

GUIDE TO SELECTION Cold Finished Bars

1018 - ASTM A108

A low carbon steel with a medium manganese content. Has good case hardening properties, fair machinability and is excellent for cold bending and forming operations. Readily welded and brazed. Suitable for general shafting purposes and for applications that do not require the greater strength of high carbon and alloy steels.

1045 - ASTM A108

A medium carbon range steel that offers better mechanical property advantages over 1018 and other lower carbon steels. Has good heat treatment response. Fair welding characteristics. Machines to a much smoother finish than 1018.

1117 - ASTM A108

A resulfurized steel with good machinability and surface finish. Has superior case hardening characteristics and it develops an excellent case. It cold forms well, but only has fair welding properties.

11L17 - ASTM A108

The properties are the same as 1117, but the added lead improves its machinability.

1215 - ASTM A108

Made to a restricted chemistry specification with a .09 maximum carbon content and resulfurized, cutting speed and machining characteristics are second only to leaded steels. Machined finished is smooth and bright.

12L14 (Leaded) - ASTM A108

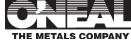
A lead bearing steel, 12L14 is one of the fastest machining steels presently produced. It machines from 30 to 50% faster than 1113 or 1213. Parts made from 12L14 have a better finish and can be machined to closer tolerances, while tool life is greatly increased. This leaded steel retains all the advantages to open hearth steel - ductility, high impact values and effective carburizing qualities.

1141 - ASTM A108

A resulfurized medium carbon steel with higher mechanical properties than the lower carbon steel. Good as-rolled strength and toughness. It is very difficult to weld.

STRESSPROOF® 1144 - ASTM A311 Class B

Often replaces parts now heat treated from Rc 23 to Rc 30. An extremely uniform material which provides exceptional quality for production, maintenance or special machine parts. It's widely used for keyed shafts, arbors, gears, pinions, pins, lead crews, or wherever the above properties are appropriate.

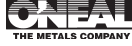


GUIDE TO SELECTION Cold Finished Bars

FATIGUE PROOF® - ASTM A108

This often replaces parts now heat treated from Rc30 to Rc 36.

2 COLD FINISHED BARS



COLD FINISHED STEEL ROUNDS

Size In Inches	Weight Per Foot	GRADE AND LENGTHS IN STOCK		
		AISI 1018	AISI 1045	STRESS PROOF®
1/8	.042	12'		
3/16	.094	12'		
1/4	.167	12'	20'	9'-13'
5/16	.261	12' & 20'		9'-13'
3/8	.376	12' & 20'	20'	9'-13'
7/16	.511	12' & 20'	12'	
1/2	.668	12' & 20'	20'	9'-13'
17/32	.754	12' & 20'		
9/16	.845	12' & 20'		
5/8	1.040	12' & 20'	20'	9'-13'
11/16	1.260	12' & 20'		
3/4	1.500	12' & 20'	20'	9'-13'
13/16	1.760	12' & 20'	20'	
7/8	2.040	12' & 20'	20'	9'-13'
15/16	2.350	12' & 20'	20'	
1	2.670	12' & 20'	20'	9'-13'
1-1/16	3.010	12' & 20'		9'-13'
1-1/8	3.380	12' & 20'	20'	9'-13'
1-3/16	3.770	12' & 20'	20'	9'-13'
1-1/4	4.170	12' & 20'	20'	
1-5/16	4.600	12' & 20'		9'-13'
1-3/8	5.050	12' & 20'	20'	9'-13'
1-7/16	5.520	12' & 20'	20'	9'-13'
1-1/2	6.010	12' & 20'	20'	9'-13'
1-5/8	7.050	12' & 20'	20'	9'-13'
1-11/16	7.600	12' & 20'		
1-3/4	8.180	12' & 20'	20'	9'-13'
1-13/16	8.770	12' & 20'		
1-7/8	9.390	12' & 20'	20'	9'-13'
1-15/16	10.020	12' & 20'	20'	9'-13'
2	10.680	12' & 20'	20'	9'-13'
2-1/16	11.360	12' & 20'	20'	
2-1/8	12.060	12' & 20'	20'	9'-13'
2-3/16	12.780	12' & 20'	20'	9'-13'
2-1/4	13.520	12' & 20'	20'	9'-13'
2-5/16	14.280	12' & 20'		
2-3/8	15.060	12' & 20'	20'	9'-13'
2-7/16	15.870	12' & 20'	20'	9'-13'
2-1/2	16.690	12' & 20'	20'	9'-13'
2-9/16	17.530	12' & 20'		9'-13'
2-5/8	18.400	12' & 20'		9'-13'
2-11/16	19.290	12' & 20'		
2-3/4	20.200	12' & 20'	20'	9'-13'
2-7/8	22.070	12' & 20'		

CONTINUED

COLD FINISHED BARS





COLD FINISHED STEEL ROUNDS

Size In Inches	Weight Per Foot	GRADE AND LENGTHS IN STOCK		
		AISI 1018	AISI 1045	STRESS PROOF®
2-15/16	23.040	12' & 20'	17'-20'	9'-13'
3	24.030	12' & 20'	17'-20'	9'-13'
3-1/8	26.080	12' & 20'		
3-3/16	27.130	12' & 20'	20'	
3-1/4	28.210	17'-20'		9'-13'
3-15/16	29.300	17'-20'		
3-3/8	30.420	12'-20'	17'-20'	9'-13'
3-17/16	31.550	12'-17'-20'	17'-20'	9'-13'
3-1/2	32.710	12'-20'		9'-13'
3-9/16	33.890	17'-20'	17'-20'	
3-5/8	35.090	17'-20'		9'-13'
3-11/16	36.310	20'	20'	
3-3/4	37.550	12'-17'-20'		9'-13'
3-7/8	40.100	17'-20'	17'-20'	
3-15/16	41.400	17'-20'	17'-20'	9'-13'
4	42.730	12'-17'-20'		9'-13'
4-3/16	46.830	17'-20'		
4-1/4	48.230	17'-20'	17'-20'	9'-13'
4-7/16	52.580	17'-20'	17'-24'	
4-1/2	54.080	12'-17'-20'	17'-24'	9'-13'
4-3/4	60.250	17'-20'	17'-20'	
4-15/16	65.100	17'-20'	17'-20'	
5	66.760	12'-17'-20'	17'-20'	9'-13'
5-7/16	78.950	17'-20'		
5-1/2	80.780	17'-20'	17'-20'	
5-15/16	94.140	17'-20'	17'-20'	
6	96.130	12'-17'-20'		
6-1/4	104.310	17'-20'		
6-3/8	108.520			
6-1/2	112.800	20'-24'		
6-5/8	117.200			
6-3/4	121.670			
7	130.900	12'-18'-22'		
7-1/4	140.400	20'-24'		
7-1/2	150.200	18'-22'		
8	170.900	18'-22'		
8-1/2	192.900	18'-22'		
9	216.300	18'-22'		
9-1/4	228.480	18'-22'		
10	267.000	18'-22'		
11	323.070	12'-16'		
12	384.500	12'-16'		

1018 6-1/2' and Larger Turned and Polished Only

1045 Over 6' Turned and Polished Only

Other sizes, grades and lengths available upon request.

4 COLD FINISHED BARS

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COLD FINISHED ROUNDS MACHINING GRADES

Size In Inches	Weight Per Foot	GRADE AND LENGTHS IN STOCK		
		AISI 1215	AISI 12L14	AISI 1117
3/16	.094		12'	
1/4	.167	12'	12'	12'
15/16	.261	12'	12'	12'
3/8	.376	12'	12'	12'
7/16	.511	12'	12'	12'
1/2	.668	12'	12'	12'
9/16	.845		12'	
5/8	1.040	12'	12'	12' *
3/4	1.500	12'	12'	12' *
13/16	1.760	12'	12'	12'
7/8	2.040	12'	12'	12'
1	2.670	12'	12'	12'
1-1/16	3.010		12'	12'
1-1/8	3.380	12'	12'	12'
1-3/16	3.770		12'	
1-1/4	4.170	12'	12'	
1-5/16	4.600		12'	
1-3/8	5.050		12'	
1-7/16	5.520		12'	
1-1/2	6.010	12'	12'	12'
1-5/8	7.050		12'	
1-3/4	8.180	12'	12'	12'
1-7/8	9.390	12'	12'	12'
1-15/16	10.020		12'	
2	10.680	12'	12'	
2-1/8	12.060		12'	
2-3/16	12.780		12'	
2-1/4	13.520		12'	12'
2-3/8	15.060		12'	12'
2-1/2	16.690	12'	12'	
2-5/8	18.400			12'
2-3/4	20.200		12'	
2-13/16	21.120		12'	
2-7/8	22.070		12'	
3	24.030		9'-12'	11'
3-1/4	28.210	12'	12'	
3-3/8	30.420	12'	12'	
3-1/2	32.710		12'	
3-3/4	37.550			12'
4	42.730		12'	12'
4-1/2	54.080			

*Also carried in 11L17

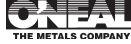
COLD FINISHED BARS



TURNED, GROUND & POLISHED ROUNDS

Size In Inches	Weight Per Foot	Length
1/2	.688	12*
5/8	1.040	20'-24' *
3/4	1.500	20'-24'
7/8	2.040	20'-24'
1	2.670	20'-24'
1-3/16	3.770	20'-24'
1-1/4	4.170	20'-24'
1-3/8	5.050	20'-24'
1-7/16	5.520	20'-24'
1-1/2	6.010	20'-24'
1-5/8	7.050	20'-24'
1-11/16	7.600	20'-24'
1-3/4	8.180	20'-24'
1-15/16	10.020	20'-24'
2	10.680	20'-24'
2-3/16	12.780	20'-24'
2-1/4	13.520	20'-24'
2-7/16	15.870	20'-24'
2-1/2	16.690	20'-24'
2-11/16	19.290	20'-24'
2-3/4	20.200	20'-24'
2-15/16	23.040	20'-24'
3	24.030	20'-24'
3-3/16	27.130	20'-24'
3-7/16	31.550	20'-24'
3-1/2	32.710	20'-24'
3-15/16	41.400	20'-24'
4	42.730	20'-24'
4-7/16	52.580	20'-24'
4-15/16	65.100	20'-24'
5	66.760	20'-24'

* Drawn, Grounded and Polished
All items tubed or boxed.



CHROMED PLATED STEEL BARS

.0005" MINIMUM, HARD

CHROME PLATE

For hydraulic/pneumatic
piston rod applicaions

Size In Inches	Weight Per Foot	Length
1/2	.688	12*
5/8	1.040	12'
3/4	1.500	12'
7/8	2.040	20'-24' *
1	2.670	20'-24'
1-1/8	3.380	20'-24'
1-1/4	4.170	20'-24'
1-3/8	5.050	20'-24'
1-1/2	6.010	20'-24' *
1-5/8	7.050	24'
1-3/4	8.180	20'-24'
2	10.680	20'-24' *
2-1/8	12.060	24'
2-1/4	13.520	20'
2-1/2	16.690	20'-24'
2-3/4	20.200	20'
3	24.030	20'-24'
3-1/4	28.210	20'-24'
3-1/2	32.710	20'
4	42.730	20'-24'
4-1/2	54.080	20'

* This size induction also hardened.

Other grades and lengths available on request from the mill.
All items tubed or boxed.

COLD FINISHED BARS **7**



COLD FINISHED STEEL FLATS

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
1/8 x 1/4	.106	10-12
5/16	.133	10-12
3/8	.159	10-12
7/16	.186	10-12
1/2	.213	10-12
5/8	.266	10-12
3/4	.319	10-12
7/8	.372	10-12
1	.425	10-12
1-1/4	.531	10-12
1-1/2	.638	10-12
1-3/4	.744	10-12
2	.850	10-12
2-1/2	1.060	10-12
3	1.280	10-12
3-1/2	1.490	10-12
4	1.700	10-12
5	2.130	10-12
6	2.550	10-12
8	3.400	10-12
3/16 x 1/2	.319	10-12
3/4	.478	10-12
7/8	.558	10-12
1	.638	10-12
1-1/4	.797	10-12
1-1/2	.956	10-12
1-3/4	1.120	10-12
2	1.280	10-12
2-1/4	1.430	10-12
2-1/2	1.590	10-12
2-3/4	1.753	10-12
3	1.910	10-12
3-1/2	2.230	10-12
4	2.550	10-12
4-1/2	2.869	10-12
5	3.190	10-12
6	3.820	10-12
1/4 x 3/8	.319	10-12
1/2	.425	10-12
5/8	.531	10-12
3/4	.638	10-12
1	.850	10-12
1-1/8	.9563	10-12
1-1/4	1.060	10-12

CONTINUED

COLD FINISHED BARS



COLD FINISHED STEEL FLATS

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
1/4 x 1-1/2	1.280	10-12
1-3/4	1.490	10-12
2	1.700	10-12
2-1/4	1.910	10-12
2-1/2	2.130	10-12
2-3/4	2.338	10-12
3	2.550	10-12
3-1/2	2.980	10-12
4	3.400	10-12
4-1/2	3.830	10-12
5	4.250	10-12
6	5.100	10-12
8	6.800	10-12
10	8.500	10-12
12	10.200	10-12
5/16 x 1/2	.531	10-12
5/8	.664	10-12
3/4	.797	10-12
1	1.060	10-12
1-1/4	1.330	10-12
1-1/2	1.590	10-12
2	2.130	10-12
2-1/4	2.391	10-12
2-1/2	2.660	10-12
3	3.190	10-12
3-1/2	3.720	10-12
4	4.250	10-12
5	5.310	10-12
6	6.380	10-12
7	7.438	10-12
3/8 x 1/2	.638	10-12
5/8	.797	10-12
3/4	.957	10-12
7/8	1.120	10-12
1	1.280	10-12
1-1/4	1.590	10-12
1-3/8	1.753	10-12
1-1/2	1.910	10-12
1-3/4	2.230	10-12
2	2.550	10-12
2-1/4	2.869	10-12
2-1/2	3.190	10-12

CONTINUED

COLD FINISHED BARS





COLD FINISHED STEEL FLATS

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
3/8 x 3	3.830	10-12
3-1/2	4.460	10-12
4	5.100	10-12
4-1/2	5.738	10-12
5	6.380	10-12
5-1/2	7.013	10-12
6	7.650	10-12
7	8.925	10-12
8	10.200	10-12
10	12.750	10-12
12	15.300	10-12
7/16 x 1/2	.744	10-12
3/4	1.120	10-12
1	1.490	10-12
1-1/4	1.860	10-12
1-1/2	2.231	10-12
2	2.980	10-12
2-1/2	3.720	10-12
1/2 x 5/8	1.060	10-12
3/4	1.280	10-12
7/8	1.490	10-12
1	1.700	10-12
1-1/4	2.130	10-12
1-1/2	2.550	10-12
1-3/4	2.980	10-12
2	3.400	10-12
2-1/4	3.830	10-12
2-1/2	4.250	10-12
2-3/4	4.680	10-12
3	5.100	10-12
3-1/4	5.525	10-12
3-1/2	5.950	10-12
4	6.800	10-12
4-1/2	7.650	10-12
5	8.500	10-12
5-1/2	9.350	10-12
6	10.200	10-12
7	11.900	10-12
8	13.600	10-12
10	17.000	10-12
12	20.400	10-12

COLD FINISHED BARS

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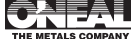


COLD FINISHED STEEL FLATS

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
5/8 x 3/4	1.590	10-12
1	2.130	10-12
1-1/4	2.660	10-12
1-1/2	3.190	10-12
1-3/4	3.719	10-12
2	4.250	10-12
2-1/4	4.780	10-12
2-1/2	5.310	10-12
3	6.380	10-12
3-1/2	7.440	10-12
4	8.500	10-12
5	10.630	10-12
6	12.750	10-12
8	17.000	10-12
10	21.250	10-12
12	25.500	10-12
3/4 x 1	2.550	10-12
1-1/4	3.190	10-12
1-3/8	3.506	10-12
1-1/2	3.830	10-12
1-3/4	4.460	10-12
2	5.100	10-12
2-1/4	5.740	10-12
2-1/2	6.380	10-12
3	7.650	10-12
3-1/2	8.930	10-12
4	10.200	10-12
4-1/2	11.480	10-12
5	12.750	10-12
5-1/2	14.030	10-12
6	15.300	10-12
7	17.850	10-12
8	20.400	10-12
10	25.500	10-12
12	30.600	10-12
7/8 x 1	2.980	10-12
1-1/4	3.719	10-12
1-1/2	4.460	10-12
2	5.950	10-12
2-1/2	7.440	10-12
3	8.930	10-12
3-1/2	10.410	10-12
5	14.880	10-12
6	17.850	10-12

CONTINUED

COLD FINISHED BARS



COLD FINISHED STEEL FLATS

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
1 x 1-1/8	3.825	10-12
1-1/4	4.250	10-12
1-1/2	5.100	10-12
1-3/4	5.950	10-12
2	6.800	10-12
2-1/4	7.650	10-12
2-1/2	8.500	10-12
2-3/4	9.350	10-12
3	10.200	10-12
3-1/2	11.900	10-12
4	13.600	10-12
4-1/2	15.300	10-12
5	17.000	10-12
5-1/2	18.100	10-12
6	20.400	10-12
7	23.800	10-12
8	27.200	10-12
9	30.600	10-12
10	34.000	10-12
11	37.400	10-12
12	40.080	10-12
1-1/4 x 1-1/2	6.375	10-12
1-3/4	7.438	10-12
2	8.500	10-12
2-1/2	10.630	10-12
3	12.750	10-12
3-1/4	13.810	10-12
3-1/2	14.880	10-12
4	17.000	10-12
5	21.250	10-12
6	25.500	10-12
8	34.000	10-12
10	42.500	10-12
12	51.000	10-12
1-1/2 x 1-3/4	8.925	10-12
2	10.200	10-12
2-1/4	11.480	10-12
2-1/2	12.750	10-12
3	15.300	10-12
3-1/2	17.850	10-12
4	20.400	10-12
4-1/2	22.950	10-12
5	25.500	10-12

COLD FINISHED BARS

CONTINUED



COLD FINISHED STEEL FLATS

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
1-1/2 x 6	30.600	10-12
8	40.800	10-12
10	51.000	10-12
12	61.200	10-12
1-3/4 x 2	11.900	10-12
2-1/4	13.390	10-12
2-1/2	14.880	10-12
3-1/2	20.830	10-12
4	23.800	10-12
5	32.730	10-12
6	35.700	10-12
8	47.600	10-12
2 x 2-1/4	15.300	10-12
2-1/2	17.000	10-12
3	20.400	10-12
3-1/2	23.800	10-12
4	27.200	10-12
4-1/2	30.600	10-12
5	34.000	10-12
6	40.800	10-12
8	54.400	10-12
10	68.000	10-12
12	81.600	10-12
2-1/4 x 2-1/2	19.130	10-12
4	30.600	10-12
4-1/2	34.430	10-12
2-1/2 x 3	25.500	10-12
3-1/2	29.750	10-12
4	34.000	10-12
4-1/2	38.250	10-12
5	42.500	10-12
6	51.000	10-12
8	68.000	10-12
3 x 3-1/2	35.700	10-12
4	40.800	10-12
4-1/2	45.900	10-12
5	51.000	10-12
6	61.200	10-12

COLD FINISHED BARS



**COLD FINISHED
STEEL HEXAGONS**

AISI-1018

Size In Inches	Weight Per Foot Pounds	1215	1018
1/8	.184	12'	12'
5/16	.288	12 ^{**}	12'
3/8	.414	12'	
7/16	.564	12 ^{**}	12'
1/2	.736	12 [*]	12'
9/16	.932	12'	12'
5/8	1.150	12'	12'
11/16	1.390	12 ^{**}	20'
3/4	1.660	12 [*]	12'
7/8	2.250	12 [*]	12'
15/16	2.588		12'
1	2.940	12 [*]	12'
1-1/16	3.320	12 [*]	12'
1-1/8	3.730	12 [*]	12'
1-1/4	4.600	12'	12'
1-3/8	5.570	12'	
1-7/16	6.085		12'
1-1/2	6.630	12'	12'
1-5/8	7.780	12'	12'
1-3/4	9.020	12'	
1-13/16	9.673		12'
1-7/8	10.350	12'	12'
2	11.780	12 [*]	12'
2-1/4	14.910	12 [*]	12'
2-1/2	18.400	12'	12'
3	26.500	12'	12'

*Also carried in 12L14

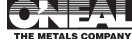
**Conveyor grades available

**COLD FINISHED
STEEL SQUARES**

AISI-1018

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
1/8	.053	10-12
3/16	.120	10-12
1/4	.213	10-12
5/16	.332	10-12
3/8	.478	10-12
7/16	.652	10-12
1/2	.850	10-12
9/16	1.080	10-12
5/8	1.330	10-12
11/16	1.610	10-12

COLD FINISHED BARS



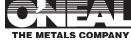
COLD FINISHED STEEL SQUARES

AISI-1018

Size In Inches	Weight Per Foot Pounds	Stock Length Feet
3/4	1.910	10-12
13/16	2.240	10-12
7/8	2.600	10-12
15/16	2.990	10-12
1	3.400	10-12
1-1/8	4.300	10-12
1-3/16	4.795	12
1-1/4	5.310	10-12
1-3/8	6.430	10-12
1-1/2	7.650	10-12
1-3/4	10.410	10-12
2	13.600	10-12*
2-1/4	17.210	10-12
2-1/2	21.250	10-12*
2-3/4	25.710	10-12
3	30.600	10-12
3-1/2	41.650	10-12
4	54.400	10-12
5	85.000	12
6	122.400	8-12

*Also carried in 1045

COLD FINISHED BARS



COLD FINISHED BARS