-1/2	3.2	12 Gauge	1-1/2	5.9
" "	2	3.6	" "	2	6.2
" "	2-1/2	4.0	" "	2-1/2	6.6
<b>7 Wide x 3 Diamond</b>			<b>18-3/4 Wide x 8 Diamond</b>		
14 Gauge	1-1/2	3.0	14 Gauge	1-1/2	6.1
" "	2	3.2	" "	2	6.3
" "	2-1/2	3.5	" "	2-1/2	6.6
12 Gauge	1-1/2	4.1	12 Gauge	1-1/2	8.5
" "	2	4.5	" "	2	8.9
" "	2-1/2	4.9	" "	2-1/2	9.2
" "	3	5.2	" "	3	9.6
<b>9-1/2 Wide x 4 Diamond</b>			<b>24 Wide x 10 Diamond</b>		
14 Gauge	1-1/2	3.6	14 Gauge	2	7.4
" "	2	3.8	" "	3	7.9
" "	2-1/2	4.1	12 Gauge	2	10.4
12 Gauge	1-1/2	5.0	" "	3	11.1
" "	2	5.4			
" "	2-1/2	5.7			
" "	3	6.1			



BAR GRATING  
(OPEN FLOOR TYPE) — INQUIRE



# TUBING, ROUND

**HREW**  
HOT ROLLED  
ELECTRIC WELDED



SIZE O.D. & WALL THICKNESS	WEIGHT PER FOOT	SIZE O.D. & WALL THICKNESS	WEIGHT PER FOOT	SIZE O.D. & WALL THICKNESS	WEIGHT PER FOOT
3/8 x .049	.17	1-3/4 x .065	1.17	4 x .065	2.73
1/2 x .049	.22	.083	1.48	.083	3.20
.065	.30	.095	1.68	.109	4.50
5/8 x .049	.28	.120	2.09	.120	4.97
.065	.39	2 x .065	1.34	.134	5.70
3/4 x .049	.37	.083	1.70	.188	7.35
.065	.48	.095	1.93	4-1/2 x .083	3.60
.083	.59	.120	2.41	.109	5.09
.120	.81	2-1/4 x .049	1.15	.134	6.40
7/8 x .049	.43	.065	1.52	5 x .065	3.43
.065	.56	.083	1.92	.083	4.20
.083	.70	.120	2.73	.109	5.70
1 x .049	.50	2-1/2 x .065	1.69	.134	7.30
.065	.65	.083	2.14	.188	9.66
.083	.81	.095	2.44	6 x .083	4.90
.095	.92	.120	3.05	.109	6.70
.120	1.13	3 x .065	2.04	.134	8.60
1-1/4 x .049	.63	.083	2.59	.188	12.10
.065	.82	.109	4.00	8 x .083	6.50
.083	1.03	.120	3.69	.109	9.00
.095	1.17	.134	4.40	.134	11.60
.120	1.45	3-1/2 x .065	2.39	.188	16.10
1-1/2 x .049	.76	.083	2.90	10 x .109	11.34
.065	1.00	.109	4.00	.134	14.50
.083	1.26	.120	4.33	.188	20.20
.095	1.43	.134	5.10	12 x .109	13.60
.120	1.77			.134	17.50
				.188	24.30

28

**ROUND MECHANICAL TUBING— SEE NUMBERS 39 TO 47**  
C.D.S. (COLD DRAWN SEAMLESS) D.O.M. (DRAWN OVER MANDREL)

# PIPE, \*T.&C.

**THREADED & COUPLED**  
STANDARD PIPE/SCHEDULE 40  
BLACK & GALVANIZED



NOM. PIPE SIZE	DIAMETER EXTERNAL	INCHES INTERNAL	WALL THICK- NESS	WEIGHT PER FT. LBS.	NOM. PIPE SIZE	DIAMETER EXTERNAL	INCHES INTERNAL	WALL THICK- NESS	WEIGHT PER FT. LBS.
1/8	.405	.269	.068	.24	1-1/2	1.900	1.610	.145	2.72
1/4	.540	.364	.088	.42	2	2.375	2.067	.154	3.65
3/8	.675	.493	.091	.57	2-1/2	2.875	2.469	.203	5.79
1/2	.840	.622	.109	.85	3	3.500	3.068	.216	7.58
3/4	1.050	.824	.113	1.13	3-1/2	4.000	3.548	.226	9.11
1	1.315	1.049	.133	1.68	4	4.500	4.026	.237	10.79
1-1/4	1.660	1.380	.140	2.27					

\*THREADED BOTH ENDS / WITH COUPLING ONE END

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# PIPE, BLK. P.E. BLACK PIPE PLAIN ENDS

X 21' LENGTHS

PIPE SIZE *NOMINAL PIPE SIZE/I.P.S	O.D. ACTUAL OUTSIDE (EXTERNAL) **( )	PIPE ***CLASS	A.S.A. SCHEDULE	WALL AVERAGE ACTUAL THICKNESS	I.D. THEORETICAL INSIDE DIAMETER (INTERNAL)	WEIGHT PER FOOT LBS.
1/8	<b>.405</b>	<b>STD</b>	<b>40</b>	.068	<b>.269</b>	.244
	(13/32")	<b>XH</b>	<b>80</b>	.095	<b>.215</b>	.314
1/4	<b>.540</b>	<b>STD</b>	<b>40</b>	.088	<b>.364</b>	.424
	(17/32")	<b>XH</b>	<b>80</b>	.119	<b>.302</b>	.535
3/8	<b>.675</b>	<b>STD</b>	<b>40</b>	.091	<b>.493</b>	.567
	(11/16")	<b>XH</b>	<b>80</b>	.126	<b>.423</b>	.738
1/2	<b>.840</b> (27/32")	<b>STD</b>	<b>40</b>	.109	<b>.622</b>	.851
		<b>XH</b>	<b>80</b>	.147	<b>.546</b>	1.088
			<b>160</b>	.187	<b>.466</b>	1.304
		<b>XXH</b>		.294	<b>.252</b>	1.714
3/4	<b>1.050</b> (1-1/16")	<b>STD</b>	<b>40</b>	.113	<b>.824</b>	1.131
		<b>XH</b>	<b>80</b>	.154	<b>.742</b>	1.474
			<b>160</b>	.218	<b>.614</b>	1.937
		<b>XXH</b>		.308	<b>.434</b>	2.441
1	<b>1.315</b> (1-5/16")	<b>STD</b>	<b>40</b>	.133	<b>1.049</b>	1.679
		<b>XH</b>	<b>80</b>	.179	<b>.957</b>	2.172
			<b>160</b>	.250	<b>.815</b>	2.844
		<b>XXH</b>		.358	<b>.599</b>	3.659
1-1/4	<b>1.660</b> (1-11/16")	<b>STD</b>	<b>40</b>	.140	<b>1.380</b>	2.273
		<b>XH</b>	<b>80</b>	.191	<b>1.278</b>	2.997
			<b>160</b>	.250	<b>1.160</b>	3.765
		<b>XXH</b>		.382	<b>.896</b>	5.214
1-1/2	<b>1.900</b> (1-7/8")	<b>STD</b>	<b>40</b>	.145	<b>1.610</b>	2.718
		<b>XH</b>	<b>80</b>	.200	<b>1.500</b>	3.631
			160	.281	<b>1.338</b>	4.859
		<b>XXH</b>		.400	<b>1.100</b>	6.408
2	<b>2.375</b> (2-3/8")	<b>STD</b>	<b>40</b>	.154	<b>2.067</b>	3.653
		<b>XH</b>	<b>80</b>	.218	<b>1.939</b>	5.022
			<b>160</b>	.343	<b>1.689</b>	7.444
		<b>XXH</b>		.436	<b>1.503</b>	9.029
2-1/2	<b>2.875</b> (2-7/8")	<b>STD</b>	<b>40</b>	.203	<b>2.469</b>	5.793
		<b>XH</b>	<b>80</b>	.276	<b>2.323</b>	7.661
			<b>160</b>	.375	<b>2.125</b>	10.010
		<b>XXH</b>		.552	<b>1.771</b>	13.690

\*NOMINAL PIPE SIZE / I.P.S. (IRON PIPE SIZE) = NOMINAL I.D. 12" & SMALLER.

\*\* ( ) NEAREST FRACTIONAL DIMENSION FOR O.D. (OUTER DIAMETER).

\*\*\*PIPE CLASS: STD. = STANDARD WEIGHT PIPE, XH = EXTRA HEAVY, XXH = DOUBLE EXTRA HEAVY

# PIPE, BLK. P.E.

## BLACK PIPE PLAIN ENDS X 21' LENGTHS



PIPE SIZE *NOMINAL PIPE SIZE/I.P.S	O.D. ACTUAL OUTSIDE (EXTERNAL) **( )	PIPE ***CLASS	A.S.A. SCHEDULE	WALL AVERAGE ACTUAL THICKNESS	I.D. THEORETICAL INSIDE DIAMETER (INTERNAL)	WEIGHT PER FOOT LBS.
3	3.500 (3-1/2")	STD	40	.216	3.068	7.576
		XH	80	.300	2.900	10.250
		XXH	160	.438	2.624	14.320
3-1/2	4.000 (4")	STD	40	.226	3.548	9.109
		XH	80	.318	3.364	12.510
		XXH		.636	2.728	22.850
4	4.500 (4-1/2")	STD	40	.237	4.026	10.790
		XH	80	.337	3.826	14.980
			120	.438	3.624	19.000
			160	.531	3.438	22.510
		XXH		.674	3.152	27.540
5	5.563 (5-9/16")	STD	40	.258	5.047	14.620
		XH	80	.375	4.813	20.780
			120	.500	4.563	27.040
			160	.625	4.313	32.960
		XXH		.750	4.063	38.550
6	6.625 (6-5/8")	STD	40	.280	6.065	18.97
		XH	80	.432	5.761	28.57
			120	.562	5.501	36.39
			160	.718	5.189	45.30
		XXH		.864	4.897	53.16
8	8.625 (8-5/8")		20	.250	8.125	22.36
			30	.277	8.071	24.70
		STD	40	.322	7.981	28.55
			60	.406	7.813	35.64
		XH	80	.500	7.625	43.39
			100	.593	7.439	50.87
			120	.718	7.189	60.63
			140	.812	7.001	67.76
				.875	6.875	72.42
			160	.906	6.813	74.69
10	10.750 (10-3/4")	STD	20	.250	10.250	28.04
		XH	40	.365	10.020	40.48
			60	.500	9.750	54.74
			80	.593	9.564	64.33
			100	.718	9.314	76.93
			120	.843	9.064	89.20
			140	1.000	8.750	104.10
	160	1.125	8.500	115.70		



BARE (UNCOATED)/ PAINTED  
HANDRAIL PIPE INQUIRE



WELL CASING (LIGHT WALL)  
INQUIRE

\*NOMINAL PIPE SIZE / I.P.S. (IRON PIPE SIZE) = NOMINAL I.D. 12" & SMALLER.

\*\* ( ) NEAREST FRACTIONAL DIMENSION FOR O.D. (OUTER DIAMETER).

\*\*\*PIPE CLASS: STD. = STANDARD WEIGHT PIPE, XH = EXTRA HEAVY, XXH = DOUBLE EXTRA HEAVY

**STAINLESS &  
ALUMINUM  
AVAILABLE**



# PIPE, BLK. P.E. BLACK PIPE PLAIN ENDS X 21' LENGTHS

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PIPE SIZE *NOMINAL PIPE SIZE/I.P.S	O.D. ACTUAL OUTSIDE (EXTERNAL) **( )	PIPE ***CLASS	A.S.A. SCHEDULE	WALL AVERAGE ACTUAL THICKNESS	I.D. THEORETICAL INSIDE DIAMETER (INTERNAL)	WEIGHT PER FOOT LBS.			
<b>12</b>	<b>12.750</b> (12-3/4")	<b>STD</b>	20	.250	<b>12.250</b>	33.38			
			30	.330	<b>12.090</b>	43.77			
			40	.375	<b>12.000</b>	49.56			
			<b>XH</b>	60	.406	<b>11.938</b>	53.53		
				80	.562	<b>11.626</b>	73.16		
				100	.687	<b>11.376</b>	88.51		
		<b>14</b>	<b>14.000</b> (14")	<b>STD</b>	10	.250	<b>13.500</b>	36.71	
					20	.312	<b>13.376</b>	45.68	
					30	.375	<b>13.250</b>	54.57	
					40	.437	<b>13.126</b>	63.37	
					<b>XH</b>	60	.500	<b>13.000</b>	72.09
						80	.593	<b>12.814</b>	84.91
100	.750			<b>12.500</b>		106.10			
<b>16</b>	<b>16.000</b> (16")			<b>STD</b>	10	.937	<b>12.126</b>	130.70	
					120	1.093	<b>11.814</b>	150.70	
					140	1.250	<b>11.500</b>	170.20	
					160	1.406	<b>11.188</b>	189.10	
					<b>XH</b>	10	.250	<b>15.500</b>	42.05
		20	.312			<b>15.376</b>	52.36		
		30	.375	<b>15.250</b>		62.58			
		40	.500	<b>15.000</b>		82.77			
		60	.656	<b>14.688</b>		107.50			
		80	.843	<b>14.314</b>		136.50			
		<b>18</b>	<b>18.000</b> (18")	<b>STD</b>	100	1.031	<b>13.938</b>	164.80	
					120	1.218	<b>13.564</b>	192.30	
140	1.437				<b>13.126</b>	223.50			
160	1.593				<b>12.814</b>	245.10			
<b>XH</b>	10				.250	<b>17.500</b>	47.39		
	30				.375	<b>17.250</b>	70.59		
	50			.500	<b>17.000</b>	93.45			
	70			.562	<b>16.876</b>	104.80			
	90			.750	<b>16.500</b>	138.20			
	110			.937	<b>16.126</b>	170.80			
<b>HEAVY WALL</b>	<b>HEAVY WALL</b>			130	1.156	<b>15.688</b>	208.00		
				150	1.375	<b>15.250</b>	244.10		
		170	1.562	<b>14.876</b>	274.20				
		190	1.781	<b>14.438</b>	308.50				

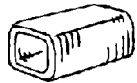
**LARGE O.D.  
HEAVY WALL**  
INQUIRE

\*NOMINAL PIPE SIZE / I.P.S. (IRON PIPE SIZE) = NOMINAL I.D. 12" & SMALLER.  
 \*\*( ) NEAREST FRACTIONAL DIMENSION FOR O.D. (OUTER DIAMETER).  
 \*\*\*PIPE CLASS: STD. = STANDARD WEIGHT PIPE, XH = EXTRA HEAVY, XXH = DOUBLE EXTRA HEAVY

STAINLESS &  
ALUMINUM  
AVAILABLE

# TUBING, SQUARE

## ORNAMENTAL & STRUCTURAL



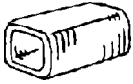
SIZE IN INCHES	WALL THICKNESS	EST. WT. PER FT. POUNDS
1/2 x 1/2 x	.049	<b>.301</b>
	.065	<b>.385</b>
5/8 x 5/8 x	.049	<b>.367</b>
	.065	<b>.495</b>
3/4 x 3/4 x	.049	<b>.46</b>
	.065	<b>.607</b>
	.083	<b>.75</b>
	.095	<b>.84</b>
	.120	<b>1.03</b>
7/8 x 7/8 x	.049	<b>.52</b>
	.065	<b>.68</b>
	.083	<b>.89</b>
	.095	<b>.98</b>
	.120	<b>1.23</b>
1 x 1 x	.049	<b>.63</b>
	.065	<b>.83</b>
	.083	<b>1.04</b>
	.095	<b>1.17</b>
	.109	<b>1.32</b>
1 1/4 x 1 1/4 x	.120	<b>1.43</b>
	.049	<b>.80</b>
	.065	<b>1.05</b>
	.083	<b>1.32</b>
	.095	<b>1.49</b>
1 1/2 x 1 1/2 x	.109	<b>1.69</b>
	.120	<b>1.84</b>
	.188	<b>2.75</b>
	.049	<b>.95</b>
	.065	<b>1.27</b>
1 3/4 x 1 3/4 x	.083	<b>1.60</b>
	.095	<b>1.81</b>
	.109	<b>2.06</b>
	.120	<b>2.25</b>
	.188	<b>3.54</b>
2 x 2 x	.250	<b>4.11</b>
	.065	<b>1.49</b>
	.083	<b>1.88</b>
	.095	<b>2.14</b>

SIZE IN INCHES	WALL THICKNESS	EST. WT. PER FT. POUNDS
1 3/4 x 1 3/4 x	.120	<b>2.66</b>
	.188	<b>3.68</b>
2 x 2 x	.065	<b>1.69</b>
	.083	<b>2.16</b>
	.095	<b>2.46</b>
2 1/4 x 2 1/4 x	.120	<b>3.07</b>
	.188	<b>4.32</b>
	.250	<b>5.41</b>
2 1/2 x 2 1/2 x	.188	<b>5.07</b>
	.250	<b>7.01</b>
2 1/2 x 2 1/2 x	.120	<b>3.89</b>
	.188	<b>5.59</b>
	.250	<b>7.11</b>
3 x 3 x	.120	<b>4.70</b>
	.188	<b>6.87</b>
	.250	<b>8.81</b>
3 1/2 x 3 1/2 x	.313	<b>10.58</b>
	.375	<b>12.17</b>
	.120	<b>5.61</b>
3 1/2 x 3 1/2 x	.188	<b>8.15</b>
	.250	<b>10.51</b>
	.313	<b>12.70</b>
4 x 4 x	.375	<b>14.70</b>
	.120	<b>6.34</b>
	.188	<b>9.42</b>
4 x 4 x	.250	<b>12.21</b>
	.313	<b>14.83</b>
	.375	<b>17.27</b>
4 1/2 x 4 1/2 x	.500	<b>21.63</b>
	.188	<b>10.70</b>
	.250	<b>13.91</b>
5 x 5 x	.313	<b>19.08</b>
	.375	<b>22.37</b>
	.500	<b>28.43</b>
	.120	<b>7.96</b>
	.188	<b>11.97</b>
5 x 5 x	.250	<b>15.62</b>
	.313	<b>19.08</b>



TELESCOPING  
TUBING  
INQUIRE

(CONTINUED NEXT PAGE)



# TUBING, SQUARE

ORNAMENTAL & STRUCTURAL

31

SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
6	x	6	x	.188	14.53
				.250	19.02
				.313	23.34
				.375	27.48
				.500	35.24
7	x	7	x	.188	17.08
				.250	22.42
				.313	27.59
				.375	32.58
				.500	42.05
8	x	8	x	.188	19.63
				.250	25.82
				.313	31.84
				.375	37.69
				.500	48.85
				.625	59.32

SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
10	x	10	x	.250	32.63
				.313	40.35
				.375	47.90
				.500	62.46
				.625	76.33
12	x	12	x	.250	39.43
				.313	48.86
				.375	58.10
				.500	76.07
				.625	93.34
14	x	14	x	.375	68.31
				.500	89.68
16	x	16	x	.500	103.30



# TUBING, RECTANGULAR

ORNAMENTAL & STRUCTURAL

32

SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
1	x	1/2	x	.049	.45
				.065	.605
1 1/2	x	1/2	x	.065	.826
1 1/2	x	3/4	x	.065	.937
				.083	1.18
				.120	1.64
1 1/2	x	1	x	.065	1.05
				.083	1.34
				.095	1.52
				.120	1.85
2	x	1	x	.065	1.27
				.083	1.60
				.095	1.82
				.120	2.25
				.188	3.36

SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
2	x	1 1/4	x	.083	1.74
				.095	1.98
2	x	1 1/2	x	.065	1.49
				.083	1.88
				.095	2.14
				.120	2.66
2 1/2	x	1	x	.065	1.49
				.120	2.66
2 1/2	x	1 1/2	x	.065	1.69
				.083	2.16
				.095	2.46
				.120	3.07
				.188	4.32
				.250	5.41
3	x	1	x	.065	1.71
				.083	2.16



(CONTINUED NEXT PAGE)

# TUBING, RECTANGULAR

## ORNAMENTAL & STRUCTURAL



SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
3	x	1	x	.095	2.46
				.120	3.05
3	x	1 1/2	x	.065	1.93
				.083	2.45
				.120	3.48
				.188	4.97
3	x	2	x	.065	2.17
				.083	2.73
				.120	3.93
				.188	5.59
				.250	7.11
4	x	1 1/2	x	.120	4.29
4	x	2	x	.120	4.70
				.188	7.04
				.250	8.81
4	x	3	x	.120	5.52
				.188	8.15
				.250	10.51
				.313	12.70
				.375	14.71
5	x	2	x	.120	5.52
				.188	8.15
				.250	10.51
5	x	3	x	.120	6.33
				.188	9.42
				.250	12.21
				.313	14.83
				.375	17.27
				.500	21.63
6	x	2	x	.120	6.33
				.188	9.42
				.250	12.21
				.313	14.83
				.375	17.27
6	x	3	x	.120	7.15
				.188	10.70
				.250	13.91

(CONTINUED)

SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
6	x	3	x	.313	16.96
				.375	19.82
				.500	25.03
6	x	4	x	.188	11.97
				.250	15.62
				.313	19.08
				.375	22.37
				.500	28.43
7	x	3	x	.188	11.97
				.250	15.62
				.375	22.37
7	x	4	x	.188	13.25
				.250	17.32
				.313	21.21
				.375	24.93
7	x	5	x	.188	14.53
				.250	19.02
				.313	23.34
				.375	27.48
				.500	35.24
8	x	2	x	.188	11.97
				.250	15.62
				.313	19.08
				.375	22.37
8	x	3	x	.188	13.25
				.250	17.32
				.313	21.21
				.375	24.93
				.500	31.84
8	x	4	x	.188	14.53
				.250	19.02
				.313	23.34
				.375	27.48
				.500	35.24
8	x	6	x	.188	17.08
				.250	22.42
				.313	27.59

(CONTINUED NEXT PAGE)



# TUBING, RECTANGULAR

ORNAMENTAL  
& STRUCTURAL

SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
8	x	6	x	.375	<b>32.58</b>
				.500	<b>42.05</b>
9	x	7	x	.188	<b>19.63</b>
				.250	<b>25.82</b>
10	x	2	x	.188	<b>14.65</b>
				.250	<b>19.02</b>
10	x	3	x	.188	<b>15.80</b>
				.250	<b>20.72</b>
10	x	4	x	.188	<b>17.08</b>
				.250	<b>22.42</b>
				.313	<b>27.59</b>
				.375	<b>32.58</b>
				.500	<b>42.05</b>
10	x	6	x	.188	<b>19.63</b>
				.250	<b>25.82</b>
				.313	<b>31.84</b>
				.375	<b>37.69</b>
				.500	<b>48.85</b>
10	x	8	x	.188	<b>22.18</b>
				.250	<b>29.23</b>
				.313	<b>36.10</b>
				.375	<b>42.79</b>
				.500	<b>55.66</b>
12	x	2	x	.188	<b>17.08</b>
				.250	<b>22.42</b>
12	x	3	x	.188	<b>18.35</b>
				.250	<b>24.12</b>
12	x	4	x	.188	<b>19.63</b>
				.250	<b>25.82</b>
				.313	<b>31.84</b>
				.375	<b>37.69</b>
				.500	<b>48.85</b>
12	x	6	x	.500	<b>59.32</b>
				.625	<b>59.32</b>
12	x	6	x	.188	<b>22.18</b>
				.250	<b>29.23</b>

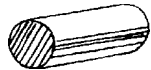
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SIZE IN INCHES				WALL THICKNESS	EST. WT. PER FT. POUNDS
12	x	6	x	.313	<b>36.10</b>
				.375	<b>42.79</b>
				.500	<b>55.66</b>
12	x	8	x	.188	<b>24.73</b>
				.250	<b>32.63</b>
				.313	<b>40.35</b>
				.375	<b>47.90</b>
				.500	<b>62.46</b>
12	x	8	x	.625	<b>76.33</b>
14	x	4	x	.250	<b>29.23</b>
				.313	<b>36.10</b>
				.375	<b>42.79</b>
				.500	<b>55.66</b>
14	x	6	x	.250	<b>32.63</b>
				.313	<b>40.35</b>
				.375	<b>47.90</b>
14	x	6	x	.500	<b>62.46</b>
14	x	10	x	.375	<b>58.10</b>
				.500	<b>76.07</b>
16	x	4	x	.313	<b>40.35</b>
				.375	<b>47.90</b>
				.500	<b>62.46</b>
16	x	8	x	.313	<b>48.86</b>
				.375	<b>58.10</b>
16	x	8	x	.500	<b>76.07</b>
16	x	12	x	.313	<b>57.36</b>
				.375	<b>68.31</b>
				.500	<b>89.68</b>
18	x	6	x	.313	<b>48.86</b>
				.375	<b>58.10</b>
				.500	<b>76.07</b>
20	x	4	x	.375	<b>58.10</b>
				.500	<b>76.07</b>
20	x	8	x	.375	<b>68.31</b>
				.500	<b>89.68</b>



# C.F. ROUND BAR

**COLD FINISHED**  
C-1018 x 20' RANDOM



SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1/8	.042	.84
3/16	.094	1.88
1/4	.167	3.34
5/16	.261	5.22
3/8	.375	7.52
7/16	.511	10.22
1/2	.668	13.36
9/16	.845	16.90
5/8	1.043	20.86
11/16	1.26	25.24
3/4	1.50	30.04
13/16	1.76	35.26
7/8	2.04	40.80
15/16	2.35	46.94
1	2.67	53.40
1-1/16	3.02	60.28
1-1/8	3.38	67.60
1-3/16	3.77	75.31
1-1/4	4.17	83.45
1-5/16	4.60	92.00
1-3/8	5.05	101.00
1-7/16	5.52	110.40
1-1/2	6.01	120.20
1-9/16	6.52	130.40
1-5/8	7.05	141.00
1-11/16	7.60	152.00
1-3/4	8.18	163.60
1-13/16	8.77	175.50
1-7/8	9.39	187.80
1-15/16	10.02	200.40
2	10.68	213.60
2-1/8	12.06	241.20
2-3/16	12.78	255.60

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
2-1/4	13.52	270.40
2-5/16	14.28	285.60
2-3/8	15.06	301.20
2-7/16	15.87	317.40
2-1/2	16.69	333.80
2-5/8	18.41	368.20
2-11/16	19.29	385.80
2-3/4	20.20	404.00
2-13/16	21.12	422.40
2-7/8	22.09	441.80
2-15/16	23.04	460.80
3	24.03	480.60
3-3/16	27.13	542.60
3-1/4	28.21	564.20
3-3/8	30.42	608.40
3-7/16	31.55	631.00
3-1/2	32.71	654.20
3-11/16	36.31	726.20
3-3/4	37.55	751.00
3-15/16	41.40	828.00
4	42.73	854.60
4-1/4	48.23	964.60
4-7/16	52.58	1051.60
4-1/2	54.08	1081.60
4-15/16	65.10	1302.00
5	66.76	1335.20
5-7/16	78.95	1579.00
5-15/16	94.14	1882.80
6	96.13	1922.60
6-7/16	110.66	2213.00
6-1/2	112.82	2256.00

**COLD DRAWN — LARGER SIZES TURNED & POLISHED / TOLERANCES — INQUIRE.**

33

# C.F. SQUARE BAR

**(KEYSTOCK)**

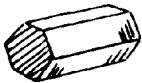
**COLD FINISHED**  
C-1018 x 12' RANDOM



SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
1/8	.053	.64
3/16	.120	1.44
1/4	.213	2.55
5/16	.332	3.98
3/8	.478	5.73
7/16	.651	7.82
1/2	.850	10.20
9/16	1.080	12.96
5/8	1.330	15.96

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
11/16	1.61	19.32
3/4	1.91	22.92
7/8	2.60	31.20
1	3.40	40.80
1-1/8	4.30	51.60
1-1/4	5.31	63.72
1-1/2	7.65	91.80
1-3/4	10.41	124.92
2	13.60	163.20

34



# C.F. HEXAGON (HEX) COLD FINISHED

VARIOUS GRADES AVAIL.  
x 12' RANDOM LENGTH

35

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
3/16	0.10	1.20	1	2.94	35.28
1/4	0.19	2.28	1-1/8	3.73	44.76
5/16	0.29	3.48	1-1/4	4.60	55.20
3/8	0.41	4.92	1-3/8	5.57	66.84
7/16	0.56	6.72	1-7/16	6.09	73.08
1/2	0.74	8.88	1-1/2	6.63	79.56
9/16	0.93	11.16	1-5/8	7.78	93.36
5/8	1.15	13.80	1-3/4	9.02	108.24
11/16	1.39	16.68	2	11.78	141.36
3/4	1.66	19.92	2-1/4	14.91	178.92
7/8	2.25	27.00	2-1/2	18.40	220.80



# \*STRESSPROOF® HIGH STRENGTH

FREE MACHINING

36

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1/4	.167	3.34	2	10.68	213.60
5/16	.261	5.22	2-1/16	11.36	227.20
3/8	.375	7.52	2-1/8	12.06	241.20
7/16	.511	10.22	2-3/16	12.78	255.60
1/2	.668	13.36	2-1/4	13.52	270.40
9/16	.845	16.90	2-5/16	14.28	285.60
5/8	1.043	20.86	2-3/8	15.06	301.20
11/16	1.262	25.24	2-7/16	15.87	317.40
3/4	1.502	30.04	2-1/2	16.69	333.80
7/8	2.044	40.88	2-5/8	18.41	368.01
15/16	2.350	46.94	2-3/4	20.20	404.00
1	2.670	53.41	2-13/16	21.12	422.40
1-1/16	3.014	60.28	2-7/8	22.07	447.40
1-1/8	3.38	67.60	2-15/16	23.04	460.80
1-3/16	3.77	75.31	3	24.03	480.60
1-1/4	4.17	83.45	3-1/8	26.08	521.60
1-5/16	4.60	92.00	3-1/4	28.21	564.20
1-3/8	5.05	101.00	3-7/16	31.55	631.00
1-7/16	5.52	110.40	3-1/2	32.71	654.20
1-1/2	6.01	120.20	3-3/4	37.55	751.00
1-9/16	6.52	130.40	3-15/16	41.40	828.00
1-5/8	7.05	141.01	4	42.73	854.60
1-11/16	7.60	152.00	4-7/16	52.58	1052.00
1-3/4	8.18	163.60	4-1/2	54.08	1082.00
1-7/8	9.39	187.80			
1-15/16	10.02	200.49			

\* AVAILABLE COLD DRAWN (EBONY FINISH) OR GROUND & POLISHED

TOOL STEEL STAINLESS STEEL

FLAT  
GROUND  
INQUIRE

# PRECISION SHAFTING

**C-1045**  
\*T.G. & P.



SIZE IN INCHES	EST.WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1/2	.668	13.36
5/8	1.043	20.86
3/4	1.50	30.04
7/8	2.04	40.88
15/16	2.35	47.00
1	2.67	53.40
1-1/8	3.38	67.60
1-3/16	3.77	75.31
1-1/4	4.17	83.45
1-3/8	5.05	101.00
1-7/16	5.52	110.40
1-1/2	6.01	120.20
1-5/8	7.05	141.00
1-11/16	7.60	152.00
1-3/4	8.18	163.60
1-15/16	10.02	200.40
2	10.68	213.60
2-3/16	12.78	255.60

SIZE IN INCHES	EST.WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
2-1/4	13.52	270.40
2-7/16	15.87	317.40
2-1/2	16.69	338.80
2-11/16	19.29	385.80
2-3/4	20.20	404.00
3	24.03	480.60
3-1/4	28.21	564.20
3-7/16	31.55	631.00
3-1/2	32.71	654.20
3-15/16	41.40	828.00
4	42.73	854.60
4-7/16	52.58	1051.60
4-1/2	54.08	1081.60
4-15/16	65.10	1302.00
5	66.76	1335.20
5-1/2	80.78	1615.60

\*C-1045 TURNED, GROUND & POLISHED—  
TOLERANCES— INQUIRE

37

# ALLOY SHAFTING

**\*A.I.S.I. 4140**  
H.T./S.R., T.G. & P.



SIZE IN INCHES	EST.WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
1/2	.668	13.36
5/8	1.043	20.86
11/16	1.26	25.24
3/4	1.50	30.04
13/16	1.76	35.26
7/8	2.04	40.88
15/16	2.35	46.94
1	2.67	53.40
1-1/16	3.02	60.29
1-1/8	3.38	67.60
1-3/16	3.77	75.31
1-1/4	4.17	83.45
1-3/8	5.05	101.00
1-7/16	5.52	110.40
1-1/2	6.01	120.20
1-5/8	7.05	141.00
1-11/16	7.60	152.00
1-3/4	8.18	163.60
1-13/16	8.77	175.70
1-7/8	9.39	187.80
1-15/16	10.02	200.40

SIZE IN INCHES	EST.WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
2	10.68	213.60
2-1/8	12.06	241.20
2-3/16	12.78	255.60
2-1/4	13.52	270.40
2-7/16	15.87	317.40
2-1/2	16.69	338.80
2-11/16	19.29	385.80
2-3/4	20.20	404.00
2-15/16	23.04	460.80
3	24.03	480.60
3-3/16	27.13	542.60
3-1/4	28.21	564.20
3-7/16	31.55	631.00
3-1/2	32.71	654.20
3-3/4	37.57	751.40
3-15/16	41.40	828.00
4	42.73	854.60
4-7/16	52.58	1051.60
4-1/2	54.08	1081.60
4-15/16	65.10	1302.00

\*AISI.4140 ALLOY, HEAT TREATED & STRESS  
RELIEVED. TURNED, GROUND & POLISHED.

38



# FREE MACHINING STEEL

**ROUND LEADED**  
COLD DRAWN A.I.S.I. 12L14  
x 12' RANDOM LENGTH

39

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
1/8	.042	.50	7/8	<b>2.044</b>	24.53
5/32	<b>.065</b>	.78	15/16	<b>2.347</b>	28.16
3/16	<b>.094</b>	1.13	1	<b>2.670</b>	32.04
7/32	<b>.128</b>	1.54	1-1/16	<b>3.014</b>	36.17
1/4	<b>.167</b>	2.00	1-1/8	<b>3.379</b>	40.55
9/32	<b>.211</b>	2.53	1-3/16	<b>3.766</b>	45.19
5/16	<b>.261</b>	3.13	1-1/4	<b>4.173</b>	50.08
11/32	<b>.316</b>	3.79	1-5/16	<b>4.600</b>	55.20
3/8	<b>.375</b>	4.50	1-3/8	<b>5.049</b>	60.59
13/32	<b>.441</b>	5.29	1-7/16	<b>5.518</b>	66.22
7/16	<b>.511</b>	6.13	1-1/2	<b>6.008</b>	72.10
1/2	<b>.668</b>	8.02	1-9/16	<b>6.520</b>	78.24
17/32	<b>.754</b>	9.05	1-5/8	<b>7.051</b>	84.61
9/16	<b>.845</b>	10.14	1-11/16	<b>7.604</b>	91.25
5/8	<b>1.043</b>	12.52	1-3/4	<b>8.178</b>	98.14
11/16	<b>1.262</b>	15.14	1-13/16	<b>8.773</b>	105.28
3/4	<b>1.502</b>	18.02	1-7/8	<b>9.388</b>	112.66
13/16	<b>1.763</b>	21.16	1-15/16	<b>10.020</b>	120.24
			2	<b>10.680</b>	128.16

LARGER SIZES AND OTHER GRADES AVAILABLE



# \* CHROMEROD

SHAFTING  
CHROME PLATED  
A.I.S.I. 1040/50

40

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 20' BAR, POUNDS
5/8	<b>1.04</b>	20.86	2	<b>10.68</b>	213.60
3/4	<b>1.50</b>	30.04	2-1/8	<b>12.06</b>	241.20
7/8	<b>2.04</b>	40.88	2-1/4	<b>13.52</b>	270.40
1	<b>2.67</b>	53.41	2-1/2	<b>16.69</b>	333.80
1-1/8	<b>3.38</b>	67.60	2-3/4	<b>20.20</b>	404.00
1-1/4	<b>4.17</b>	83.45	3	<b>24.03</b>	480.60
1-3/8	<b>5.05</b>	101.00	3-1/4	<b>28.21</b>	564.20
1-1/2	<b>6.01</b>	120.20	3-1/2	<b>32.71</b>	654.20
1-5/8	<b>7.05</b>	141.01	4	<b>42.73</b>	854.60
1-3/4	<b>8.18</b>	163.60	4-1/2	<b>54.08</b>	1082.00
1-7/8	<b>9.39</b>	187.80	5	<b>66.76</b>	1335.20

\* GRADES



- o Standard Chrome (.0005) — Typical Cold Drawn Properties
- o Standard Chrome (.0005) — High Strength, 100,000 Min. Yield
- o Heavy Chrome (.001) — High Strength, 100,000 Min. Yield
- o Standard Chrome (.0005) — High Strength, 100,000 Min. Yield — Induction Hardened — Surface Hardness 50 Rockwell C Case Depth .050-.060

SHAFTING  
**CHROME PLATING**  
A.I.S.I. 1040/50

# DRILL ROD

**GROUND & POLISHED**  
 W-1 WATER HARDENING O-1 OIL HARDENING  
 A-2 AIR HARDENING x3' LENGTH



DIAMETER DECIMAL INCHES	SIZE NO. OR FRACTION	WT. LBS. PER 3 FT. LENGTH	DIAMETER DECIMAL INCHES	SIZE NO. OR FRACTION	WT. LBS. PER 3 FT. LENGTH	DIAMETER DECIMAL INCHES	SIZE NO. OR FRACTION	WT. LBS. PER 3 FT. LENGTH
.0156	<b>1/64</b>	.002	.172	<b>17</b>	.237	.4531	<b>29/64</b>	1.644
.0312	<b>1/32</b>	.008	.175	<b>16</b>	.246	.4687	<b>15/32</b>	1.761
.032	<b>66</b>	.008	.178	<b>15</b>	.255	.4843	<b>31/64</b>	1.881
.033	<b>65</b>	.009	.180	<b>14</b>	.261	.500	<b>1/2</b>	2.004
.035	<b>64</b>	.010	.182	<b>13</b>	.267	.5156	<b>33/64</b>	2.130
.036	<b>63</b>	.011	.185	<b>12</b>	.276	.5312	<b>17/32</b>	2.262
.037	<b>62</b>	.011	.1875	<b>3/16</b>	.282	.5468	<b>35/64</b>	2.397
.038	<b>61</b>	.011	.188	<b>11</b>	.282	.5625	<b>9/16</b>	2.535
.039	<b>60</b>	.012	.191	<b>10</b>	.288	.5781	<b>37/64</b>	2.679
.040	<b>59</b>	.013	.194	<b>9</b>	.297	.5937	<b>19/32</b>	2.823
.041	<b>58</b>	.014	.197	<b>8</b>	.312	.6093	<b>39/64</b>	2.976
.042	<b>57</b>	.015	.199	<b>7</b>	.318	.625	<b>5/8</b>	3.129
.045	<b>56</b>	.018	.201	<b>6</b>	.321	.6406	<b>41/64</b>	3.288
.0468	<b>3/64</b>	.018	.2031	<b>13/64</b>	.330	.6562	<b>21/32</b>	3.450
.050	<b>55</b>	.021	.204	<b>5</b>	.330	.6718	<b>43/64</b>	3.615
.055	<b>54</b>	.024	.207	<b>4</b>	.345	.6875	<b>11/16</b>	3.786
.058	<b>53</b>	.027	.212	<b>3</b>	.363	.7031	<b>45/64</b>	3.960
.0625	<b>1/16</b>	.030	.2187	<b>7/32</b>	.384	.7187	<b>23/32</b>	4.137
.063	<b>52</b>	.033	.219	<b>2</b>	.387	.7348	<b>47/64</b>	4.377
.066	<b>51</b>	.036	.227	<b>1</b>	.414	.750	<b>3/4</b>	4.506
.069	<b>50</b>	.039	.234	<b>A</b>	.441	.7656	<b>49/64</b>	4.695
.072	<b>49</b>	.042	.2343	<b>15/64</b>	.441	.7812	<b>25/32</b>	4.890
.075	<b>48</b>	.045	.238	<b>B</b>	.450	.7969	<b>51/64</b>	5.088
.077	<b>47</b>	.048	.242	<b>C</b>	.462	.8125	<b>13/16</b>	5.289
.0781	<b>5/64</b>	.048	.246	<b>D</b>	.483	.8281	<b>53/64</b>	5.480
.079	<b>46</b>	.051	.250	<b>1/4</b>	.501	.8437	<b>27/32</b>	5.703
.081	<b>45</b>	.054	.250	<b>E</b>	.501	.8593	<b>55/64</b>	5.916
.085	<b>44</b>	.057	.257	<b>F</b>	.522	.875	<b>7/8</b>	6.132
.088	<b>43</b>	.063	.261	<b>G</b>	.543	.8906	<b>57/64</b>	6.354
.092	<b>42</b>	.069	.2656	<b>17/64</b>	.564	.9062	<b>29/32</b>	6.579
.0937	<b>3/32</b>	.069	.266	<b>H</b>	.564	.9219	<b>59/64</b>	6.810
.095	<b>41</b>	.072	.272	<b>I</b>	.594	.9375	<b>15/16</b>	7.041
.097	<b>40</b>	.075	.277	<b>J</b>	.615	.9531	<b>61/64</b>	7.250
.099	<b>39</b>	.078	.281	<b>K</b>	.633	.9687	<b>31/32</b>	7.518
.101	<b>38</b>	.084	.2812	<b>9/32</b>	.633	.9844	<b>63/64</b>	7.761
.103	<b>37</b>	.087	.290	<b>L</b>	.675	1.000	<b>1</b>	8.010
.106	<b>36</b>	.090	.295	<b>M</b>	.699	1.0158	<b>1-1/64</b>	8.247
.108	<b>35</b>	.093	.2968	<b>19/64</b>	.705	1.0313	<b>1-1/32</b>	8.520
.1093	<b>7/64</b>	.096	.302	<b>N</b>	.726	1.0625	<b>1-1/16</b>	9.042
.110	<b>34</b>	.096	.3125	<b>5/16</b>	.783	1.0937	<b>1-3/32</b>	9.580
.112	<b>33</b>	.102	.316	<b>O</b>	.813	1.125	<b>1-1/8</b>	10.137
.115	<b>32</b>	.108	.323	<b>P</b>	.831	1.1562	<b>1-5/32</b>	10.700
.120	<b>31</b>	.117	.3281	<b>21/64</b>	.864	1.1875	<b>1-3/16</b>	11.298
.125	<b>1/8</b>	.126	.332	<b>Q</b>	.882	1.2187	<b>1-7/32</b>	11.898
.127	<b>30</b>	.129	.339	<b>R</b>	.924	1.250	<b>1-1/4</b>	12.519
.134	<b>29</b>	.144	.3437	<b>11/32</b>	.948	1.2812	<b>1-9/32</b>	13.122
.139	<b>28</b>	.156	.348	<b>S</b>	.975	1.3125	<b>1-5/16</b>	13.800
.1406	<b>9/64</b>	.159	.358	<b>T</b>	1.026	1.3437	<b>1-11/32</b>	14.450
.143	<b>27</b>	.165	.3593	<b>23/64</b>	1.035	1.3750	<b>1-3/8</b>	15.147
.146	<b>26</b>	.171	.368	<b>U</b>	1.086	1.4062	<b>1-13/32</b>	15.820
.148	<b>25</b>	.177	.375	<b>3/8</b>	1.128	1.4375	<b>1-7/16</b>	16.554
.151	<b>24</b>	.183	.377	<b>V</b>	1.149	1.4687	<b>1-15/32</b>	17.260
.153	<b>23</b>	.189	.386	<b>W</b>	1.200	1.500	<b>1-1/2</b>	18.024
.155	<b>22</b>	.195	.3906	<b>25/64</b>	1.221	1.5625	<b>1-9/16</b>	19.560
.157	<b>21</b>	.198	.397	<b>X</b>	1.263	1.625	<b>1-5/8</b>	21.153
.161	<b>20</b>	.207	.404	<b>Y</b>	1.281	1.75	<b>1-3/4</b>	24.534
.164	<b>19</b>	.216	.4062	<b>13/32</b>	1.323	1.8125	<b>1-13/16</b>	26.310
.168	<b>18</b>	.228	.413	<b>Z</b>	1.374	1.875	<b>1-7/8</b>	28.164
.1718	<b>11/64</b>	.237	.4218	<b>27/64</b>	1.425	1.9375	<b>1-15/16</b>	30.060
			.4375	<b>7/16</b>	1.533	2.000	<b>2</b>	32.043

METRIC, FLAT GROUND & OTHER  
 GRADES AVAILABLE



# C.F. FLAT BAR

**COLD FINISHED  
C-1018**

x 12' RANDOM LENGTH

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
<b>1/8x</b>		
1/4	.106	1.27
5/16	.133	1.59
3/8	.159	1.91
1/2	.213	2.55
5/8	.266	3.19
3/4	.319	3.83
7/8	.372	4.46
1	.425	5.10
1-1/8	.478	5.74
1-1/4	.531	6.37
1-1/2	.638	7.66
1-3/4	.744	8.93
2	.850	10.20
2-1/4	.956	11.47
2-1/2	1.063	12.76
2-3/4	1.169	14.03
3	1.275	15.30
3-1/2	1.488	17.86
4	1.700	20.40
4-1/2	1.913	22.96
5	2.125	25.50
6	2.550	30.60
<b>3/16x</b>		
1/4	.160	1.92
5/16	.199	2.39
3/8	.239	2.87
7/16	.279	3.35
1/2	.319	3.83
5/8	.398	4.78
3/4	.478	5.74
7/8	.558	6.69
1	.638	7.65
1-1/8	.717	8.60
1-1/4	.797	9.56
1-1/2	.956	11.47
1-3/4	1.116	13.39
2	1.275	15.30
2-1/4	1.434	17.21
2-1/2	1.594	19.13
2-3/4	1.753	21.04
3	1.913	22.96
3-1/2	2.231	26.77
4	2.550	30.60
4-1/2	2.869	34.43
5	3.188	38.26
6	3.825	45.90
<b>1/4x</b>		
5/16	.266	3.19
3/8	.319	3.83
1/2	.425	5.10
9/16	.478	5.74
5/8	.531	6.37
3/4	.638	7.65

(CONT.)

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
<b>1/4x</b>		
7/8	.744	8.93
1	.850	10.20
1-1/8	.956	11.47
1-1/4	1.063	12.76
1-1/2	1.275	15.30
1-5/8	1.381	16.57
1-3/4	1.488	17.86
2	1.700	20.40
2-1/4	1.913	22.96
2-1/2	2.125	25.50
2-3/4	2.338	28.06
3	2.550	30.60
3-1/4	2.763	33.16
3-1/2	2.975	35.70
4	3.400	40.80
4-1/2	3.825	45.90
5	4.250	51.00
5-1/2	4.675	56.10
6	5.100	61.20
8	6.800	81.60
10	8.500	102.00
12	10.200	122.40
<b>5/16x</b>		
3/8	.398	4.78
1/2	.531	6.37
5/8	.664	7.97
3/4	.797	9.56
7/8	.930	11.16
1	1.063	12.76
1-1/8	1.195	14.34
1-1/4	1.328	15.94
1-1/2	1.594	19.13
1-3/4	1.859	22.31
2	2.125	25.50
2-1/4	2.391	28.69
2-1/2	2.656	31.87
2-3/4	2.922	35.06
3	3.188	38.26
3-1/2	3.719	44.63
4	4.250	51.00
4-1/2	4.781	57.37
5	5.313	63.76
6	6.375	76.50
8	8.500	102.00
10	10.630	127.50
12	12.750	153.00
<b>3/8x</b>		
7/16	.588	6.70
1/2	.638	7.65
5/8	.797	9.56
3/4	.956	11.47
7/8	1.116	13.39
1	1.275	15.30

(CONT.)

# C.F.FLAT BAR

**COLD FINISHED  
C-1018**

x 12' RANDOM LENGTH



SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
<b>3/8x</b>		
1-1/8	<b>1.434</b>	17.21
1-1/4	<b>1.594</b>	19.13
1-3/8	<b>1.753</b>	21.04
1-1/2	<b>1.913</b>	22.96
1-5/8	<b>2.072</b>	24.86
1-3/4	<b>2.231</b>	26.77
2	<b>2.550</b>	30.60
2-1/4	<b>2.869</b>	34.43
2-1/2	<b>3.188</b>	38.26
2-3/4	<b>3.506</b>	42.07
3	<b>3.825</b>	45.90
3-1/4	<b>4.144</b>	49.73
3-3/8	<b>4.303</b>	51.64
3-1/2	<b>4.463</b>	53.56
4	<b>5.100</b>	61.20
4-1/2	<b>5.738</b>	68.86
5	<b>6.375</b>	76.50
5-1/2	<b>7.013</b>	84.16
6	<b>7.650</b>	91.80
8	<b>10.200</b>	122.40
10	<b>12.750</b>	153.00
12	<b>15.300</b>	183.60
<b>7/16x</b>		
1/2	<b>.744</b>	8.93
5/8	<b>.930</b>	11.16
3/4	<b>1.116</b>	13.39
1	<b>1.488</b>	17.86
1-1/4	<b>1.859</b>	22.31
1-1/2	<b>2.231</b>	26.77
1-3/4	<b>2.603</b>	31.24
2	<b>2.975</b>	35.70
2-1/2	<b>3.719</b>	44.63
3	<b>4.463</b>	53.56
3-1/2	<b>5.206</b>	62.47
4	<b>5.950</b>	71.40
5	<b>7.438</b>	89.26
6	<b>8.930</b>	107.16
<b>1/2x</b>		
9/16	<b>.970</b>	11.64
5/8	<b>1.063</b>	12.76
3/4	<b>1.275</b>	15.30
7/8	<b>1.488</b>	17.86
1	<b>1.700</b>	20.40
1-1/8	<b>1.913</b>	22.96
1-1/4	<b>2.125</b>	25.50
1-1/2	<b>2.550</b>	30.60
1-3/4	<b>2.975</b>	35.70
2	<b>3.400</b>	40.80
2-1/4	<b>3.825</b>	45.90
2-1/2	<b>4.250</b>	51.00
2-3/4	<b>4.675</b>	56.10
3	<b>5.100</b>	61.20
3-1/4	<b>5.525</b>	66.30

(CONT.)

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
<b>1/2x</b>		
3-1/2	<b>5.950</b>	71.40
4	<b>6.800</b>	81.60
4-1/4	<b>7.224</b>	86.69
4-1/2	<b>7.650</b>	91.80
5	<b>8.500</b>	102.00
5-1/2	<b>9.350</b>	112.20
6	<b>10.200</b>	122.40
8	<b>13.600</b>	163.20
10	<b>17.000</b>	204.00
12	<b>20.400</b>	244.80
<b>5/8x</b>		
3/4	<b>1.594</b>	19.13
7/8	<b>1.859</b>	22.31
1	<b>2.125</b>	25.50
1-1/8	<b>2.391</b>	28.69
1-1/4	<b>2.656</b>	31.87
1-1/2	<b>3.188</b>	38.26
1-3/4	<b>3.719</b>	44.63
2	<b>4.250</b>	51.00
2-1/4	<b>4.781</b>	57.37
2-1/2	<b>5.313</b>	63.76
2-3/4	<b>5.844</b>	70.13
3	<b>6.375</b>	76.50
3-1/4	<b>6.906</b>	82.87
3-1/2	<b>7.438</b>	89.26
4	<b>8.500</b>	102.00
4-1/2	<b>9.563</b>	114.80
5	<b>10.630</b>	127.60
5-1/2	<b>11.690</b>	140.36
6	<b>12.750</b>	153.00
8	<b>17.000</b>	204.00
10	<b>21.250</b>	255.00
12	<b>25.500</b>	306.00
<b>3/4x</b>		
7/8	<b>2.231</b>	26.77
1	<b>2.550</b>	30.60
1-1/8	<b>2.869</b>	34.43
1-1/4	<b>3.188</b>	38.26
1-1/2	<b>3.825</b>	45.90
1-3/4	<b>4.463</b>	53.56
2	<b>5.100</b>	61.20
2-1/4	<b>5.738</b>	68.86
2-1/2	<b>6.375</b>	76.50
3	<b>7.650</b>	91.80
3-1/4	<b>8.288</b>	99.46
3-1/2	<b>8.925</b>	107.10
4	<b>10.200</b>	122.40
4-1/2	<b>11.480</b>	137.80
5	<b>12.750</b>	153.00
6	<b>15.300</b>	183.60
8	<b>20.400</b>	244.80
10	<b>25.500</b>	306.00
12	<b>30.600</b>	367.20



# C.F. FLAT BAR

**COLD FINISHED  
C-1018**

x 12' RANDOM LENGTH

SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS	SIZE IN INCHES	EST. WT. PER FT. POUNDS	WT. PER 12' BAR, POUNDS
<b>7/8x</b>			<b>1-1/4x</b>		
1	<b>2.975</b>	35.70	5	<b>21.250</b>	255.00
1-1/8	<b>3.347</b>	40.16	6	<b>25.500</b>	306.00
1-1/4	<b>3.719</b>	44.63	8	<b>34.000</b>	408.00
1-1/2	<b>4.463</b>	53.56	10	<b>42.500</b>	510.00
1-3/4	<b>5.206</b>	62.47	12	<b>51.000</b>	612.00
2	<b>5.950</b>	71.40	<b>1-1/2x</b>		
2-1/4	<b>6.694</b>	80.33	1-3/4	<b>8.925</b>	107.10
2-1/2	<b>7.438</b>	89.26	2	<b>10.200</b>	122.40
3	<b>8.925</b>	107.10	2-1/4	<b>11.480</b>	137.80
3-1/2	<b>10.410</b>	124.90	2-1/2	<b>12.750</b>	153.00
4	<b>11.900</b>	142.80	3	<b>15.300</b>	183.60
4-1/2	<b>13.390</b>	160.70	3-1/2	<b>17.850</b>	214.20
5	<b>14.880</b>	178.60	4	<b>20.400</b>	244.80
6	<b>17.850</b>	214.20	4-1/2	<b>22.950</b>	275.40
8	<b>23.800</b>	285.60	5	<b>25.500</b>	306.00
12	<b>35.700</b>	428.40	6	<b>30.600</b>	367.20
<b>1x</b>			8	<b>40.800</b>	489.60
1-1/8	<b>3.825</b>	45.90	10	<b>51.000</b>	612.00
1-1/4	<b>4.250</b>	51.00	12	<b>61.200</b>	734.40
1-1/2	<b>5.100</b>	61.20	<b>1-3/4x</b>		
1-3/4	<b>5.950</b>	71.40	2	<b>11.900</b>	142.80
2	<b>6.800</b>	81.60	2-1/4	<b>13.390</b>	160.70
2-1/4	<b>7.650</b>	91.80	2-1/2	<b>14.880</b>	178.60
2-1/2	<b>8.500</b>	102.00	3	<b>17.850</b>	214.20
2-3/4	<b>9.350</b>	112.20	3-1/2	<b>20.830</b>	250.00
3	<b>10.200</b>	122.40	4	<b>23.800</b>	285.60
3-1/4	<b>11.050</b>	132.60	4-1/2	<b>26.780</b>	321.40
3-1/2	<b>11.900</b>	142.80	5	<b>29.750</b>	357.00
4	<b>13.600</b>	163.20	6	<b>35.700</b>	428.40
4-1/2	<b>15.300</b>	183.60	<b>2x</b>		
5	<b>17.000</b>	204.00	2-1/4	<b>15.300</b>	183.60
6	<b>20.400</b>	244.80	2-1/2	<b>17.000</b>	204.00
8	<b>27.200</b>	326.40	3	<b>20.400</b>	244.80
10	<b>34.000</b>	408.00	3-1/2	<b>23.800</b>	285.60
12	<b>40.800</b>	489.60	4	<b>27.200</b>	326.40
<b>1-1/8x</b>			4-1/2	<b>30.600</b>	367.20
1-1/4	<b>4.781</b>	57.37	5	<b>34.000</b>	408.00
1-1/2	<b>5.738</b>	68.86	6	<b>40.800</b>	489.60
2	<b>7.650</b>	91.80	8	<b>54.400</b>	652.80
2-1/2	<b>9.562</b>	114.74	10	<b>68.000</b>	<b>816.00</b>
3	<b>11.470</b>	137.64	12	<b>81.600</b>	979.20
<b>1-1/4x</b>			<b>2-1/2x</b>		
1-1/2	<b>6.375</b>	76.50	3	<b>25.500</b>	306.00
1-3/4	<b>7.438</b>	89.26	3-1/2	<b>29.750</b>	357.00
2	<b>8.500</b>	102.00	4	<b>34.000</b>	408.00
2-1/4	<b>9.563</b>	114.80	4-1/2	<b>38.250</b>	459.00
2-1/2	<b>10.630</b>	127.60	5	<b>42.500</b>	510.00
2-3/4	<b>11.690</b>	140.30	6	<b>51.000</b>	612.00
3	<b>12.750</b>	153.00	<b>3x</b>		
3-1/2	<b>14.880</b>	178.60	4	<b>40.800</b>	489.60
4	<b>17.000</b>	204.00	4-1/2	<b>45.900</b>	550.80
4-1/2 (CONT.)	<b>19.130</b>	229.60	5	<b>51.000</b>	612.00
			6	<b>61.200</b>	734.40



# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL



SIZE O.D. INCHES (OUTSIDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	
<b>1/8</b>	.020	<b>.085</b>	CDS	.022	<b>1/2</b>	.095	<b>.310</b>	CDS	.410	
	.028	<b>.069</b>	CDS	.029		.109	<b>.282</b>	CDS	.455	
	.035	<b>.055</b>	CDS	.033		.120	<b>.260</b>	CDS	.487	
<b>5/32</b>	.026	<b>.100</b>	CDS	.038	<b>9/16</b>	.134	<b>.232</b>	CDS	.523	
	<b>3/16</b>	.022	<b>.144</b>	CDS		.039	.156	<b>.187</b>	CDS	.572
		.028	<b>.131</b>	CDS		.047	.188	<b>.124</b>	CDS	.626
.035		<b>.118</b>	CDS	.057	.028	<b>.506</b>	CDS	.160		
<b>1/4</b>	.049	<b>.090</b>	CDS	.072	.035	<b>.493</b>	CDS	.197		
	.085	<b>.058</b>	CDS	.086	.049	<b>.269</b>	CDS	.269		
	.028	<b>.194</b>	CDS	.066	.058	<b>.447</b>	CDS	.310		
	.035	<b>.180</b>	CDS	.080	.065	<b>.432</b>	CDS	.345		
	.049	<b>.152</b>	CDS	.105	.083	<b>.397</b>	CDS	.425		
	.058	<b>.134</b>	CDS	.118	.095	<b>.374</b>	CDS	.474		
<b>5/16</b>	.065	<b>.120</b>	CDS	.128	<b>5/8</b>	.109	<b>.344</b>	CDS	.528	
	.083	<b>.084</b>	CDS	.148		.120	<b>.323</b>	CDS	.567	
	.095	<b>.060</b>	CDS	.157		.156	<b>.251</b>	CDS	.678	
	.028	<b>.257</b>	CDS	.085		.028	<b>.569</b>	CDS	.178	
	.035	<b>.243</b>	CDS	.103		.035	<b>.049</b>	CDS	.220	
	.049	<b>.214</b>	CDS	.138		.049	<b>.527</b>	CDS	.301	
	.058	<b>.196</b>	CDS	.158		.058	<b>.509</b>	CDS	.351	
	.065	<b>.182</b>	CDS	.172		.065	<b>.495</b>	CDS	.388	
	.083	<b>.147</b>	CDS	.203		.083	<b>.459</b>	CDS	.480	
	.095	<b>.122</b>	CDS	.237		.095	<b>.435</b>	CDS	.537	
.109	<b>.095</b>	CDS	.237	.109	<b>.407</b>	CDS	.600			
<b>3/8</b>	.120	<b>.072</b>	CDS	.247	.120	<b>.385</b>	CDS	.647		
	.028	<b>.319</b>	CDS	.103	.134	<b>.357</b>	CDS	.702		
	.035	<b>.305</b>	CDS	.127	.156	<b>.312</b>	CDS	.781		
	.049	<b>.277</b>	CDS	.170	.188	<b>.250</b>	CDS	.877		
	.058	<b>.259</b>	CDS	.196	<b>11/16</b>	.035	<b>.618</b>	CDS	.264	
	.065	<b>.245</b>	CDS	.215		.049	<b>.589</b>	CDS	.334	
.083	<b>.209</b>	CDS	.258	.065		<b>.557</b>	CDS	.432		
.095	<b>.185</b>	CDS	.284	.083		<b>.521</b>	CDS	.536		
.109	<b>.157</b>	CDS	.309	.095		<b>.497</b>	CDS	.601		
.120	<b>.135</b>	CDS	.327	.109		<b>.456</b>	CDS	.674		
<b>7/16</b>	.028	<b>.381</b>	CDS	.122	.120	<b>.447</b>	CDS	.727		
	.035	<b>.367</b>	CDS	.150	.156	<b>.375</b>	CDS	.886		
	.049	<b>.340</b>	CDS	.203	.188	<b>.312</b>	CDS	1.004		
	.058	<b>.322</b>	CDS	.235	<b>3/4</b>	.035	<b>.660</b>	CDS	.267	
	.065	<b>.307</b>	CDS	.258		.049	<b>.652</b>	CDS	.366	
	.083	<b>.272</b>	CDS	.314		.058	<b>.634</b>	CDS	.428	
.095	<b>.248</b>	CDS	.348	.065		<b>.620</b>	CDS	.475		
.120	<b>.197</b>	CDS	.407	.083		<b>.584</b>	CDS	.591		
.028	<b>.444</b>	CDS	.141	.095		<b>.560</b>	CDS	.664		
<b>1/2</b>	.035	<b>.430</b>	CDS	.173	.109	<b>.532</b>	CDS	.746		
	.049	<b>.402</b>	CDS	.236	.120	<b>.510</b>	CDS	.807		
	.058	<b>.384</b>	CDS	.273	.134	<b>.482</b>	CDS	.881		
	.065	<b>.370</b>	CDS	.302	.156	<b>.437</b>	CDS	.989		
	.083	<b>.334</b>	CDS	.369	.188	<b>.375</b>	CDS	1.128		
	.095									



# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL

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SIZE O.D. INCHES (OUTSIDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS
<b>3/4</b>	.219	<b>.312</b>	CDS	1.242	<b>1</b>	.281	<b>.438</b>	CDS	2.158
	.250	<b>.250</b>	CDS	1.335		.313	<b>.375</b>	CDS	2.297
<b>13/16</b>	.035	<b>.743</b>	CDS	.290	<b>1-1/16</b>	.375	<b>.250</b>	CDS	2.503
	.049	<b>.714</b>	CDS	.399		.035	<b>.992</b>	CDS	.384
	.065	<b>.683</b>	CDS	.519		.065	<b>.932</b>	CDS	.692
	.083	<b>.646</b>	CDS	.677		.083	<b>.897</b>	CDS	.868
	.095	<b>.622</b>	CDS	.728		.095	<b>.872</b>	CDS	.982
	.120	<b>.572</b>	CDS	.888		.120	<b>.823</b>	CDS	1.209
<b>7/8</b>	.156	<b>.500</b>	CDS	1.095	<b>1-1/8</b>	.188	<b>.687</b>	CDS	1.757
	.188	<b>.437</b>	CDS	1.225		.219	<b>.625</b>	CDS	1.974
	.028	<b>.819</b>	CDS	.253		.250	<b>.562</b>	CDS	2.171
	.035	<b>.805</b>	CDS	.314		.035	<b>1.055</b>	CDS	.407
	.049	<b>.777</b>	CDS	.432		.049	<b>1.027</b>	CDS	.563
	.058	<b>.759</b>	CDS	.506		.058	<b>1.009</b>	CDS	.660
	.065	<b>.745</b>	CDS	.562		.065	<b>.995</b>	CDS	.735
	.083	<b>.709</b>	CDS	.702		.083	<b>.959</b>	CDS	.923
	.095	<b>.685</b>	CDS	.791		.095	<b>.935</b>	CDS	1.045
	.109	<b>.657</b>	CDS	.891		.109	<b>.907</b>	CDS	1.183
.120	<b>.635</b>	CDS	.967	.120	<b>.885</b>	CDS	1.288		
.134	<b>.607</b>	CDS	1.060	.156	<b>.812</b>	CDS	1.614		
.156	<b>.562</b>	CDS	1.198	.188	<b>.750</b>	CDS	1.881		
.188	<b>.500</b>	CDS	1.379	.219	<b>.688</b>	CDS	2.119		
.219	<b>.437</b>	CDS	1.534	.250	<b>.625</b>	CDS	2.336		
.250	<b>.375</b>	CDS	1.669	.281	<b>.563</b>	CDS	2.533		
.281	<b>.313</b>	CDS	1.783	.313	<b>.500</b>	CDS	2.714		
.313	<b>.250</b>	CDS	1.879	.375	<b>.375</b>	CDS	3.004		
<b>15/16</b>	.035	<b>.868</b>	CDS	.338	<b>1-3/16</b>	.065	<b>1.057</b>	CDS	.779
	.049	<b>.840</b>	CDS	.465		.083	<b>1.022</b>	CDS	.979
	.065	<b>.808</b>	CDS	.606		.095	<b>.997</b>	CDS	1.109
	.083	<b>.772</b>	CDS	.758		.120	<b>.947</b>	CDS	1.368
	.095	<b>.748</b>	CDS	.855		.156	<b>.876</b>	CDS	1.719
	.120	<b>.697</b>	CDS	1.085		.188	<b>.812</b>	CDS	2.008
	.134	<b>.670</b>	CDS	1.151		.250	<b>.687</b>	CDS	2.504
	.156	<b>.625</b>	CDS	1.303		.313	<b>.562</b>	CDS	2.925
<b>1</b>	.028	<b>.944</b>	CDS	.290	<b>1-1/4</b>	.035	<b>1.180</b>	CDS	.454
	.035	<b>.930</b>	CDS	.360		.049	<b>1.152</b>	CDS	.628
	.049	<b>.902</b>	CDS	.497		.065	<b>1.120</b>	CDS	.822
	.058	<b>.884</b>	CDS	.583		.083	<b>1.084</b>	CDS	1.034
	.065	<b>.870</b>	CDS	.649		.095	<b>1.060</b>	CDS	1.172
	.083	<b>.834</b>	CDS	.812		.109	<b>1.032</b>	CDS	1.328
	.095	<b>.810</b>	CDS	.918		.120	<b>1.010</b>	CDS	1.448
	.109	<b>.782</b>	CDS	1.037		.156	<b>.937</b>	CDS	1.823
	.120	<b>.760</b>	CDS	1.128		.188	<b>.875</b>	CDS	2.132
	.134	<b>.732</b>	CDS	1.239		.219	<b>.812</b>	CDS	2.411
	.156	<b>.687</b>	CDS	1.406		.250	<b>.750</b>	CDS	2.670
	.188	<b>.625</b>	CDS	1.630		.281	<b>.687</b>	CDS	2.908
	.219	<b>.562</b>	CDS	1.827		.313	<b>.625</b>	CDS	3.132
	.250	<b>.500</b>	CDS	2.003		.375	<b>.500</b>	CDS	3.504

(CONT.)

(CONT.)

# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL



SIZE O.D. INCHES (OUTSIDEDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDEDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS		
<b>1-1/4</b>	.438	<b>.375</b>	CDS	3.798	<b>1-1/2</b>	.281	<b>.938</b>	CDS	3.658		
<b>1-5/16</b>	.065	<b>1.182</b>	CDS	.866		.313	<b>.875</b>	CDS	3.968		
	.095	<b>1.123</b>	CDS	1.236		.375	<b>.750</b>	CDS	4.506		
	.120	<b>1.072</b>	CDS	1.529		.438	<b>.625</b>	CDS	4.928		
	.134	<b>1.044</b>	CDS	1.687		.500	<b>.500</b>	CDS	5.340		
	.156	<b>1.000</b>	CDS	1.928	<b>1-9/16</b>	.035	<b>1.493</b>	CDS	.571		
	.188	<b>.938</b>	CDS	2.259			.095	<b>1.373</b>	CDS	1.489	
	.219	<b>.875</b>	CDS	2.559			.120	<b>1.323</b>	CDS	1.849	
	.250	<b>.813</b>	CDS	2.839			.156	<b>1.250</b>	CDS	2.344	
		.281	<b>.750</b>	CDS	3.097		.188	<b>1.187</b>	CDS	2.716	
		.313	<b>.688</b>	CDS	3.343		.250	<b>1.062</b>	CDS	3.506	
	.375	<b>.562</b>	CDS	3.757	<b>1-5/8</b>	.313	<b>.936</b>	CDS	4.179		
<b>1-3/8</b>	.035	<b>1.305</b>	CDS	.500			.065	<b>1.495</b>	CDS	1.083	
	.049	<b>1.277</b>	CDS	.693			.083	<b>1.459</b>	CDS	1.367	
	.058	<b>1.259</b>	CDS	.846			.095	<b>1.435</b>	CDS	1.552	
	.065	<b>1.245</b>	CDS	.909			.120	<b>1.385</b>	CDS	1.929	
	.083	<b>1.209</b>	CDS	1.145			.134	<b>1.385</b>	CDS	2.132	
	.095	<b>1.185</b>	CDS	1.299			.156	<b>1.313</b>	CDS	2.447	
	.109	<b>1.157</b>	CDS	1.473			.188	<b>1.250</b>	CDS	2.885	
	.120	<b>1.135</b>	CDS	1.608			.219	<b>1.187</b>	CDS	3.289	
	.134	<b>1.107</b>	CDS	1.776			.250	<b>1.125</b>	CDS	3.671	
	.156	<b>1.062</b>	CDS	2.031		.281	<b>1.063</b>	CDS	4.033		
.188	<b>1.000</b>	CDS	2.383		.313	<b>1.000</b>	CDS	4.386			
.219	<b>.938</b>	CDS	2.704		.375	<b>.875</b>	CDS	5.006			
.250	<b>.875</b>	CDS	3.004		.438	<b>.750</b>	CDS	5.553			
.281	<b>.813</b>	CDS	3.283		.500	<b>.625</b>	CDS	6.008			
.313	<b>.750</b>	CDS	3.550	<b>1-3/4</b>	.065	<b>1.620</b>	CDS	1.170			
.375	<b>.625</b>	CDS	4.005			.083	<b>1.584</b>	CDS	1.478		
<b>1-7/16</b>	.065	<b>1.307</b>	CDS		.953		.095	<b>1.560</b>	CDS	1.679	
	.120	<b>1.198</b>	CDS		1.689		.120	<b>1.510</b>	CDS	2.089	
	.156	<b>1.125</b>	CDS		2.136		.134	<b>1.482</b>	CDS	2.313	
	.188	<b>1.062</b>	CDS		2.510		.156	<b>1.438</b>	CDS	2.656	
	.219	<b>1.000</b>	CDS		2.851		.188	<b>1.375</b>	CDS	3.136	
	.250	<b>.938</b>	CDS		3.172		.219	<b>1.312</b>	CDS	3.581	
	<b>1-1/2</b>	.028	<b>1.444</b>		CDS	.440		.250	<b>1.250</b>	CDS	4.005
		.035	<b>1.430</b>		CDS	.547		.281	<b>1.188</b>	CDS	4.409
		.049	<b>1.402</b>	CDS	.759		.313	<b>1.125</b>	CDS	4.804	
		.058	<b>1.384</b>	CDS	.893		.375	<b>1.000</b>	CDS	5.510	
.065		<b>1.370</b>	CDS	.996		.438	<b>.875</b>	CDS	6.137		
.083		<b>1.334</b>	CDS	1.256		.500	<b>.750</b>	CDS	6.675		
.095		<b>1.310</b>	CDS	1.426		.563	<b>.624</b>	CDS	7.137		
.109		<b>1.282</b>	CDS	1.619	<b>1-7/8</b>	.065	<b>1.745</b>	CDS	1.257		
.120		<b>1.260</b>	CDS	1.769			.095	<b>1.685</b>	CDS	1.806	
.134		<b>1.232</b>	CDS	1.955			.120	<b>1.635</b>	CDS	2.249	
.156	<b>1.188</b>	CDS	2.239			.156	<b>1.563</b>	CDS	2.864		
.188	<b>1.125</b>	CDS	2.634			.188	<b>1.500</b>	CDS	3.387		
.219	<b>1.062</b>	CDS	2.996			.219	<b>1.438</b>	CDS	3.873		
(CONT.)	.250	<b>1.000</b>	CDS	3.338	(CONT.)	.250	<b>1.375</b>	CDS	4.339		



# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL

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SIZE O.D. INCHES (OUTSIDEDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDEDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS
1-7/8	.281	<b>1.313</b>	CDS	4.784	2-1/4	.313	<b>1.625</b>	DOM	6.475
	.313	<b>1.250</b>	CDS	5.222		.375	<b>1.500</b>	CDS	7.509
	.375	<b>1.125</b>	CDS	6.008		.438	<b>1.375</b>	CDS	8.476
	.438	<b>1.000</b>	CDS	6.722		.500	<b>1.250</b>	CDS	9.345
	.500	<b>.875</b>	CDS	7.343		.563	<b>1.125</b>	CDS	10.140
2	.049	<b>1.902</b>	CDS	1.021	2-3/8	.625	<b>1.000</b>	CDS	10.850
	.065	<b>1.870</b>	CDS	1.343		.750	<b>.750</b>	CDS	12.020
	.083	<b>1.834</b>	CDS	1.669		.065	<b>2.245</b>	DOM	1.604
	.095	<b>1.810</b>	CDS	1.933		.120	<b>2.135</b>	DOM	2.890
	.109	<b>1.782</b>	CDS	2.201		.156	<b>2.063</b>	DOM	3.697
	.120	<b>1.760</b>	CDS	2.409	.188	<b>2.000</b>	DOM	4.391	
	.134	<b>1.732</b>	CDS	2.670	.219	<b>1.938</b>	DOM	5.043	
	.156	<b>1.687</b>	CDS	3.072	.250	<b>1.875</b>	DOM	5.674	
	.188	<b>1.625</b>	CDS	3.638	.281	<b>1.813</b>	CDS	6.284	
	.219	<b>1.562</b>	CDS	4.166	.313	<b>1.750</b>	DOM	6.893	
	.250	<b>1.500</b>	CDS	4.673	.375	<b>1.625</b>	CDS	8.010	
	.281	<b>1.438</b>	CDS	5.159	.438	<b>1.500</b>	CDS	9.061	
	.313	<b>1.375</b>	CDS	5.639	.500	<b>1.375</b>	CDS	10.010	
	.375	<b>1.250</b>	CDS	6.508	.563	<b>1.249</b>	CDS	10.900	
	.438	<b>1.125</b>	CDS	7.307	.625	<b>1.125</b>	CDS	11.680	
2-1/8	.500	<b>1.000</b>	CDS	8.010	2-1/2	.065	<b>2.370</b>	DOM	1.690
	.563	<b>.874</b>	CDS	8.649		.083	<b>2.334</b>	DOM	2.143
	.625	<b>.750</b>	CDS	9.178		.095	<b>2.310</b>	DOM	2.440
	.750	<b>.500</b>	CDS	10.010		.125	<b>2.250</b>	DOM	3.171
	.049	<b>2.027</b>	DOM	1.086		.134	<b>2.232</b>	DOM	3.385
	.065	<b>1.995</b>	DOM	1.430	.156	<b>2.187</b>	DOM	3.905	
	.095	<b>1.935</b>	DOM	2.060	.188	<b>2.125</b>	DOM	4.642	
	.125	<b>1.875</b>	DOM	2.670	.219	<b>2.062</b>	DOM	5.335	
	.156	<b>1.813</b>	DOM	3.281	.250	<b>2.000</b>	DOM	6.008	
	.188	<b>1.750</b>	DOM	3.889	.313	<b>1.875</b>	DOM	7.311	
	.219	<b>1.687</b>	DOM	4.458	.375	<b>1.750</b>	DOM	8.511	
	.250	<b>1.625</b>	DOM	5.006	.438	<b>1.625</b>	CDS	9.646	
	.281	<b>1.563</b>	DOM	5.534	.500	<b>1.500</b>	CDS	10.680	
	.313	<b>1.500</b>	DOM	6.057	.563	<b>1.375</b>	CDS	11.650	
	.375	<b>1.375</b>	CDS	7.009	.625	<b>1.250</b>	CDS	12.520	
.438	<b>1.250</b>	CDS	7.892	.750	<b>1.000</b>	CDS	14.020		
.500	<b>1.125</b>	CDS	8.678	2-5/8	.065	<b>2.495</b>	DOM	1.777	
.563	<b>1.000</b>	CDS	9.392		.095	<b>2.435</b>	DOM	2.567	
.625	<b>.875</b>	CDS	10.010		.125	<b>2.375</b>	DOM	3.338	
.035	<b>2.180</b>	DOM	.828		.156	<b>2.313</b>	DOM	4.114	
.065	<b>2.120</b>	DOM	1.517		.188	<b>2.250</b>	DOM	4.893	
.083	<b>2.084</b>	DOM	1.921	.219	<b>2.187</b>	DOM	5.627		
.095	<b>2.060</b>	DOM	2.186	.250	<b>2.125</b>	DOM	6.341		
.125	<b>2.000</b>	DOM	2.837	.281	<b>2.063</b>	DOM	7.035		
.156	<b>1.937</b>	DOM	3.489	.313	<b>2.000</b>	DOM	7.729		
.188	<b>1.875</b>	DOM	4.140	.375	<b>1.875</b>	CDS	9.011		
.219	<b>1.813</b>	DOM	4.750	.438	<b>1.751</b>	CDS	10.230		
.250	<b>1.750</b>	DOM	5.340	.500	<b>1.625</b>	CDS	11.350		

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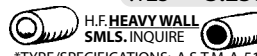
# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL



SIZE O.D. INCHES (OUTSIDEDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDEDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS		
2-5/8	.625	<b>1.375</b>	CDS	13.350	3	.563	<b>1.875</b>	CDS	14.650		
	.750	<b>1.750</b>	CDS	15.018		.625	<b>1.750</b>	CDS	15.850		
2-3/4	.065	<b>2.620</b>	DOM	1.864	3-1/8	.750	<b>1.500</b>	CDS	18.020		
	.083	<b>2.584</b>	DOM	2.364		.875	<b>1.250</b>	CDS	19.860		
	.095	<b>2.560</b>	DOM	2.699		1.000	<b>1.000</b>	CDS	21.360		
	.125	<b>2.500</b>	DOM	3.504		.065	<b>2.995</b>	DOM	2.124		
	.156	<b>2.438</b>	DOM	4.322		.095	<b>2.935</b>	DOM	3.074		
	.188	<b>2.375</b>	DOM	5.144		.125	<b>2.875</b>	DOM	4.008		
	.219	<b>2.312</b>	DOM	5.920		.188	<b>2.750</b>	DOM	5.897		
	.250	<b>2.250</b>	DOM	6.675		.219	<b>2.687</b>	DOM	6.797		
	.313	<b>2.125</b>	DOM	8.147		.250	<b>2.625</b>	DOM	7.676		
	.375	<b>2.000</b>	CDS	9.512		.281	<b>2.563</b>	DOM	8.535		
	.438	<b>1.875</b>	CDS	10.820		.313	<b>2.499</b>	DOM	9.400		
	.500	<b>1.750</b>	CDS	12.020		.375	<b>2.375</b>	DOM	11.010		
	.563	<b>1.625</b>	CDS	13.150		.438	<b>2.250</b>	CDS	12.570		
	.625	<b>1.500</b>	CDS	14.180		.500	<b>2.125</b>	CDS	14.020		
	.750	<b>1.250</b>	CDS	16.020		.563	<b>1.999</b>	CDS	15.400		
	.875	<b>1.000</b>	CDS	17.521		.625	<b>1.875</b>	CDS	16.690		
2-7/8	.065	<b>2.745</b>	DOM	1.951	3-1/4	.065	<b>3.120</b>	DOM	2.211		
	.125	<b>2.625</b>	DOM	3.671		.095	<b>3.060</b>	DOM	3.201		
	.156	<b>2.563</b>	DOM	4.530		.125	<b>3.000</b>	DOM	4.172		
	.188	<b>2.500</b>	DOM	5.395		.156	<b>2.938</b>	DOM	5.155		
	.219	<b>2.437</b>	DOM	6.212		.188	<b>2.875</b>	DOM	6.148		
	.250	<b>2.375</b>	DOM	7.009		.219	<b>2.813</b>	DOM	7.089		
	.281	<b>2.313</b>	CDS	7.785		.250	<b>2.750</b>	DOM	8.010		
	.313	<b>2.250</b>	CDS	8.564		.313	<b>2.615</b>	DOM	9.818		
	.375	<b>2.125</b>	CDS	10.010		.375	<b>2.500</b>	DOM	11.510		
	.438	<b>2.000</b>	CDS	11.400		.438	<b>2.374</b>	CDS	13.150		
	.500	<b>1.875</b>	CDS	12.680		.500	<b>2.250</b>	CDS	14.690		
	.563	<b>1.751</b>	CDS	13.900		.563	<b>2.125</b>	CDS	16.160		
	.625	<b>1.625</b>	CDS	15.020		.625	<b>2.000</b>	CDS	17.520		
	.750	<b>1.375</b>	CDS	17.020		.750	<b>1.750</b>	CDS	20.030		
	3	.049	<b>2.902</b>	DOM		1.544	3-3/8	.875	<b>1.500</b>	CDS	22.190
		.065	<b>2.870</b>	DOM		2.037		1.000	<b>1.250</b>	CDS	24.030
.083		<b>2.834</b>	DOM	2.856	.188	<b>3.000</b>		DOM	6.399		
.095		<b>2.810</b>	DOM	2.947	.250	<b>2.875</b>		DOM	8.344		
.120		<b>2.760</b>	CDS	3.691	.313	<b>2.750</b>		DOM	10.240		
.125		<b>2.750</b>	DOM	3.838	.375	<b>2.625</b>		DOM	12.020		
.134		<b>2.732</b>	DOM	4.102	.438	<b>2.500</b>		CDS	13.740		
.156		<b>2.688</b>	DOM	4.739	.500	<b>2.375</b>		CDS	15.350		
.188		<b>2.625</b>	DOM	5.646	.625	<b>2.125</b>		CDS	18.360		
.219		<b>2.562</b>	DOM	6.505	.750	<b>1.875</b>		CDS	21.030		
.250		<b>2.500</b>	DOM	7.342	3-1/2	.065		<b>3.370</b>	DOM	2.385	
.281		<b>2.437</b>	DOM	8.160		.083		<b>3.334</b>	DOM	3.029	
.313		<b>2.375</b>	DOM	8.982		.095		<b>3.310</b>	DOM	3.455	
.375		<b>2.250</b>	DOM	10.510		.125		<b>3.250</b>	DOM	4.332	
.438		<b>2.125</b>	CDS	11.980							
.500		<b>2.000</b>	CDS	13.350							

(CONT.)



\*TYPE/SPECIFICATIONS: A.S.T.M. A-519 C.D.S. 1018/1026  
A.S.T.M. A-513 D.O.M. 1020/1026



# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL

SIZE O.D. INCHES (OUTSIDEDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDEDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS
3-1/2	.134	<b>3.232</b>	DOM	4.817	4	.065	<b>3.870</b>	DOM	2.732
	.156	<b>3.188</b>	DOM	5.571		.083	<b>3.834</b>	DOM	3.472
	.188	<b>3.124</b>	DOM	6.650		.095	<b>3.810</b>	DOM	3.962
	.219	<b>3.062</b>	DOM	7.674		.125	<b>3.750</b>	DOM	4.973
	.250	<b>3.000</b>	DOM	8.687		.134	<b>3.732</b>	DOM	5.533
	.281	<b>2.938</b>	DOM	9.660		.156	<b>3.688</b>	DOM	6.404
	.313	<b>2.875</b>	DOM	10.650		.188	<b>3.625</b>	DOM	7.654
	.375	<b>2.750</b>	DOM	12.520		.219	<b>3.563</b>	DOM	8.843
	.438	<b>2.625</b>	CDS	14.320		.250	<b>3.500</b>	DOM	10.010
	.500	<b>2.500</b>	CDS	16.020		.281	<b>3.483</b>	DOM	11.160
	.563	<b>2.375</b>	CDS	17.660		.313	<b>3.375</b>	DOM	12.330
	.625	<b>2.250</b>	CDS	19.190		.375	<b>3.250</b>	DOM	14.520
	.750	<b>2.000</b>	CDS	22.030		.438	<b>3.125</b>	DOM	16.660
	.875	<b>1.750</b>	CDS	24.530		.500	<b>3.000</b>	DOM	18.690
	1.000	<b>1.500</b>	CDS	26.700		.563	<b>2.875</b>	CDS	20.670
	3-5/8	.188	<b>3.200</b>	DOM		6.901	.625	<b>2.750</b>	CDS
.250		<b>3.125</b>	DOM	9.011	.750	<b>2.500</b>	CDS	26.030	
.281		<b>3.083</b>	DOM	10.040	.875	<b>2.250</b>	CDS	29.200	
.313		<b>3.000</b>	DOM	11.070	1.000	<b>2.000</b>	CDS	32.040	
.375		<b>2.875</b>	DOM	13.020	1.250	<b>1.500</b>	CDS	36.710	
.438		<b>2.750</b>	CDS	14.910	4-1/8	.120	<b>3.885</b>	DOM	5.133
.500		<b>2.625</b>	CDS	16.690		.188	<b>3.749</b>	DOM	7.905
.625		<b>2.375</b>	CDS	20.030		.250	<b>3.625</b>	DOM	10.690
.750	<b>2.125</b>	CDS	23.030	.313		<b>3.500</b>	DOM	12.740	
3-3/4	.095	<b>3.560</b>	DOM	3.708	.375	<b>3.375</b>	DOM	15.020	
	.125	<b>3.500</b>	DOM	4.839	.438	<b>3.249</b>	DOM	17.250	
	.156	<b>3.438</b>	DOM	5.988	.500	<b>3.125</b>	DOM	19.360	
	.188	<b>3.375</b>	DOM	7.152	.563	<b>2.999</b>	CDS	21.420	
	.250	<b>3.250</b>	DOM	9.345	.625	<b>2.875</b>	CDS	23.360	
	.281	<b>3.188</b>	DOM	10.410	.750	<b>2.625</b>	CDS	27.030	
	.313	<b>3.125</b>	DOM	11.490	1.000	<b>2.125</b>	CDS	33.380	
	.375	<b>3.000</b>	DOM	13.520	4-1/4	.095	<b>4.060</b>	DOM	4.216
	.438	<b>2.875</b>	CDS	15.490		.125	<b>4.000</b>	DOM	5.507
	.500	<b>2.750</b>	CDS	17.360		.156	<b>3.937</b>	DOM	6.821
.563	<b>2.624</b>	CDS	19.160	.188		<b>3.875</b>	DOM	8.156	
.625	<b>2.500</b>	CDS	20.860	.250		<b>3.750</b>	DOM	10.680	
.750	<b>2.250</b>	CDS	24.030	.313		<b>3.625</b>	DOM	13.160	
.875	<b>2.000</b>	CDS	26.870	.375	<b>3.500</b>	DOM	15.520		
1.000	<b>1.750</b>	CDS	29.370	.438	<b>3.375</b>	DOM	17.830		
3-7/8	.125	<b>3.625</b>	DOM	5.006	.500	<b>3.250</b>	DOM	20.030	
	.188	<b>3.500</b>	DOM	7.403	.563	<b>2.999</b>	DOM	24.000	
	.250	<b>3.375</b>	DOM	9.679	.625	<b>3.000</b>	DOM	24.200	
	.313	<b>3.249</b>	DOM	11.910	.750	<b>2.750</b>	CDS	28.040	
	.375	<b>3.125</b>	DOM	14.020	.875	<b>2.500</b>	CDS	31.540	
	.438	<b>3.000</b>	CDS	16.080	1.000	<b>2.250</b>	CDS	34.710	
	.500	<b>2.875</b>	CDS	18.020	1.250	<b>1.750</b>	CDS	40.050	
	.563	<b>2.750</b>	CDS	19.910	4-3/8	.188	<b>4.000</b>	DOM	8.407
	.750	<b>2.375</b>	CDS	25.030		.313	<b>3.749</b>	DOM	13.580

\*TYPE/SPECIFICATIONS: A.S.T.M. A-519 C.D.S. 1018/1026 A.S.T.M. A-513 D.O.M. 1020/1026

# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M DRAWN OVER MANDREL



SIZE O.D. INCHES (OUTSIDEDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDEDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS
<b>4-3/8</b>	.375	<b>3.625</b>	DOM	16.020	<b>5</b>	.095	<b>4.810</b>	DOM	4.977
	.438	<b>3.500</b>	DOM	18.420		.125	<b>4.750</b>	DOM	6.254
	.500	<b>3.375</b>	DOM	20.690		.188	<b>4.625</b>	DOM	9.662
	.625	<b>3.125</b>	DOM	25.030		.250	<b>4.500</b>	DOM	12.680
	.750	<b>2.875</b>	CDS	29.040		.313	<b>4.375</b>	DOM	15.670
<b>4-1/2</b>	.095	<b>4.310</b>	DOM	4.216	.375	<b>4.250</b>	DOM	18.520	
	.125	<b>4.250</b>	DOM	5.841	.438	<b>4.125</b>	DOM	21.340	
	.134	<b>4.232</b>	DOM	6.248	.500	<b>4.000</b>	DOM	24.030	
	.156	<b>4.188</b>	DOM	7.237	.563	<b>3.875</b>	DOM	26.680	
	.188	<b>4.125</b>	DOM	8.658	.625	<b>3.750</b>	DOM	29.200	
	.219	<b>4.062</b>	DOM	10.010	.750	<b>3.500</b>	CDS	34.040	
	.250	<b>4.000</b>	DOM	11.350	.875	<b>3.250</b>	CDS	38.550	
	.313	<b>3.875</b>	DOM	14.000	1.000	<b>3.000</b>	CDS	42.720	
	.375	<b>3.750</b>	DOM	16.520	1.125	<b>2.750</b>	CDS	46.560	
	.438	<b>3.625</b>	DOM	19.000	1.250	<b>2.500</b>	CDS	50.060	
	.500	<b>3.500</b>	DOM	21.360	1.500	<b>2.000</b>	CDS	56.070	
	.563	<b>3.375</b>	DOM	23.670	<b>5-1/4</b>	.125	<b>5.000</b>	DOM	6.842
	.625	<b>3.250</b>	DOM	25.870		.188	<b>4.875</b>	DOM	10.160
.750	<b>3.000</b>	CDS	30.040	.250		<b>4.750</b>	DOM	13.350	
.875	<b>2.750</b>	CDS	33.880	.313		<b>4.625</b>	DOM	16.500	
1.000	<b>2.500</b>	CDS	37.380	.375		<b>4.500</b>	DOM	19.520	
<b>4-5/8</b>	1.125	<b>2.250</b>	CDS	40.550	.500	<b>4.250</b>	DOM	25.370	
	1.250	<b>2.000</b>	CDS	43.390	.625	<b>4.000</b>	DOM	30.870	
	.188	<b>4.250</b>	DOM	8.908	.750	<b>3.750</b>	CDS	36.050	
	.250	<b>4.125</b>	DOM	11.680	.875	<b>3.500</b>	CDS	40.880	
	.313	<b>4.000</b>	DOM	14.410	1.000	<b>3.250</b>	CDS	45.390	
	.375	<b>3.875</b>	DOM	17.020	1.125	<b>3.000</b>	CDS	49.560	
	.438	<b>3.750</b>	DOM	19.590	1.250	<b>2.750</b>	CDS	53.400	
	.500	<b>3.625</b>	DOM	22.030	<b>5-3/8</b>	.188	<b>5.000</b>	DOM	10.410
	.625	<b>3.375</b>	DOM	26.100		.250	<b>4.875</b>	DOM	13.680
	.875	<b>2.875</b>	CDS	35.040	<b>5-1/2</b>	.125	<b>5.250</b>	DOM	7.176
1.000	<b>2.625</b>	CDS	38.720	.188		<b>5.125</b>	DOM	10.670	
<b>4-3/4</b>	1.125	<b>4.500</b>	DOM	6.174	.250	<b>5.000</b>	DOM	14.020	
	.188	<b>4.374</b>	DOM	9.160	.313	<b>4.875</b>	DOM	17.340	
	.250	<b>4.250</b>	DOM	12.020	.375	<b>4.750</b>	DOM	20.530	
	.313	<b>4.125</b>	DOM	14.830	.438	<b>4.624</b>	CDS	23.680	
	.375	<b>4.000</b>	DOM	17.520	.500	<b>4.500</b>	DOM	26.700	
	.438	<b>3.874</b>	DOM	20.170	.625	<b>4.250</b>	DOM	32.540	
	.500	<b>3.750</b>	DOM	22.720	.750	<b>4.000</b>	CDS	38.050	
	.625	<b>3.500</b>	DOM	27.530	.875	<b>3.750</b>	CDS	43.220	
	.750	<b>3.250</b>	CDS	32.040	1.000	<b>3.500</b>	CDS	48.060	
	.875	<b>3.000</b>	CDS	36.210	1.250	<b>3.000</b>	CDS	56.740	
	1.000	<b>2.750</b>	CDS	40.050	1.375	<b>2.750</b>	CDS	60.566	
	1.250	<b>2.250</b>	CDS	46.730	1.500	<b>2.500</b>	CDS	64.080	
<b>4-7/8</b>	.313	<b>4.250</b>	DOM	15.180	<b>5-3/4</b>	.125	<b>5.500</b>	DOM	7.509
	.438	<b>4.000</b>	DOM	20.760		.188	<b>5.375</b>	DOM	11.170
	.500	<b>3.625</b>	DOM	23.360		.250	<b>5.250</b>	DOM	14.690
	.750	<b>3.375</b>	CDS	33.040		.313	<b>5.125</b>	DOM	18.180

(CONT.)



# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL

SIZE O.D. INCHES (OUTSIDEDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDEDIA)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	
<b>5-3/4</b>	.375	<b>5.000</b>	DOM	21.530	<b>6-3/4</b>	1.000	<b>4.750</b>	CDS	61.410	
	.500	<b>4.750</b>	DOM	28.040		<b>7</b>	.188	<b>6.625</b>	DOM	13.680
	.625	<b>4.500</b>	DOM	34.210		.250	<b>6.500</b>	DOM	18.020	
	.750	<b>4.250</b>	CDS	40.050		.375	<b>6.250</b>	DOM	26.530	
	.875	<b>4.000</b>	CDS	45.560		.500	<b>6.000</b>	DOM	34.710	
	1.000	<b>3.750</b>	CDS	50.730		.625	<b>5.750</b>	DOM	42.550	
	1.250	<b>3.250</b>	CDS	60.080		.750	<b>5.500</b>	CDS	50.060	
	1.500	<b>2.750</b>	CDS	68.900		1.000	<b>5.000</b>	CDS	64.080	
	<b>6</b>	.125	<b>5.750</b>	DOM		7.843	1.250	<b>4.500</b>	CDS	76.760
		.188	<b>5.625</b>	DOM		11.670	1.500	<b>4.000</b>	CDS	88.110
.250		<b>5.500</b>	DOM	15.350	<b>7-1/4</b>	.188	<b>6.875</b>	DOM	14.180	
.313		<b>5.375</b>	DOM	19.010		.250	<b>6.750</b>	DOM	18.690	
.375		<b>5.250</b>	DOM	22.530		.375	<b>6.500</b>	DOM	27.530	
.438		<b>5.125</b>	DOM	26.020		.500	<b>6.250</b>	DOM	36.050	
.500		<b>5.000</b>	DOM	29.370		.625	<b>6.000</b>	DOM	44.220	
.625		<b>4.750</b>	DOM	35.880		.750	<b>5.750</b>	CDS	52.070	
.750		<b>4.500</b>	CDS	42.050		1.000	<b>5.250</b>	CDS	66.760	
.875		<b>4.250</b>	CDS	47.890		1.500	<b>4.250</b>	CDS	92.120	
1.000	<b>4.000</b>	CDS	53.400	<b>7-1/2</b>		.188	<b>7.125</b>	DOM	14.680	
1.125	<b>3.750</b>	CDS	58.570			.250	<b>7.000</b>	DOM	19.360	
1.250	<b>3.500</b>	CDS	63.410		.375	<b>6.750</b>	DOM	28.540		
1.500	<b>3.000</b>	CDS	72.090		.500	<b>6.500</b>	DOM	37.380		
<b>6-1/4</b>	.125	<b>3.000</b>	DOM		8.177	.625	<b>6.250</b>	DOM	45.890	
	.188	<b>5.875</b>	DOM		12.170	.750	<b>6.000</b>	CDS	54.070	
	.250	<b>5.750</b>	DOM		16.020	1.000	<b>5.500</b>	CDS	69.420	
	.375	<b>5.500</b>	DOM		23.530	1.250	<b>5.000</b>	CDS	83.440	
	.500	<b>5.250</b>	DOM		30.710	1.500	<b>4.500</b>	CDS	96.120	
	.625	<b>5.000</b>	DOM		37.550	<b>7-3/4</b>	.250	<b>7.250</b>	DOM	20.030
	.750	<b>4.750</b>	CDS	44.060	.375		<b>7.000</b>	DOM	29.540	
	1.000	<b>4.250</b>	CDS	55.070	.500		<b>6.750</b>	DOM	38.720	
	1.250	<b>3.750</b>	CDS	66.750	.625		<b>6.500</b>	DOM	46.560	
	<b>6-1/2</b>	.188	<b>6.125</b>	DOM	12.670		.750	<b>6.250</b>	CDS	56.070
.250		<b>6.000</b>	DOM	16.690	1.000		<b>5.750</b>	CDS	72.090	
.375		<b>5.750</b>	DOM	24.530	<b>8</b>		.188	<b>7.625</b>	DOM	15.690
.500		<b>5.500</b>	DOM	32.040			.250	<b>7.500</b>	DOM	20.690
.625		<b>5.250</b>	DOM	39.220			.375	<b>7.250</b>	DOM	30.540
.750		<b>5.000</b>	CDS	46.060			.500	<b>7.000</b>	DOM	40.050
.875		<b>4.750</b>	CDS	52.570		.625	<b>6.750</b>	DOM	49.230	
1.000		<b>4.500</b>	CDS	58.740		.750	<b>6.500</b>	CDS	58.070	
1.250		<b>4.000</b>	CDS	70.090		1.000	<b>6.000</b>	CDS	74.760	
1.500		<b>3.500</b>	CDS	80.100		1.250	<b>5.500</b>	CDS	90.110	
<b>6-3/4</b>	.188	<b>6.375</b>	DOM	13.180		1.500	<b>5.000</b>	CDS	104.100	
	.250	<b>6.250</b>	DOM	17.360		<b>8-1/4</b>	.250	<b>7.750</b>	DOM	21.360
	.375	<b>6.000</b>	DOM	25.530	.375		<b>7.500</b>	DOM	31.540	
	.500	<b>5.750</b>	DOM	33.380	.500		<b>7.250</b>	DOM	41.390	
	.625	<b>5.500</b>	DOM	40.880	.750		<b>6.750</b>	CDS	60.080	
	.750	<b>5.250</b>	CDS	48.060	1.000		<b>6.250</b>	CDS	77.430	
	.875	<b>5.000</b>	CDS	54.900						

(CONT.)



# TUBING, ROUND

ROUND MECHANICAL  
C.D.S. COLD DRAWN SEAMLESS  
D.O.M. DRAWN OVER MANDREL



SIZE O.D. INCHES (OUTSIDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS	SIZE O.D. INCHES (OUTSIDIA.)	WALL THICK- NESS	THEO- RETICAL I.D.	TYPE DESCRIP- TION	EST. WT. PER FT. POUNDS		
<b>8-1/2</b>	.250	<b>8.000</b>	DOM	22.030	<b>10-1/4</b>	.625	<b>9.000</b>	DOM	64.250		
	.375	<b>7.750</b>	DOM	32.540		.750	<b>8.750</b>	CDS	76.090		
	.500	<b>7.500</b>	DOM	42.720		1.000	<b>7.250</b>	CDS	140.200		
	<b>8-3/4</b>	.750	<b>7.000</b>	CDS	62.080	<b>10-1/2</b>	.250	<b>10.000</b>	CDS	27.370	
		.875	<b>6.750</b>	CDS	71.260		.375	<b>9.750</b>	DOM	40.550	
		1.000	<b>6.500</b>	CDS	80.100		.500	<b>9.500</b>	DOM	53.400	
		1.250	<b>6.000</b>	CDS	96.790		.750	<b>9.000</b>	CDS	78.100	
1.500		<b>5.500</b>	CDS	112.100	1.000		<b>8.500</b>	CDS	101.500		
<b>9</b>		.250	<b>8.250</b>	DOM	22.700		<b>10-3/4</b>	.375	<b>10.000</b>	DOM	41.550
		.375	<b>8.000</b>	DOM	33.540			.500	<b>9.750</b>	DOM	54.740
	.500	<b>7.750</b>	DOM	44.060	.750	<b>9.250</b>		CDS	80.100		
	.750	<b>7.250</b>	CDS	64.080	1.000	<b>8.750</b>		CDS	104.100		
<b>9-1/4</b>	1.000	<b>6.750</b>	CDS	82.770	<b>11</b>	1.250	<b>8.250</b>	CDS	126.800		
	.250	<b>8.500</b>	DOM	23.360		1.500	<b>7.750</b>	CDS	148.200		
	.375	<b>8.250</b>	DOM	34.540		.375	<b>10.250</b>	DOM	42.550		
	.500	<b>8.000</b>	DOM	45.390		.500	<b>10.000</b>	DOM	56.070		
	.625	<b>7.750</b>	DOM	55.900		.750	<b>9.500</b>	CDS	82.100		
	.750	<b>7.500</b>	CDS	66.080		1.000	<b>9.000</b>	CDS	106.800		
	1.000	<b>7.000</b>	CDS	85.440		1.500	<b>8.000</b>	CDS	152.190		
<b>9-1/2</b>	1.250	<b>6.500</b>	CDS	103.460	<b>11-1/2</b>	.250	<b>11.000</b>	CDS	30.040		
	1.500	<b>6.000</b>	CDS	120.200		.375	<b>10.750</b>	DOM	44.560		
	.250	<b>8.750</b>	DOM	24.030		.500	<b>10.500</b>	DOM	58.740		
	.375	<b>8.250</b>	DOM	36.550		.750	<b>10.000</b>	CDS	86.110		
<b>9-3/4</b>	.500	<b>8.250</b>	DOM	46.730	<b>11-3/4</b>	1.000	<b>9.500</b>	CDS	112.100		
	.750	<b>7.750</b>	CDS	68.090		.375	<b>11.000</b>	DOM	45.560		
	1.000	<b>7.250</b>	CDS	88.110		.500	<b>10.750</b>	DOM	60.080		
	.250	<b>9.000</b>	DOM	24.700		.750	<b>10.250</b>	CDS	88.110		
	.375	<b>8.750</b>	DOM	36.550		1.000	<b>9.750</b>	CDS	114.800		
	.500	<b>8.500</b>	DOM	48.060		.250	<b>11.500</b>	CDS	31.370		
	.625	<b>8.250</b>	DOM	59.240		.375	<b>11.250</b>	DOM	46.560		
<b>10</b>	.750	<b>7.000</b>	CDS	70.090	<b>12</b>	.500	<b>11.000</b>	DOM	61.410		
	1.000	<b>6.500</b>	CDS	90.780		.750	<b>10.500</b>	CDS	90.110		
	1.250	<b>6.000</b>	CDS	110.100		1.000	<b>10.000</b>	CDS	117.50		
	<b>9-1/4</b>	.375	<b>9.000</b>	DOM		37.550	<b>10-1/4</b>	.250	<b>9.500</b>	DOM	26.030
		.500	<b>8.750</b>	DOM		49.400		.375	<b>9.250</b>	DOM	38.550
		.750	<b>8.250</b>	CDS		72.090		.500	<b>9.000</b>	DOM	50.730
	<b>10-1/2</b>	1.000	<b>7.750</b>	CDS		93.450		.625	<b>8.750</b>	DOM	62.580
.250		<b>9.500</b>	DOM	26.030	.750	<b>8.500</b>		CDS	74.090		
.375		<b>9.250</b>	DOM	38.550	1.000	<b>8.000</b>		CDS	96.120		
.500		<b>9.000</b>	DOM	50.730	1.250	<b>7.500</b>		CDS	116.812		
.625		<b>8.750</b>	DOM	62.580	1.500	<b>7.000</b>	CDS	136.200			
.750		<b>8.500</b>	CDS	74.090	.250	<b>9.750</b>	CDS	26.700			
1.000		<b>8.000</b>	CDS	96.120	.375	<b>9.500</b>	DOM	39.550			
<b>10-3/4</b>	1.250	<b>7.500</b>	CDS	116.812	.500	<b>9.000</b>	DOM	64.250			
	1.500	<b>7.000</b>	CDS	136.200							

(CONT.)

\*TYPE/SPECIFICATIONS: A.S.T.M.-A-519 C.D.S. 1018/1026 A.S.T.M.-A-513 D.O.M. 1020/1026

## CHEMICAL ANALYSIS ALLOY STEELS

## MECHANICAL PROPERTIES

GRADE	CARBON	MANGANESE	SULFUR	PHOSPHOROUS	SILICON	CHROMIUM	MOLYBDENUM	OTHER	TENSILE	YIELD	ELONG.	RED/AREA	MACH%	HB
CD Ann. 4130	.28/.33	.40/.60	.04	.035	.15/.35	.80/1.1	.15/.25	-	95,000	80,000	18%	40%	70%	179
HR Ann. 4140	.38/.43	.75/1.0	-	-	-	.80/1.1	.15/.25	-	89,000	62,000	26%	58%	57%	190
H1SR,TG&P 4140	.38/.45	.75/1.0	.04	.035	-	.80/1.1	.15/.25	-	120,000	100,000	20%	50%	55%	255
CD Ann. 41L40	.38/.43	.75/1.0	.04	.035	.15/.35	.80/1.1	.15/.25	Pb .15/.25	105,000	85,000	15%	45%	86%	187
HR FT 41F50	.48/.53	.75/1.0	.040	.035	.15/.35	.80/1.1	.15/.25	-	115,000	95,000	16%	50%	50%	269/321
HR Q&T 4142	.40/.45	.75/1.0	.040	.035	-	.80/1.1	.15/.25	-	110,000	95,000	18%	50%	55%	255
HR Ann. 4340	.38/.43	.60/.80	.040	.035	-	.70/.90	.20/.30	Ni 1.65/2.0	100,000	65,000	20%	45%	50%	212
CD Ann. 86L20	.018/.023	.70/.90	.04	.035	.15/.35	.40/.60	.15/.25	Ni .40/.70 Pb .15/.35	95,000	80,000	15%	50%	86%	179
5160	.56/.64	.75/1.0	.40	.035	-	.70/.90	-	-	128,000	90,000	12%	35%	-	269

## STANDARD CARBON REPHOSPHORIZED & RESULFURIZED STEELS

GRADE	CARBON	MANGANESE	SULFUR	PHOSPHOROUS	SILICON	CHROMIUM	MOLYBDENUM	OTHER	TENSILE	YIELD	ELONG.	RED/AREA	MACH%	HB
12L14	.15	.85/115	.26/35	.04/09	-	-	-	Pb .15/.35	70,000	60,000	15%	35%	193%	165
1215	.09	.75/105	.26/35	.04/09	-	-	-	-	80,000	60,000	10%	35%	136%	165

## CHEMICAL ANALYSIS

### STANDARD CARBON & RESULFURIZED STEELS

GRADE	CARBON	MANGANESE	SULFUR	PHOSPHOROUS	SILICON	CHROMIUM	MOLYBDENUM	OTHER	TENSILE	YIELD	ELONG.	RED/AREA	MACH%	HB
CD 1018	.15/.20	.60/.90	.050	.040	-	-	-	-	64,000	54,000	15%	40%	66%	126
HR 1020	.18/.23	.30/.60	.050	.040	-	-	-	-	54,000	30,000	25%	50%	52%	111
TCS&P 1045	.43/.50	.60/.90	.050	.040	-	-	-	-	91,000	77,000	12%	35/45	56%	179
HR A-36	.26/.29	.60/.90	.050	.040	-	-	-	-	58,000/ 80,000	MIN 36,000	21%	-	-	116-167
Stressproof®	.40/.48	1.35/1.65	.24/.33	.040	.15/.30	-	-	Ni .006/.009	132,300	100,000	12%	34%	83%	269

## MECHANICAL PROPERTIES

### STAINLESS STEELS

GRADE	CARBON	MANGANESE	SULFUR	PHOSPHOROUS	SILICON	CHROMIUM	MOLYBDENUM	OTHER	TENSILE	YIELD	ELONG.	RED/AREA	MACH%	HB
303	.15	2.00	.15	.20	1.00	17.0/19.0	.75	Ni 8.0/10.0	85,000/ 95,000	30,000/ 40,000	45/55	50/60	73%	160/180
304	.08	2.00	.030	.045	1.00	18.0/20.0	-	Ni 8.0/10.5 N .10	80,000/ 90,000	30,000/ 40,000	55/65	65/75	45%	150/180
316	.08	2.00	.030	.045	1.00	16.0/18.0	2.0/3.0	Ni 10.0/ 14.0 N .10	75,000/ 90,000	30,000/ 40,000	40/50	60/70	40%	150/180
416	.15	1.25	.15	.060	1.00	12.0/14.0	-	Zr or Mo .60	80,000/ 100,000	55,000/ 65,000	15/25	40/50	90%	190/220
440C	.95/1.20	1.00	.030	.040	1.00	16.0/18.0	.75	-	110,000	65,000	14%	25%	40%	260

## CHEMICAL ANALYSIS STEEL PLATE

## MECHANICAL PROPERTIES

GRADE	CARBON	MANGANESE	SULFUR	PHOSPHOROUS	SILICON	CHROMIUM	MOLYBDENUM	OTHER	TENSILE	YIELD	ELONG.	RED/AREA	MACH%	HB
A-36	.25/.29	.80/1.20	.05	.04	.00/.30	-	-	-	58,000/ 80,000	36,000	20/30	-	-	-
A572-50	.23	1.35	.05	.04	.15/.40	-	-	-	65,000	50,000	15/17	-	-	-
A-588	.19/.20	.75/1.35	.05	.04	.15/.65	.40/.70	-	Ni-.50 Cu .20/.40	63,000/ 70,000	42,000/ 50,000	18/21	-	-	-
AR	Chemical & mechanical properties vary. Brinells of 235, 350, 400, 425, & 500 can be achieved depending on amounts of Ni, B, Cr, & Mo added & quenching & tempering processes used.													
A514[T-1]	Chemical analysis varies depending on the mill process. In general all grades will have .12-.21% carbon and various amounts of Cr, Ni, Mo and V. Boron is added to increase hardenability.													
									100,000/ 130,000	90,000/ 100,000	16/18	-	-	235/293

## DRILL ROD

GRADE	CARBON	MANGANESE	SULFUR	PHOSPHOROUS	SILICON	CHROMIUM	MOLYBDENUM	OTHER	TENSILE	YIELD	ELONG.	RED/AREA	MACH%	HB
W-1	1.00	.40	.20	-	-	-	-	-	Mechanical properties vary depending on hardening process. Typical stock bars are annealed.					
O-1	.95	1.20	.35	-	.35	.50	-	W .50						
A-2	1.00	.70	-	-	-	5.00	1.10	V .25						

## ALUMINUM

GRADE	COPPER	SILICON	MAGNE- SIUM	CHRO- MIUM	TENSILE	YIELD	ELONG.	GRADE	COPPER	SILICON	MAGNE- SIUM	CHRO- MIUM	TENSILE	YIELD	ELONG.
6063-T5	-	0.40	.20	-	27,000	21,000	12	2011-T3	5.5	-	-	-	55,000	43,000	15
6061-T6	0.28	0.6	1.0	0.20	45,000	40,000	12	2024-T3	4.4	-	1.5	-	70,000	50,000	18
5052-H32	-	-	2.5	0.25	33,000	28,000	12	5086-H32	-	-	4.0	0.15	42,000	30,000	12
7075-T6	1.60	-	2.5	0.23	83,000	73,000	11	3003-H22	0.12	-	-	-	23,000	20,000	12

# HARDNESS CONVERSION NUMBERS FOR STEEL

## BASED ON ROCKWELL HARDNESS

ROCKWELL	SCLEROSCOPE	BRINELL	TENSIL STRENGTH LBS./SQ. INCH
1	.....	158	80,000
2	.....	160	80,700
3	.....	162	81,500
4	.....	165	82,800
5	.....	168	84,000
6	.....	171	85,000
7	.....	174	87,000
8	28	177	88,000
9	28	180	89,200
10	29	183	90,600
11	29	186	91,800
12	29	190	93,800
13	30	193	95,000
14	30	197	96,800
15	30	201	98,500
16	31	206	100,500
17	32	210	102,400
18	32	215	104,600
19	33	220	106,800
20	33	225	109,000
21	34	230	110,100
22	35	235	113,200
23	36	241	115,800
24	36	247	118,500
25	37	253	121,200
26	38	259	124,000
27	39	265	126,500

ROCKWELL	SCLEROSCOPE	BRINELL	TENSIL STRENGTH LBS./SQ. INCH
28	40	272	129,500
29	41	279	133,000
30	42	286	135,000
31	43	294	139,500
32	44	301	142,300
33	45	309	146,000
34	46	318	150,000
35	47	327	153,800
36	48	337	158,000
37	50	347	162,800
38	51	357	167,800
39	52	367	173,500
40	53	377	179,600
41	54	387	186,000
42	56	398	193,000
43	57	408	200,000
44	58	419	206,500
45	59	430	213,400
46	61	442	221,000
47	62	453	231,600
48	63	464	236,600
49	65	476	245,500
50	66	488	255,500
51	67	500	263,500
52	69	512	273,000
53	70	524	283,000
54	71	536	.....

ROCKWELL	SCLEROSCOPE	BRINELL	TENSIL STRENGTH LBS./SQ. INCH
55	73	548	.....
56	74	561	.....
57	76	574	.....
58	77	584	.....
59	78	600	.....
60	80	613	.....
61	81	627	.....
62	82	.....	.....
63	84	.....	.....

### NOTE

Exact comparison between Rockwell and Brinell tests for hardness is impossible because of differences in methods of determination. This table is offered for approximation only. The figures are mostly derived from ordinary carbon and alloy steels and should not be applied to austenitic or highly alloyed steels.

**Brinell** hardness is the measurement of resistance to indentation. The machine prepresses a hardened steel ball into the metal being tested; the size of the impression is measured by its diameter.

**Rockwell** hardness is also the measurement of resistance to indentation. The load and the penetrator are both smaller than the Brinell test and the depth of the indentation is measured rather than the diameter.

**Scleroscope** hardness is determined by measuring the rebound of a diamond-pointed hammer which is dropped on the material being tested.

# ASTM-AISI THICKNESS TOLERANCE RANGES

## CARBON STEEL SHEETS

HOT ROLLED • H R P & O • COLD ROLLED

GAGE NO.	THICKNESS, INCHES			LBS. PER SQ. FT.
	DEC. EQUIV.	TOLER., RANGE		
		H R & P & O	CR	WEIGHT EQUIV.
4	.2242	.2332 .2152		9.375
5	.2092	.2182 .2002		8.75
6	.1943	.2033 .1853		8.125
7	.1793	.1873 .1713	.1883 .1703	7.5
8	.1644	.1724 .1564	.1734 .1554	6.875
9	.1495	.1575 .1415	.1585 .1405	6.25
10	.1345	.1425 .1265	.1405 .1285	5.625
11	.1196	.1276 .1116	.1256 .1136	5.0
12	.1046	.1126 .0966	.1106 .0986	4.375
13	.0897	.0967 .0827	.0947 .0847	3.75
14	.0747	.0817 .0677	.0797 .0697	3.125
15	.0673	.0733 .0613	.0723 .0623	2.812
16	.0598	.0658 .0538	.0648 .0548	2.5
17	.0538	.0598 .0478	.0548 .0498	2.25
18	.0478	.0528 .0428	.0518 .0438	2.0
19	.0418		.0458 .0378	1.75
20	.0359		.0389 .0329	1.5
21	.0329		.0359 .0299	1.375
22	.0299		.0329 .0269	1.25
23	.0269		.0299 .0239	1.125
24	.0239		.0269 .0209	1.0
25	.0209		.0239 .0179	.875
26	.0179		.0199 .0159	.75
27	.0164		.0184 .0144	.688
28	.0149		.0169 .0129	.625
29	.0135		.0155 .0115	.562
30	.0120		.0130 .0110	.50

## GALVANIZED STEEL SHEETS

GAGE NO.	THICKNESS, INCHES		LBS. PER SQ. FT.
	DEC. EQUIV.	TOLER., RANGE	
			WEIGHT EQUIV.
10	.1382	.1472 .1292	5.78125
11	.1233	.1323 .1143	5.15625
12	.1084	.1174 .0994	4.53125
13	.0934	.1014 .0854	3.90625
14	.0785	.0865 .0705	3.28125
15	.0710	.0770 .0650	2.96875
16	.0635	.0695 .0575	2.65625
17	.0575	.0625 .0525	2.40625
18	.0516	.0566 .0466	2.15625
19	.0456	.0506 .0406	1.90625
20	.0396	.0436 .0356	1.65625
21	.0366	.0406 .0326	1.53125
22	.0336	.0376 .0296	1.40625
23	.0306	.0346 .0266	1.28125
24	.0276	.0316 .0236	1.15625
25	.0247	.0287 .0207	1.03125
26	.0217	.0247 .0187	.90625
27	.0202	.0232 .0172	.84375
28	.0187	.0217 .0157	.78125
29	.0172	.0202 .0142	.71875
30	.0157	.0187 .0127	.65625

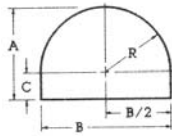
### Various ASTM Specs for Steel Sheets

- A366** Cold Rolled Commercial Quality
- A569** Hot Rolled Commercial Quality
- A570** Hot Rolled Structural Quality
- A526** Zinc Coated (Galvanized) Steel
- A526/A527** Galvanneal
- A591** Electrolytically Zinc Plated

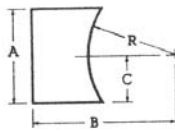
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ORDER BY  
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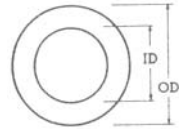
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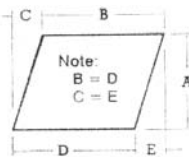
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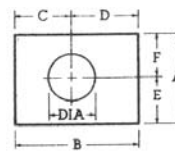
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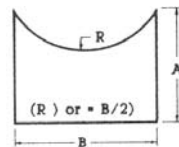
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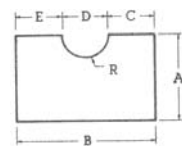
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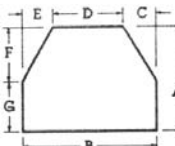
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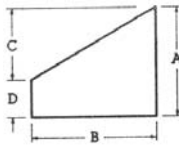
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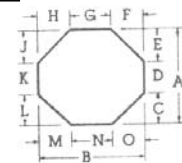
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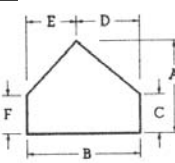
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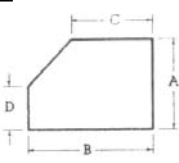
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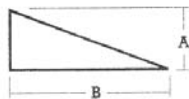
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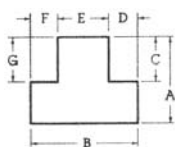
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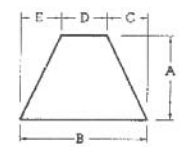
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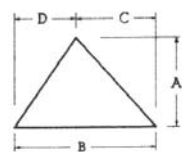
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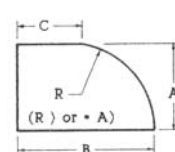
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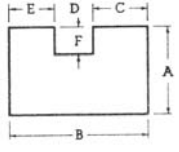
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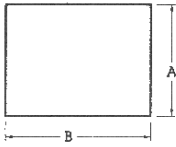
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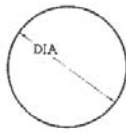
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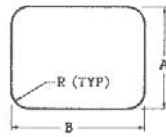
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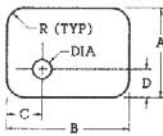
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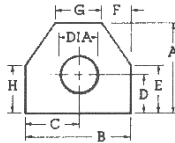
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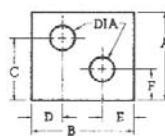
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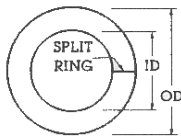
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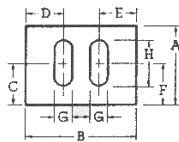
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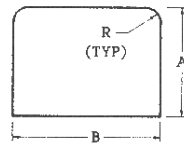
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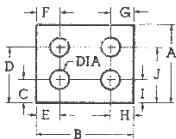
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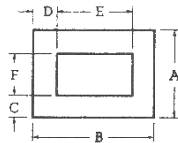
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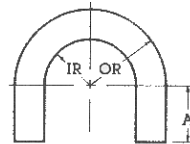
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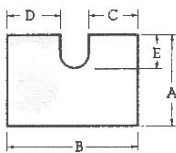
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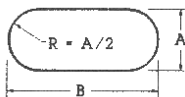
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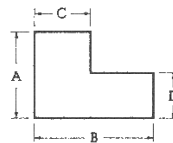
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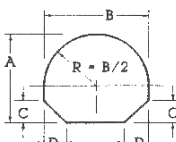
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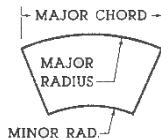
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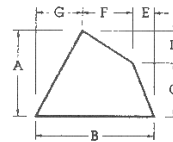
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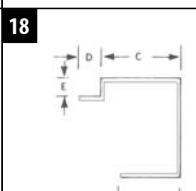
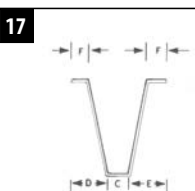
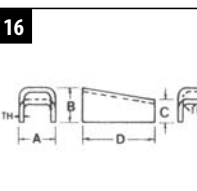
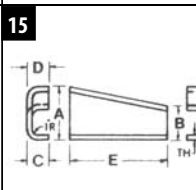
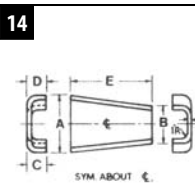
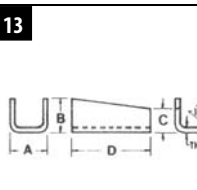
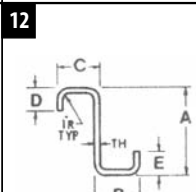
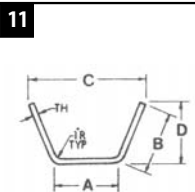
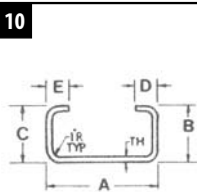
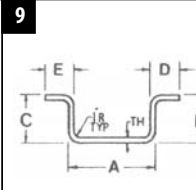
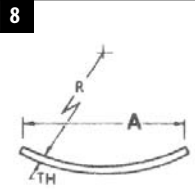
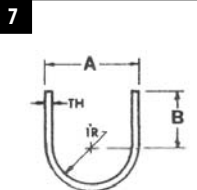
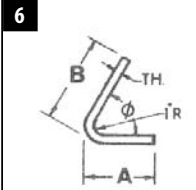
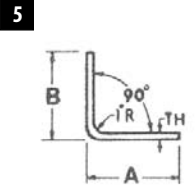
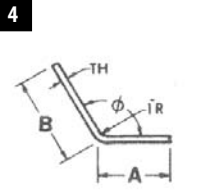
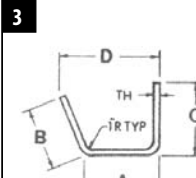
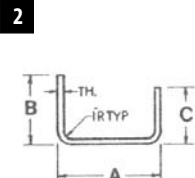
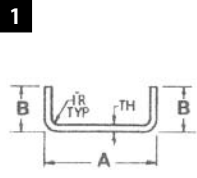
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# FORMED SECTIONS

ORDER BY  
NUMBER



# SIMPLE STEEL WEIGHT FORMULAS

Simply enter data indicated (**Decimal Inches**), move from left to right making computations by factors as shown.

- ROUND** Diameter x Diameter x **2.6729** = Lbs. Per Foot
- FLAT** Thickness x Width x **3.4032** = Lbs. Per Foot
- SQUARE** Diameter x Diameter x **3.4032** = Lbs. Per Foot
- HEXAGON** \*Diameter x Diameter x **2.9437** = Lbs. Per Foot
- OCTAGON** \*Diameter x Diameter x **2.8193** = Lbs. Per Foot
- PIPE** Actual O.D. - Wall x Wall x **10.68** = Lbs. Per Foot
- TUBE** O.D. - Wall x Wall x **10.68** = Lbs. Per Foot
- SHEET** Thickness x Width x Length x **.2904** = Lbs. Each
- COIL** O.D. x O.D. - I.D. x I.D. x **.2223** = Lbs. Per Inch of Width
- SHEET CIRCLE** Diameter x Diameter x Thickness x **.228** = Lbs. Each
- PLATE** Thickness x Width x Length x **.2836** = Lbs. Each
- PLATE SHAPES:**
- CIRCLE** Diameter x Diameter x Thickness x **.2227** = Lbs. Each
- RING** Diameter x Diameter - I.D. x I.D. x Thickness x **.2227** = Lbs. Each
- CIRCLE SECTOR** Radius x Radius x Number of Degrees in Arc  
x Thickness x **.0025** = Lbs. Each
- TRIANGLE** (Right Angle) Base Length x Height x Thickness x **.1418** = Lbs. Each
- TRAPEZOIDS** (2 Sides Parallel) Side "A" + Side "B" x Height x Thickness x **14.18** = Lbs. Each
- HEXAGON** (Equal Sides) Side Length x Side Length x **.7367** = Lbs. Each
- OCTAGON** Side Length x Side Length x **1.3692** = Lbs. Each

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\*DIAMETER MEASURED BY DISTANCE ACROSS FLATS.

**NOTE:** FORMULAS ARE BASED ON NOMINAL WEIGHTS AT .2836 LBS. PER CUBIC INCH AND SHOULD BE CONSIDERED **APPROXIMATIONS ONLY RATHER THAN ACTUAL SCALE WEIGHT.**

## Weights of Various Metals in Pounds Per \*Cubic Foot

Aluminum	168.48	Copper	559.87	Manganese	463.10	Silver	654.91
Antimony	419.99	Gold	1206.83	Mercury	849.00	Stainless Steel (18-8)	494.21
Beryllium	113.70	Gun Metal (Aver.)	544.00	Molybdenum	637.63	Steel, Cast/Rolled	490.00
Bismuth	611.00	Iridium	1396.00	Monel Metal	556.00	Tin	455.67
Brass (Approx.)	535.68	Iron	491.09	Nickel	555.72	Titanium	283.39
Bronze, Alum.	481.00	Iron, Cast Grey	442.00	Osmium	1402.00	Tungsten	1204.41
Bronze (Approx.)	541.00	Iron, Wrought	480.00	Palladium	712.00	Vanadium	374.97
Cadmium	540.86	Iron, Slag	172.00	Platinum	1339.20	Zinc	445.30
Chromium	428.00	Lead	707.96	Rhodium	755.00		*1728 CU. IN. PER CU. FT.
Cobalt	552.96	Magnesium	108.51	Ruthenium	765.00		

## Weights of Other Materials in Pounds Per \*Cubic Foot

Acids, Muriatic, 40%	75.00	Earth, Common Loam	75.00-90.00	Maple, Hard	43.00	Rubber, Goods	94.00
Acids, Nitric, 91%	94.00	Earth, Dry/Loose	76.00	Maple, White	33.00	Sand, Clay & Earth, Dry	100.00
Acids, Sulphuric, 87%	112.00	Earth, Dry/Packed	95.00	Marble	170.00	Sand, Clay & Earth, Wet	120.00
Alcohol, 100%	49.00	Earth, Mud/Packed	115.00	Masonry, Rubble	130.00-150.00	Sand, Pure Quartz, Dry	90.00-106.00
Asbestos	153.00	Elm, White	45.00	Masonry, Ashlar	140.00-160.00	Sandstone, Blustone	147.00
Ash, White, Red	40.00	Fats	58.00	Mortar	100.00	Slate	175.00
Asphaltum	81.00	Fir, Douglas	30.00	Mud, River	90.00	Snow, Freshly Fallen	10.00
Basalt	184.00	Fir, Eastern	25.00	Oil, Kerosene	52.00	Snow, Wet	50.00
Brick, Paving	150.00	Flour, Loose	28.00	Oil, Mineral	57.00	Soap Stone, Tall	169.00
Brick, Com. Building	120.00	Flour, Pressed	47.00	Oil, Vegetable	58.00	Soda Ash	74.00
Brick, Soft Building	100.00	Gasoline	42.00	Oak, White	50.00	Sodium	61.00
Cedar, White, Red	22.00	Glass, Common Window	156.00	Paper, Newspaper	33.00-44.00	Spruce	25.00
Cement, Portland	100.00	Granite	170.00	Paving, Asphaltum	100.00	Spruce, White, Black	27.00
Cereals, Bulk	32.00-48.00	Graphite	131.00	Pine, Oregon	32.00	Sulphur	125.00
Chestnut	41.00	Gravel, Dry/Loose	90.00-105.00	Pine, White	25.00	Tar, Bituminous	75.00
Clay, Hard-ordinary	150.00	Hay, Bales	20.00	Pine, Yellow	40.00	Water, Pure, 32°F	62.40
Coal	78.00-97.00	Hemlock	25.00	Pitch	60.00	Water, Sea	64.00
Concrete, Stone	130.00-150.00	Hickory	49.00	Plaster of Paris	140.00	Water, Solid Ice	56.00
Concrete, Cinder	70.00	Ice-.917 to .922	54.70	Poplar	30.00	Wool	82.00
Cypress	30.00	Leather	59.00	Pumice, Natural	40.00		
Dolomite	181.00	Lye, Soda, 66%	106.00	Redwood, Calif.	26.00		*1728 CU. IN. PER CU. FT.

# COMMON FRACTIONS OF AN INCH WITH DECIMAL & METRIC EQUIVALENTS

FRACTION	DECIMAL	MM	MM	DECIMAL	FRACTION
$\frac{1}{64}$	.015625	0.396	13.096	.515625	$\frac{33}{64}$
$\frac{1}{32}$	.03125	0.793	13.493	.53125	$\frac{17}{32}$
$\frac{3}{64}$	.046875	1.190	13.890	.546875	$\frac{35}{64}$
$\frac{1}{16}$	<b>.0625</b>	1.587	14.287	<b>.5625</b>	$\frac{9}{16}$
$\frac{5}{64}$	.078125	1.984	14.684	.578125	$\frac{37}{64}$
$\frac{3}{32}$	.09375	2.381	15.081	.59375	$\frac{19}{32}$
$\frac{7}{64}$	.109375	2.778	15.478	.609375	$\frac{39}{64}$
$\frac{1}{8}$	<b>.125</b>	3.175	15.875	<b>.625</b>	$\frac{5}{8}$
$\frac{9}{64}$	.140625	3.571	16.271	.640625	$\frac{41}{64}$
$\frac{5}{32}$	.15625	3.968	16.668	.65625	$\frac{21}{32}$
$\frac{11}{64}$	.171875	4.365	17.065	.671875	$\frac{43}{64}$
$\frac{3}{16}$	<b>.1875</b>	4.762	17.462	<b>.6875</b>	$\frac{11}{16}$
$\frac{13}{64}$	.203125	5.159	17.859	.703125	$\frac{45}{64}$
$\frac{7}{32}$	.21875	5.556	18.256	.71875	$\frac{23}{32}$
$\frac{15}{64}$	.234375	5.953	18.653	.734375	$\frac{47}{64}$
$\frac{1}{4}$	<b>.250</b>	6.350	19.050	<b>.750</b>	$\frac{3}{4}$
$\frac{17}{64}$	.265625	6.746	19.446	.765625	$\frac{49}{64}$
$\frac{9}{32}$	.28125	7.143	19.843	.78125	$\frac{25}{32}$
$\frac{19}{64}$	.296875	7.540	20.240	.796875	$\frac{51}{64}$
$\frac{5}{16}$	<b>.3125</b>	7.937	20.637	<b>.8125</b>	$\frac{13}{16}$
$\frac{21}{64}$	.328125	8.334	21.034	.828125	$\frac{53}{64}$
$\frac{11}{32}$	.34375	8.731	21.431	.84375	$\frac{27}{32}$
$\frac{23}{64}$	.359375	9.128	21.828	.859375	$\frac{55}{64}$
$\frac{3}{8}$	<b>.375</b>	9.525	22.225	<b>.875</b>	$\frac{7}{8}$
$\frac{25}{64}$	.390625	9.921	22.621	.890625	$\frac{57}{64}$
$\frac{13}{32}$	.40625	10.318	23.018	.90625	$\frac{29}{32}$
$\frac{27}{64}$	.421875	10.715	23.415	.921875	$\frac{59}{64}$
$\frac{7}{16}$	<b>.4375</b>	11.112	23.812	<b>.9375</b>	$\frac{15}{16}$
$\frac{29}{64}$	.453125	11.509	24.209	.953125	$\frac{61}{64}$
$\frac{15}{32}$	.46875	11.906	24.606	.96875	$\frac{31}{32}$
$\frac{31}{64}$	.484375	12.303	25.003	.984375	$\frac{63}{64}$
$\frac{1}{2}$	<b>.500</b>	12.700	25.400	<b>1.0000</b>	<b>1</b>

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