



**PRECISION GROUND FLAT STOCK
AND DRILL ROD**

PRECISION FLAT STOCK AND DRILL ROD



Cut costs and save time - make your own parts like these from Flat Stock

PRECISION GROUND FLAT STOCK AND DRILL ROD STANDARD AND OVERSIZE

Starrett Precision Ground Flat Stock and Drill Rod can save time in your shop ... no more time hunting lost stock ... no more slow, costly grinding to size. Just lay it out and saw it out and save valuable machinery, downtime and man hours.

- Machine parts
- Shims
- Flat gages
- Fixtures
- Stamps
- Punches
- Parallels
- Templates
- Cutters
- Dies
- Jigs
- Buttons
- Test gages
- Test tools

Six types of material in a complete range of sizes is available to meet your specific needs:

495 and 496 are (AISI O1) oil hardening tool steels. These steels are dimensionally stable and can be used for all intricate work, including work with thin sections, with a minimum danger of cracking.

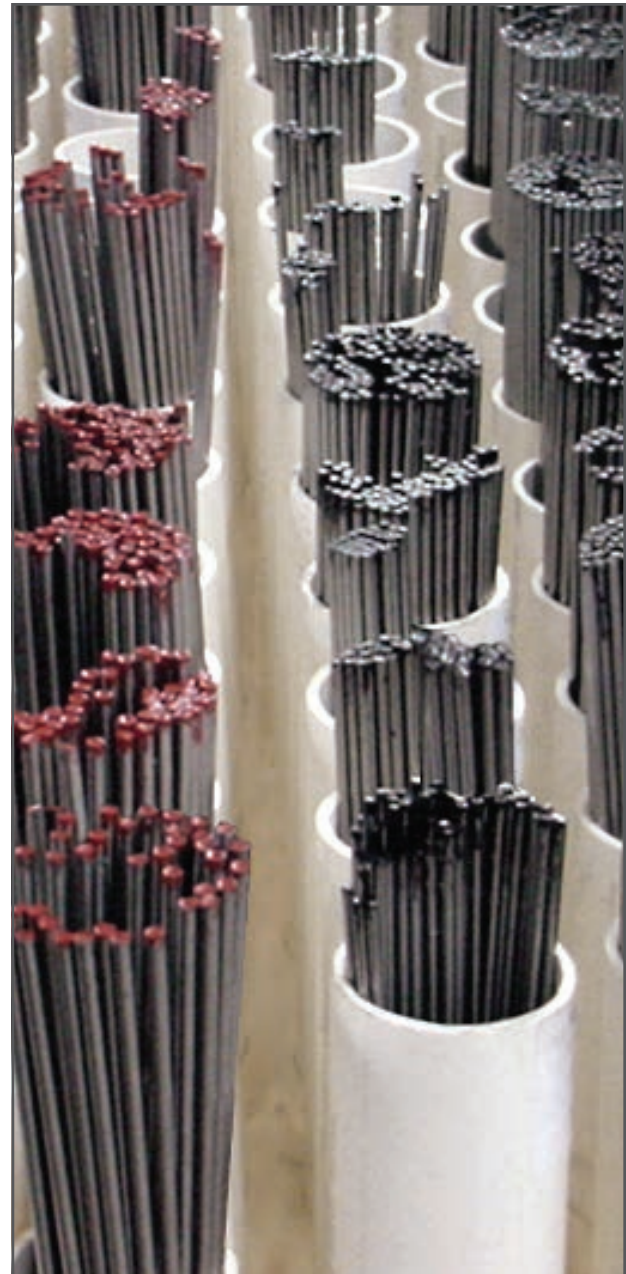
497 and 499 are (AISI A2) 5% chromium air-hardening steel. These steels have high wear and abrasion resistance.

498 Low carbon steel is used where deep hardening is not necessary, although it can be carburized or case hardened.

344 is (AISI A6) a medium alloyed air hardening tool steel that provides an excellent balance of machinability, toughness and wear resistance.

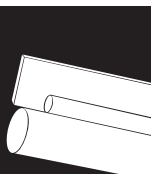
W1 Carbon (Available only in Drill Rod) is (AISI/SAE W1) a versatile and less expensive carbon steel with excellent machinability, good wear resistance and toughness.

401 and 402 are (AISI D2) high chromium steel. These steels are for the highest wear resistance applications.



PACKAGING

Starrett Precision Ground Flat Stock is individually wrapped in brown paper and clearly marked with size dimensions, analysis and correct hardening and tempering information. Drill rods are bundled together and tagged with a description that includes the size and EDP number. Color coding by grade on the ends of each piece allows for easy identification.



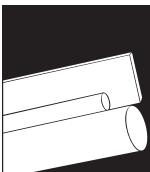
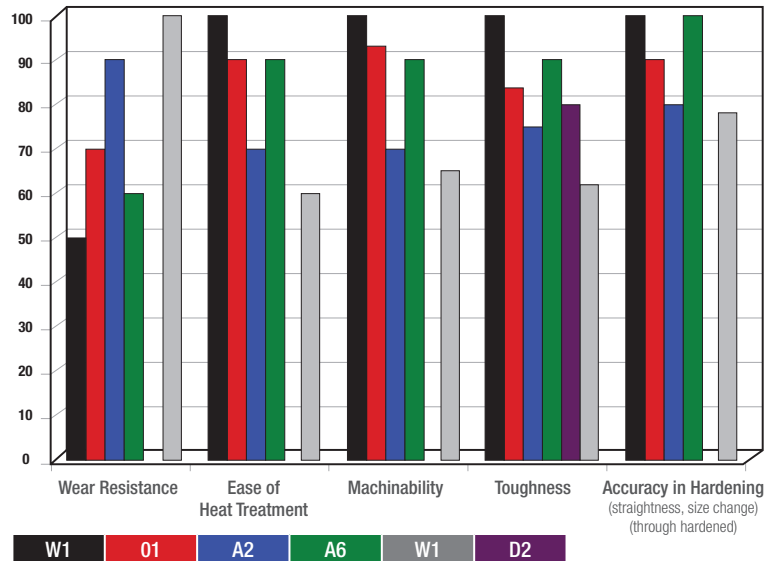


Cut costs and save time - make your own parts like these from Drill Rod

Flat Stock Tolerances	
Standard:	Thickness $\pm .001$ " Widths Up through 8", $+.000/.005$ " 9" and Over, $+.000/.015$ " Squares, $\pm .001$ "
Override:	Thickness, $+.010/.015$ " Width, $+.010/.015$ " Squares, $+.010/.015$ "
Length: Saw Cut Oversize to Allow for Finish Cutting	18", $+1/4$ " 24", $+1/2$ " 36", $+5/8$ "
Squareness Edge All:	.003" Per Inch
Finish:	35 Microinch or Finer

Drill Rod Tolerances		
Size Range	Diameter Tolerance	Length Tolerance
.124" round and less	$\pm .0003$ "	
.125" to .499"	$\pm .0005$ "	$+1/8" - 0$
.500" to 2"	$\pm .0010$ "	

COMPARATIVE FEATURE PROPERTIES



PRECISION GROUND FLAT STOCK

496 OIL HARDENING PRECISION GROUND FLAT STOCK

STANDARD

495 OIL HARDENING PRECISION GROUND FLAT STOCK

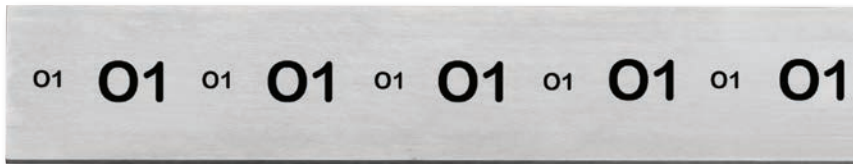
OVERSIZE

- Stock is dimensionally stable – use it for the most intricate work
- Deep hardening characteristics and fine grain structure
- Machines freely – fully spheroidized, annealed
- Full length identification – eliminates confusion with other steels
- Starrett uses its own ground flat stock and die stock for many of its fine precision tool parts

NOMINAL ANALYSIS (AISI 01)

Carbon .....	.90
Chromium .....	.50
Manganese	1.20
Tungsten .....	.50
Vanadium .....	.20

Size	Temperature	Quench	Rockwell C
All Sizes	1450°-1500° F	Oil	63-65



SPECIFICATIONS

Furnished in 18" and 36" lengths, ground straight and parallel.

HARDENING

It is recommended that stock be heated uniformly to 1450°-1500° F and quenched in oil. Temperature of the quenching oil should be 120°-140° F for best results. Do not quench in water because this is an oil hardening steel.

TEMPERING

For maximum toughness, a tempering time of one hour at temperature is recommended. Use chart for selecting desired Rockwell C hardness and corresponding tempering temperature. The following may also be used as a guide depending on type of work.

CUTTING TOOLS

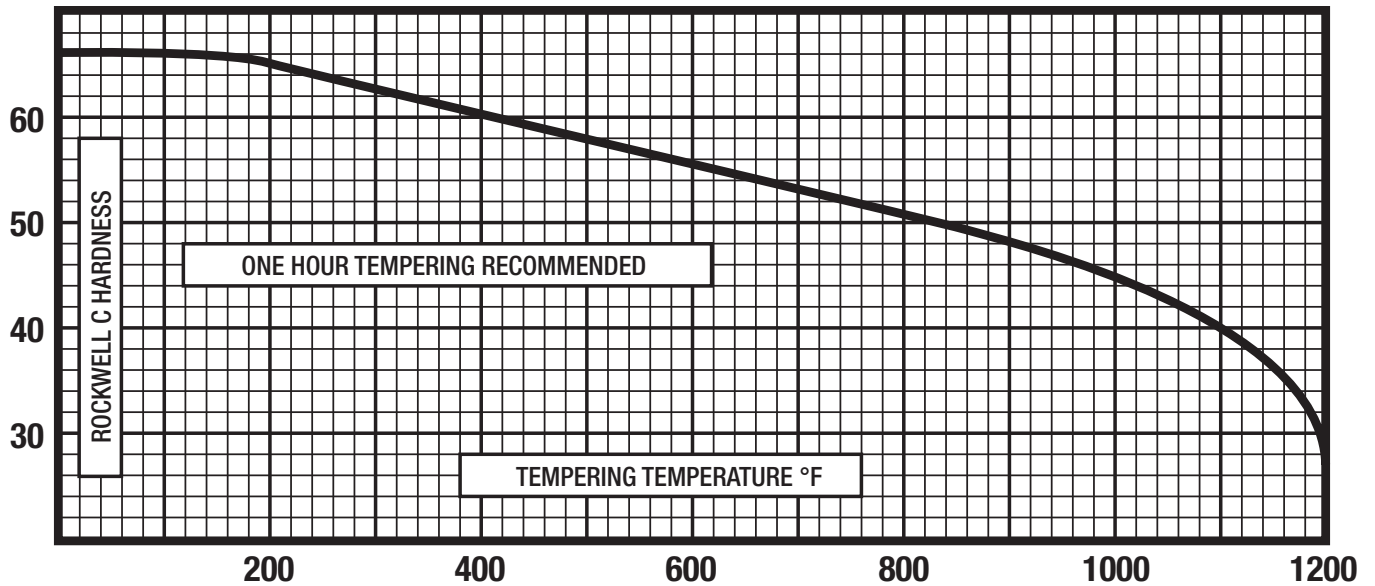
- 300°-350° F (Light Straw)

SOLID PUNCHES AND DIES

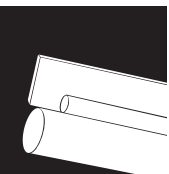
- 400°-450° F (Straw)

SPRING TEMPER

- 750°-800° F (Blue)



NOTE: Lengths, widths and thicknesses other than listed can also be quoted by request



PRECISION GROUND FLAT STOCK

496 OIL HARDENING PRECISION GROUND FLAT STOCK

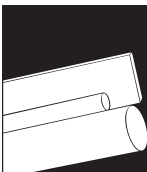
STANDARD TOLERANCE

496 Oil Hardening Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/64"	1/2"	53924	59139
	3/4"	53925	
	1"	53926	
	1-1/4"	53927	
	1-1/2"	53928	
	2"	53929	59140
	2-1/2"	53930	
	3"	53931	
1/32"	4"	53932	59141
	1/2"	53933	58895
	3/4"	53934	59143
	1"	53935	59144
	1-1/4"	53936	
	1-1/2"	53937	59145
	2"	53938	58901
	2-1/2"	53939	
3/64"	3"	53940	59147
	4"	53941	59148
	6"	53942	
	1/2"	53943	59149
	3/4"	53944	59150
	1"	53945	58902
	1-1/4"	53946	59171
	1-1/2"	53947	57685
1/16"	2"	53948	59152
	2-1/2"	53949	
	3"	53950	
	3-1/2"	53951	
	4"	53952	59153
	6"	53953	
	1/4"	57226	58891
	3/8"	57227	
1/8"	1/2"	53954	54257
	3/4"	53955	54258
	1"	53956	54259
	1-1/4"	53957	54260
	1-1/2"	53958	54261
	1-3/4"	53959	54262
	2"	53960	54263
	2-1/2"	53961	54264
	3"	53962	54265
	3-1/2"	53963	54266
	4"	53964	54267
	5"	53965	54268
	6"	53966	54269
	8"	53967	57236
	10"	53968	57237
	5/64"	1/2"	53969	54270
3/4"		53970	58905
1"		53971	58890
1-1/2"		53972	
2"		53973	
2-1/2"		53974	
3"		53975	
4"		53976	
6"	53977		

496 Oil Hardening Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
3/32"	1/4"		58899
	3/8"	58903	
	1/2"	53978	54279
	3/4"	53979	54280
	1"	53980	54281
	1-1/4"	53981	54282
	1-1/2"	53982	54283
	2"	53983	54284
	2-1/2"	53984	54285
	3"	53985	54286
	4"	53986	54287
	5"	53987	54288
7/64"	6"	53988	54289
	8"	53989	57682
	1/2"	53990	
	3/4"	53991	
	1"	53992	
	1-1/4"	53993	
	1-1/2"	53994	
	2"	53995	
1/8"	3"	53996	
	4"	53997	
	1/8"	53998	59154
	1/4"	57228	58894
	5/16"	59127	58897
	3/8"	57229	58892
	1/2"	53999	54298
	5/8"	54000	54299
	3/4"	54001	54300
	1"	54002	54301
	1-1/4"	54003	54302
	1-1/2"	54004	54303
	1-3/4"	54005	54304
	2"	54006	54305
	2-1/2"	54007	54306
	9/64"	3"	54008	54307
3-1/2"		54009	54308
4"		54010	54309
4-1/2"		54011	54310
5"		54012	54311
6"		54013	54312
7"		54014	54313
8"		54015	54314
10"		54016	54315
12"		54017	54316
14"		54018	57238
9/64"		54019	
1/2"		54020	
3/4"		54021	
1"	54022		
5/32"	1-1/2"	54023	
	2"	54024	
	3"	54025	
	4"	54026	
	5/32"	54027	
	1/2"	54028	54324
	3/4"	54029	54325
	1"	54030	54326
5/32"	1-1/4"	54031	54327
	1-1/2"	54032	54328

496 Oil Hardening Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
5/32"	1-3/4"	54033	54329
	2"	54034	54330
	2-1/2"	54035	54331
	3"	54036	54332
	3-1/2"	54037	54333
	4"	54038	54334
	5"	54039	54335
	6"	54040	54336
3/16"	8"	54041	54337
	3/16"	54042	59157
	1/4"	57230	
	3/8"	57231	
	1/2"	54043	54338
	3/4"	54044	54339
	1"	54045	54340
	1-1/4"	54046	54341
	1-1/2"	54047	54342
	1-3/4"	54048	54343
	2"	54049	54344
	2-1/2"	54050	54345
7/32"	3"	54051	54346
	3-1/2"	54052	54347
	4"	54053	54348
	5"	54054	54349
	6"	54055	54350
	8"	54056	54351
	10"	54057	54352
	7/32"	54058	
	1/2"	54059	54353
	3/4"	54060	54354
1/4"	1"	54061	54355
	1-1/4"	54062	54356
	1-1/2"	54063	54357
	2"	54064	54358
	3"	54065	54359
	4"	54066	54360
	6"	54067	
	1/4"	54068	56517
	3/8"	54069	58900
	1/2"	54070	54362
	5/8"	58904	58893
	3/4"	54071	54363
	1"	54072	54364
	1-1/4"	54073	54365
	1-1/2"	54074	54366
	1-3/4"	54075	54367
2"	54076	54368	
2-1/2"	54077	54369	
3"	54078	54370	
3-1/2"	54079	54371	
4"	54080	54372	
4-1/2"	54081	54373	
5"	54082	54374	
5-1/2"	54083	54375	
6"	54084	54376	
7"	54085	54377	
8"	54086	54378	
10"	54087	54379	
12"	54088	54380	
14"	54089	57239	

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

496 OIL HARDENING PRECISION GROUND FLAT STOCK

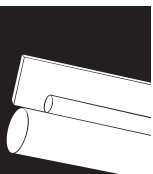
STANDARD TOLERANCE (CONTINUED)

496 Oil Hardening Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
9/32"	9/32"	54090	
	1/2"	54091	
	3/4"	54092	
	1"	54093	
	1-1/4"	54094	
	1-1/2"	54095	
	2"	54096	
	2-1/2"	54097	
	3"	54098	
	4"	54099	
6"	54100	54390	
5/16"	5/16"	54101	54391
	3/8"	57232	
	1/2"	54102	54392
	5/8"		58896
	3/4"	54103	54393
	1"	54104	54394
	1-1/4"	54105	54395
	1-1/2"	54106	54396
	1-3/4"	57233	57240
	2"	54107	54397
	2-1/2"	54108	54398
	3"	54109	54399
	3-1/2"	54110	54400
	4"	54111	54401
	4-1/2"	54112	54402
	5"	54113	54403
6"	54114	54404	
8"	54115	54405	
3/8"	3/8"	54116	54406
	1/2"	54117	54407
	5/8"		58898
	3/4"	54118	54408
	1"	54119	54409
	1-1/4"	54120	54410
	1-1/2"	54121	54411
	1-3/4"	54122	54412
	2"	54123	54413
	2-1/2"	54124	54414
	3"	54125	54415
	3-1/2"	54126	54416
	4"	54127	54417
	4-1/2"	54128	54418
	5"	54129	54419
	5-1/2"	54130	54420
6"	54131	54421	
7"	54132	54422	
8"	54133	54423	
10"	54134	54424	
12"	54135	54425	
7/16"	7/16"	54136	54426
	1/2"	54137	54427
	3/4"	54138	54428
	1"	54139	54429
	1-1/4"	54140	54430
	1-1/2"	54141	54431
	2"	54142	54432
	2-1/2"	54143	54433
	3"	54144	54434
	4"	54145	54435
6"	54146	54436	

496 Oil Hardening Precision Ground Flat Stock				
Thickness	Width	18" Length	36" Length	
1/2"	1/2"	54147	54437	
	5/8"	54148	54438	
	3/4"	54149	54439	
	1"	54150	54440	
	1-1/4"	54151	54441	
	1-1/2"	54152	54442	
	1-3/4"	57234	57241	
	2"	54153	54443	
	2-1/2"	54154	54444	
	3"	54155	54445	
	3-1/2"	54156	54446	
	4"	54157	54447	
	4-1/2"	54158	54448	
	5"	54159	54449	
9/16"	9/16"	54166	54455	
	3/4"	54167	54456	
	1"	54168	54457	
	1-1/4"	54169	54458	
	1-1/2"	54170	54459	
	2"	54171	54460	
	5/8"	5/8"	54172	54461
		3/4"	54173	54462
		1"	54174	54463
		1-1/4"	54175	54464
1-1/2"		54176	54465	
2"		54177	54466	
2-1/2"		54178	54467	
3"		54179	54468	
3-1/2"		54180	54469	
4"		54181	54470	
5"		54182	54471	
6"		54183	54472	
3/4"	8"	54185	54474	
	10"	54186	54475	
	12"	57235	57242	
	3/4"	54187	54476	
	1"	54188	54477	
	1-1/4"	54189	54478	
	1-1/2"	54190	54479	
	2"	54191	54480	
	2-1/2"	54192	54481	
	3"	54193	54482	
	3-1/2"	54194	54483	
	4"	54195	54484	
	4-1/2"	54196	54485	
	5"	54197	54486	
6"	54198	54487		
8"	54199	54488		
10"	54200	54489		
12"	54201	54490		

496 Oil Hardening Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
7/8"	7/8"	54202	54491
	1"	54203	54492
	1-1/4"	54204	54493
	1-1/2"	54205	54494
	2"	54206	54495
	2-1/2"	54207	54496
1"	3"	54208	54497
	4"	54209	54498
	6"	54210	54499
	1"	54211	54500
	1-1/4"	54212	54501
	1-1/2"	54213	54502
	2"	54214	54503
	2-1/2"	54215	54504
	3"	54216	54505
	3-1/2"	54217	54506
1-1/8"	4"	54218	54507
	4-1/2"	54219	54508
	5"	54220	54509
	6"	54221	54510
	8"	54222	54511
	10"	54223	54512
1-1/4"	12"	54224	54513
	1-1/2"	54225	54514
	2"	54226	54515
	3"	54227	54516
	4"	54228	54517
	6"	54229	54518
1-1/2"	1-1/4"	54230	54519
	1-1/2"	54231	54520
	2"	54232	54521
	2-1/2"	54233	54522
	3"	54234	54523
	4"	54235	54524
	5"	54236	54525
	6"	54237	54526
2"	8"	54238	54527
	10"	54239	54528
	1-1/2"	54240	54529
	2"	54241	54530
	2-1/2"	54242	54531
	3"	54243	54532
	3-1/2"	54244	54533
	4"	54245	54534
2"	5"	54246	54535
	6"	54247	54536
	8"	54248	54537
	10"	54249	54538
	12"	59189	
	2"	54250	54539
2"	3"	54251	54540
	4"	54252	54541
	6"	54253	54542

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

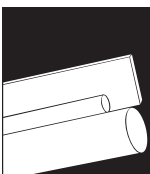
495 OIL HARDENING PRECISION GROUND FLAT STOCK

OVERSIZE TOLERANCE

495 Oil Hardening Ground Flat Stock			
Thickness	Width	18" Length	36" Length
3/16"	3/16"	56957	57677
	1/2"	56958	56813
	3/4"	56959	56814
	1"	56960	56815
	1-1/4"	56961	56816
	1-1/2"	56962	56817
	2"	56963	56818
	2-1/2"	56964	56819
	3"	56965	56820
	4"	56966	56821
1/4"	5"	56967	
	6"	56968	56822
	8"	56969	
	10"	56970	
	1/4"	56971	57678
	1/2"	56972	56823
	3/4"	56973	56824
	1"	56974	56825
	1-1/4"	56975	56826
	1-1/2"	56976	56827
5/16"	1-3/4"	56977	
	2"	56978	56828
	2-1/2"	56979	56829
	3"	56980	56830
	3-1/2"	56981	56831
	4"	56982	56832
	4-1/2"	56983	
	5"	56984	56833
	6"	56985	56834
	8"	56986	
3/8"	5/16"	56987	
	1/2"	56988	56835
	3/4"	56989	56836
	1"	56990	56837
	1-1/4"	56991	56838
	1-1/2"	56992	56839
	2"	56993	56840
	2-1/2"	56994	56841
	3"	56995	56842
	4"	56996	56843
1"	5"	56997	56844
	6"	56998	56845
	3/8"	56998	57679
	1/2"	56999	56846
	3/4"	57000	56847
	1"	57001	56848
	1-1/4"	57002	56849
	1-1/2"	57003	56850
	2"	57004	56851
	2-1/2"	57005	56852
3/4"	3"	57006	56853
	3-1/2"	57007	
	4"	57008	56854
	4-1/2"	57009	
	5"	57010	56855
	6"	57011	56856
	8"	57012	56857
	12"	57013	

495 Oil Hardening Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/2"	1/2"	57014	56858
	3/4"	57015	56859
	1"	57016	56860
	1-1/4"	57017	56861
	1-1/2"	57018	56862
	2"	57019	56863
	2-1/2"	57020	56864
	3"	57021	56865
	3-1/2"	57022	
	4"	57023	56866
	4-1/2"	57024	
	5"	57025	56867
5/8"	6"	57026	56868
	8"	57027	56869
	10"	57028	56870
	12"	57029	
	5/8"	57030	56871
	3/4"	57031	57680
	1"	57032	56872
	1-1/4"	57033	56873
	1-1/2"	57034	56874
	2"	57035	56875
	2-1/2"	57036	56876
	3"	57037	56877
3/4"	3-1/2"	57038	
	4"	57039	56878
	5"	57040	56879
	6"	57041	56880
	3/4"	57042	56881
	1"	57043	56882
	1-1/4"	57044	
	1-1/2"	57045	56883
	2"	57046	56884
	2-1/2"	57047	56885
	3"	57048	56886
	3-1/2"	57049	
1"	4"	57050	56887
	5"	57051	
	6"	57052	56888
	8"	57053	
	1"	57054	56889
	1-1/4"	57055	57681
	1-1/2"	57056	56890
	2"	57057	56891
	2-1/2"	57058	56892
	3"	57059	56893
	3-1/2"	57060	
	4"	57061	56894
5"	57062		
6"	57063	56895	

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

497 AIR HARDENING PRECISION GROUND FLAT STOCK

STANDARD

499 AIR HARDENING PRECISION GROUND FLAT STOCK

OVERSIZE

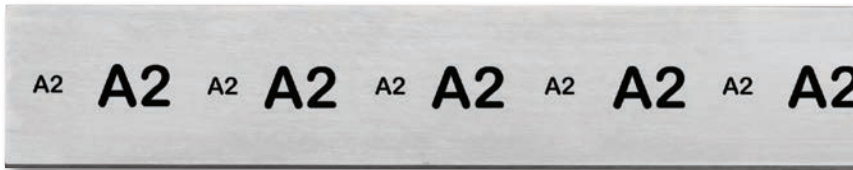
DIMENSIONALLY STABLE

- The 5% chromium content makes this steel especially desirable for punches and dies to be used in long production runs since it gives the tools far longer life. Up to 50% more pieces per sharpening can be produced than with oil hardening steel.
- High wear resistance is also ideal for punches and dies to stamp silicon, stainless steels, monel metal and other types of abrasive material
- Maintains close dimensional accuracy throughout the heat treating process. The wide 75° hardening range make this virtually foolproof.
- Full-length identification eliminates confusion with other steels
- Starrett uses its own ground flat stock for many of its precision tool parts

NOMINAL ANALYSIS (AISI A2)

Carbon	1.00
Chromium	5.25
Manganese .....	.60
Molybdenum	1.00
Vanadium .....	.25

Size	Temperature	Cool	Rockwell C
All Sizes	1700°-1775° F	Still Air	63.5-65



SPECIFICATIONS

Furnished in 18" and 36" lengths, ground straight and parallel.

HARDENING

497 and 499 Air Hardening Ground Flat Stock have a wide hardening range of 1700°F to 1775°F, with 1750°F recommended for most work. For heavier sections use the high side of the range. Heat uniformly throughout but do not soak longer than necessary. Cool in still air. No pre-heat is required if pack or atmosphere controlled furnace methods are used, but with the open furnace method a pre-heat of 1450°F is recommended.

TEMPERING

A tempering time of two hours at temperature is recommended. Use chart for selecting the desired Rockwell C hardness and corresponding tempering temperature. For maximum toughness, double temper for two hours at each temperature recommended. The following may also be used as a guide, depending on the type of work.

LIGHT BLANKING PUNCHES AND DIES

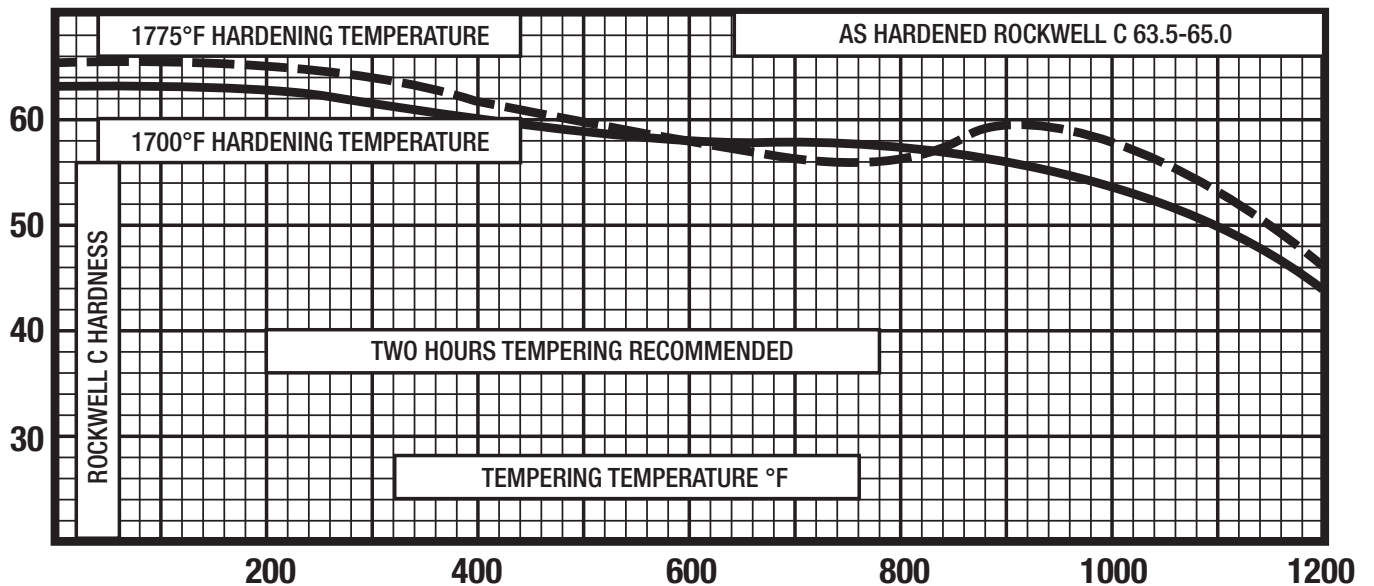
- 400°-425° F

HEAVY BLANKING PUNCHES AND DIES

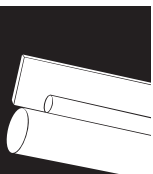
- 700° F

ANNEALING

1525°-1575° F. Furnace cool at no more than 50° per hour to 800° for maximum softness.



499, 1-1/4" and over is Blanchard ground with saw cut edges



PRECISION GROUND FLAT STOCK

497 AIR HARDENING PRECISION GROUND FLAT STOCK

STANDARD TOLERANCE

497 Air Hardening Precision Ground Flat Stock			
Thickness	Width	18"	36"
		Length	Length
1/16"	1/2"	57489	57301
	3/4"	57490	57302
	1"	57491	57303
	1-1/4"	57492	57304
	1-1/2"	57493	57305
	2"	57494	57306
	2-1/2"	57495	57307
	3"	57496	57308
	4"	57497	57309
	3/32"	1/2"	57498	57310
3/4"		57499	57311
1"		57500	57312
1-1/4"		57501	57313
1-1/2"		57502	57314
2"		57503	57315
2-1/2"		57504	57316
3"		57505	57317
4"		57506	57318
1/8"		1/2"	57243
	5/8"	57507	57319
	3/4"	57244	57246
	1"	54589	54546
	1-1/4"	54590	54547
	1-1/2"	54591	54548
	1-3/4"	57508	57320
	2"	54592	54549
	2-1/2"	54593	54550
	3"	54594	54551
	3-1/2"	54595	54552
	4"	54596	54553
	5"	54598	54555
	6"	54599	54556
7"	57509	57321	
8"	57510	57322	
10"	57511	57323	
12"	57512	57324	
5/32"	1/2"	57513	57325
	3/4"	57514	57326
	1"	54600	54557
	1-1/4"	54601	54558
	1-1/2"	54602	54559
	1-3/4"	57515	57327
	2"	54603	54560
	2-1/2"	54604	54561
	3"	54605	54562
	3-1/2"	54606	54563
4"	54607	54564	
5"	54608	54565	
6"	54609	54566	
8"	57516	57328	

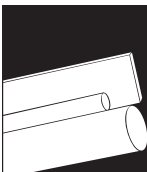
497 Air Hardening Precision Ground Flat Stock			
Thickness	Width	18"	36"
		Length	Length
3/16"	3/16"	57517	57329
	1/2"	57518	57330
	3/4"	57519	57331
	1"	54610	54567
	1-1/4"	54611	54568
	1-1/2"	54612	54569
	1-3/4"	57520	57332
	2"	54613	54570
	2-1/2"	54614	54571
	3"	54615	54572
	3-1/2"	54616	54573
	4"	54617	54574
	5"	54618	54575
	6"	54619	54576
7"	57521	57333	
8"	57522	57334	
12"	59129	59161	
1/4"	1/4"	57523	57335
	1/2"	57524	57336
	3/4"	57525	57337
	1"	54620	54577
	1-1/4"	54621	54578
	1-1/2"	54622	54579
	1-3/4"	57526	57338
	2"	54623	54580
	2-1/2"	54624	54581
	3"	54625	54582
	3-1/2"	54626	54583
	4"	54627	54584
	5"	54629	54586
	6"	54631	54588
8"	59130	59162	
12"	59131	59163	
5/16"	5/16"	57527	57339
	1/2"	57528	57340
	3/4"	57529	57341
	1"	54717	54632
	1-1/4"	54718	54633
	1-1/2"	54719	54634
	1-3/4"	57530	57342
	2"	54720	54635
	2-1/2"	54721	54636
	3"	54722	54637
3-1/2"	54723	54638	
4"	54724	54639	
5"	54726	54641	
6"	54727	54642	
8"	59132	59164	

497 Air Hardening Precision Ground Flat Stock			
Thickness	Width	18"	36"
		Length	Length
3/8"	3/8"	57531	57343
	1/2"	57532	57344
	3/4"	57533	57345
	1"	54728	54643
	1-1/4"	54729	54644
	1-1/2"	54730	54645
	1-3/4"	57534	57346
	2"	54731	54646
	2-1/2"	54732	54647
	3"	54733	54648
	3-1/2"	54734	54649
	4"	54735	54650
	5"	54737	54652
	6"	54739	54654
8"	59133	59165	
12"	59134	59166	
1/2"	1/2"	56495	56505
	5/8"	57535	57347
	3/4"	56494	56506
	1"	56493	56507
	1-1/4"	57536	57348
	1-1/2"	57537	57349
	1-3/4"	57538	57350
	2"	54748	54663
	2-1/2"	54749	54664
	3"	54750	54665
	3-1/2"	54751	54666
	4"	54752	54667
	5"	54754	54669
	6"	54755	54670
8"	54757	54672	
12"	59135	59167	
5/8"	5/8"	56499	56508
	3/4"	56498	56509
	1"	56497	56510
	1-1/2"	56496	56511
	2"	54760	54675
	2-1/2"	54761	54676
	3"	54762	54677
	3-1/2"	54763	54678
	4"	54764	54679
	5"	54765	54680
6"	54766	54681	
8"	59136	59168	
3/4"	3/4"	54770	54685
	1"	56501	56512
	1-1/4"	57539	57351
	1-1/2"	56500	56513
	2"	54771	54686
	2-1/2"	54772	54687
	3"	54773	54688
	4"	54775	54690
	5"	54777	54692
	6"	54778	54693

497 Air Hardening Precision Ground Flat Stock			
Thickness	Width	18"	36"
		Length	Length
7/8"	7/8"	54781	54696
	1"	56503	56514
	1-1/2"	56502	56515
	2"	54782	54697
	2-1/2"		54698
	3"	54784	54699
1"	4"	54785	54700
	6"	54786	54701
	1"	54787	54702
	1-1/4"	57540	57352
	1-1/2"	56504	56516
	2"	54788	54703
	2-1/2"	54789	54704
	3"	54790	54705
	4"	54792	54707
	5"	54794	54709
1-1/4"	6"	54795	54710
	1-1/4"	54834	57684
	1-1/2"	57683	57686
	2"	54835	57687
	2-1/2"	54836	57688
	3"	54837	57689
1-1/2"	4"	54838	57690
	5"	54839	57691
	6"	54840	57692
	1-1/2"	54843	57693
	2"	54844	57694
	2-1/2"	54845	57695
2"	3"	54846	57696
	3-1/2"	54847	57697
	4"	54848	57698
	6"	54850	57699
2"	2"	54853	57700
	2-1/2"	54854	57701
	3"	54855	57702
	4"	54857	57703

FLAT STOCK AND DRILL ROD

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

499 AIR HARDENING GROUND FLAT STOCK

OVERSIZE TOLERANCE

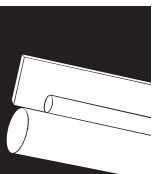
499 Air Hardening Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/8"	1/2"	57541	57353
	5/8"	57542	57354
	3/4"	57543	57355
	1"	57544	57356
	1-1/4"	57545	57357
	1-1/2"	57546	57358
	1-3/4"	57547	57359
	2"	57548	57360
	2-1/2"	57549	57361
	3"	57550	57362
	3-1/2"	57551	57363
	4"	57552	57364
5"	57553	57365	
6"	57554	57366	
7"	57555	57367	
8"	57556	57368	
10"	57557	57369	
12"	57558	57370	
5/32"	1/2"	57559	57371
	3/4"	57560	57372
	1"	57561	57373
	1-1/4"	57562	57374
	1-1/2"	57563	57375
	2"	57564	57376
	2-1/2"	57565	57377
	3"	57566	57378
	4"	57567	57379
	5"	57568	57380
	6"	57569	57381
	8"	57570	57382
3/16"	3/16"	57571	57383
	1/2"	57572	57384
	3/4"	57573	57385
	1"	57162	56896
	1-1/4"	57163	56897
	1-1/2"	57164	56898
	1-3/4"	57574	57386
	2"	57165	56899
	2-1/2"	57166	56900
	3"	57167	56901
	3-1/2"	57575	57387
	4"	57168	56902
5"	57576	57388	
6"	57577	57389	
8"	57578	57390	
10"	57579	57391	

499 Air Hardening Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/4"	1/4"	57580	57392
	3/8"		58906
	1/2"	57581	57393
	3/4"	57582	57394
	1"	57169	56903
	1-1/4"	57170	56904
	1-1/2"	57171	56905
	1-3/4"	57583	57395
	2"	57172	56906
	2-1/2"	57173	56907
	3"	57174	56908
	3-1/2"	57584	57396
4"	57175	56909	
5"	57176	56910	
6"	57177	56911	
7"	57585	57397	
8"	57586	57398	
10"	57587	57399	
12"	57588	57400	
5/16"	5/16"	57589	57401
	1/2"	57590	57402
	3/4"	57591	57403
	1"	57178	56912
	1-1/4"	57179	56913
	1-1/2"	57180	56914
	1-3/4"	57592	57404
	2"	57181	56915
	2-1/2"	57593	57405
	3"	57182	56916
	3-1/2"	57594	57406
	4"	57183	56917
5"	57184	56918	
6"	57595	57407	
8"	57596	57408	
3/8"	3/8"	57597	57409
	1/2"	57598	57410
	3/4"	57599	57411
	1"	57185	56919
	1-1/4"	57186	56920
	1-1/2"	57187	56921
	1-3/4"	57600	57412
	2"	57188	56922
	2-1/2"	57189	56923
	3"	57190	56924
	3-1/2"	57191	56925
	4"	57192	56926
4-1/2"	57601	57413	
5"	57193	56927	
6"	57194	56928	
7"	57602	57414	
8"	57603	57415	
10"	57604	57416	
12"	57605	57417	

499 Air Hardening Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/2"	1/2"	57195	56929
	5/8"	57606	57418
	3/4"	57196	56930
	1"	57197	56931
	1-1/4"	57607	57419
	1-1/2"	57608	57420
	1-3/4"	57609	57421
	2"	57198	56932
	2-1/2"	57199	56933
	3"	57200	56934
	3-1/2"	57201	56935
	4"	57202	56936
4-1/2"	57610	57422	
5"	57203	56937	
6"	57204	56938	
7"	57611	57423	
8"	57612	57424	
10"	57613	57425	
12"	57614	57426	
9/16"	2"	57615	57427
	2-1/2"	57616	57428
	3"	57617	57429
	4"	57618	57430
5/8"	5/8"	57205	56939
	3/4"	57206	56940
	1"	57207	56941
	1-1/4"	57619	57431
	1-1/2"	57208	56942
	2"	57209	56943
	2-1/2"	57210	56944
	3"	57211	56945
	3-1/2"	57212	56946
	4"	57620	57432
	5"	57621	57433
	6"	57622	57434
8"	57623	57435	
10"	57624	57436	
3/4"	3/4"	57213	56947
	1"	57214	56948
	1-1/4"	57625	57437
	1-1/2"	57215	56949
	1-3/4"	57626	57438
	2"	57216	56950
	2-1/2"	57627	57439
	3"	57217	56951
	3-1/2"	57628	57440
	4"	57218	56952
	4-1/2"	57629	57441
	5"	57630	57442
6"	57631	57443	
8"	57632	57444	
10"	57633	57445	
12"	57634	57446	

499 Air Hardening Ground Flat Stock			
Thickness	Width	18" Length	36" Length
7/8"	7/8"	57635	57447
	1"	57636	57448
	1-1/4"	57637	57449
	1-1/2"	57638	57450
	2"	57639	57451
	2-1/2"	57640	57452
1"	3"	57641	57453
	3-1/2"	57642	57454
	4"	57643	57455
	5"	57644	57456
	6"	57645	57457
	1"	57219	56953
	1-1/4"	57646	57458
	1-1/2"	57220	56954
	1-3/4"	57647	57459
	2"	57221	56955
	2-1/2"	57648	57460
	3"	57222	56956
3-1/2"	57649	57461	
4"	57650	57462	
4-1/2"	57651	57463	
5"	57652	57464	
6"	57653	57465	
8"	57654	57466	
12"	57655	57467	
1-1/4"	1-1/4"	57656	57468
	1-1/2"	57657	57469
	2"	57658	57470
	2-1/2"	57659	57471
	3"	57660	57472
	4"	57661	57473
1-1/2"	5"	57662	57474
	6"	57663	57475
	1-1/2"	57664	57476
	2"	57665	57477
	2-1/2"	57666	57478
	3"	57667	57479
2"	3-1/2"	57668	57480
	4"	57669	57481
	6"	57670	57482
	8"	59137	59169
	12"	59138	59170
	2"	57671	57483
2-1/2"	2-1/2"	57672	57484
	3"	57673	57485
	4"	57674	57486
3"	57675	57487	
3"	57676	57488	

499, 1-1/4" and over is Blanchard ground with saw cut edges
 Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

Starrett
A6

Heat Treatment and Tempering Data available upon request

344 A6 AIR HARDENING PRECISION GROUND FLAT STOCK

A6 is a medium alloyed air hardening tool steel that provides an excellent balance of machinability, toughness and wear resistance. Its lower heat treating temperature, which is similar to that of oil hardening steel, results in deep hardness and minimum distortion.

SPECIFICATIONS

Furnished in 36" lengths, ground straight and parallel.

NOMINAL ANALYSIS (AISI A6)

Carbon .....	.70
Chromium	1.00
Manganese	2.00
Molybdenum	1.25
Vanadium	-
Tungsten	-

FLAT STOCK AND DRILL ROD

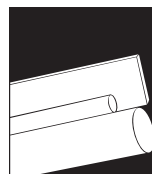
344 AIR HARDENING PRECISION GROUND FLAT STOCK

344 Air Hardening Precision Ground Flat Stock		
Thickness	Width	36" Length
1/16"	1/4"	58907
	5/16"	58908
	3/8"	58909
	1/2"	58910
	5/8"	58911
	3/4"	58912
	7/8"	58913
	1"	58914
	1-1/4"	58915
	1-1/2"	58916
	1-3/4"	58917
	2"	58918
	2-1/2"	58919
	3"	58920
3-1/2"	58921	
4"	58922	
5"	58923	
6"	58924	
3/32"	1/4"	58925
	5/16"	58926
	3/8"	58927
	1/2"	58928
	5/8"	58929
	3/4"	58930
	7/8"	58931
	1"	58932
	1-1/4"	58933
	1-1/2"	58934
	1-3/4"	58935
	2"	58936
	2-1/2"	58937
	3"	58938
	3-1/2"	58939
	4"	58940
	5"	58941
	6"	58942

344 Air Hardening Precision Ground Flat Stock			
Thickness	Width	36" Length	
1/8"	1/4"	58943	
	5/16"	58944	
	3/8"	58945	
	1/2"	58946	
	5/8"	58947	
	3/4"	58948	
	7/8"	58949	
	1"	58950	
	1-1/4"	58951	
	1-1/2"	58952	
	1-3/4"	58953	
	2"	58954	
3/16"	2-1/2"	58955	
	3"	58956	
	3-1/2"	58957	
	4"	58958	
	5"	58959	
	6"	58960	
	7"	58961	
	8"	58962	
	10"	58963	
	12"	58964	
	3/16"	3/16"	58965
		1/4"	58966
5/16"		58967	
3/8"		58968	
1/2"		58969	
5/8"		58970	
3/4"		58971	
7/8"		58972	
1"		58973	
1-1/4"		58974	
1-1/2"		58975	
1-3/4"		58976	
2"		58977	
2-1/2"		58978	
3"		58979	
3-1/2"		58980	
4"		58981	
5"		58982	
6"		58983	
7"		58984	
8"	58985		
10"	58986		
12"	58987		

344 Air Hardening Precision Ground Flat Stock			
Thickness	Width	36" Length	
1/4"	1/4"	58988	
	5/16"	58989	
	3/8"	58990	
	1/2"	58991	
	5/8"	58992	
	3/4"	58993	
	7/8"	58994	
	1"	58995	
	1-1/4"	58996	
	1-1/2"	58997	
	1-3/4"	58998	
	2"	58999	
5/16"	2-1/2"	59000	
	3"	59001	
	3-1/2"	59002	
	4"	59003	
	5"	59004	
	6"	59005	
	7"	59006	
	8"	59007	
	10"	59008	
	12"	59009	
	5/16"	5/16"	59010
		3/8"	59011
1/2"		59012	
5/8"		59013	
3/4"		59014	
7/8"		59015	
1"		59016	
1-1/4"		59017	
1-1/2"		59018	
1-3/4"		59019	
2"		59020	
2-1/2"		59021	
3"		59022	
3-1/2"		59023	
4"		59024	
4-1/2"		59025	
5"		59026	
5-1/2"		59027	
6"	59028		
8"	59029		
10"	59030		
12"	59031		

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

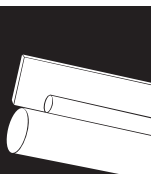
344 AIR HARDENING PRECISION GROUND FLAT STOCK

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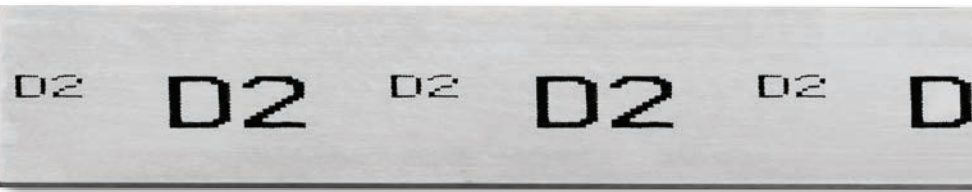
344 Air Hardening Precision Ground Flat Stock		
Thickness	Width	36" Length
3/8"	3/8"	59032
	1/2"	59033
	5/8"	59034
	3/4"	59035
	7/8"	59036
	1"	59037
	1-1/4"	59038
	1-1/2"	59039
	1-3/4"	59040
	2"	59041
	2-1/2"	59042
	3"	59043
1/2"	3-1/2"	59044
	4"	59045
	4-1/2"	59046
	5"	59047
	6"	59048
	7"	59049
	8"	59050
	10"	59051
	12"	59052
	1/2"	59053
	5/8"	59054
	3/4"	59055
7/8"	59056	
1"	59057	
1-1/4"	59058	
1-1/2"	59059	
1-3/4"	59060	
2"	59061	
2-1/2"	59062	
3"	59063	
3-1/2"	59064	
4"	59065	
4-1/2"	59066	
5"	59067	
5-1/2"	59068	
6"	59069	
7"	59070	
8"	59071	
10"	59072	
12"	59073	
5/8"	5/8"	59074
	3/4"	59075
	7/8"	59076
	1"	59077
	1-1/4"	59078
	1-1/2"	59079
	1-3/4"	59080
	2"	59081
	2-1/2"	59082
	3"	59083
	3-1/2"	59084
	4"	59085
4-1/2"	59086	
5"	59087	
5-1/2"	59088	
6"	59089	
7"	59090	
8"	59091	
10"	59092	

344 Air Hardening Precision Ground Flat Stock		
Thickness	Width	36" Length
3/4"	3/4"	59093
	7/8"	59094
	1"	59095
	1-1/4"	59096
	1-1/2"	59097
	1-3/4"	59098
	2"	59099
	2-1/2"	59100
	3"	59101
	3-1/2"	59102
	4"	59103
	4-1/2"	59104
1"	5"	59105
	5-1/2"	59106
	6"	59107
	7"	59108
	8"	59109
	10"	59110
	1"	59111
	1-1/4"	59112
	1-1/2"	59113
	1-3/4"	59114
	2"	59115
	2-1/2"	59116
3"	59117	
3-1/2"	59118	
4"	59119	
4-1/2"	59120	
5"	59121	
5-1/2"	59122	
6"	59123	
7"	59124	
8"	59125	
10"	59126	

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK



401 AND 402 HIGH CARBON, HIGH CHROMIUM PRECISION GROUND FLAT STOCK

- High carbon, high chromium steel
- For applications that demand the highest wear resistance
- 401 is standard tolerance
- 402 is oversize tolerance

SPECIFICATIONS

Furnished in 18" and 36" lengths, ground straight and parallel.

FLAT STOCK AND DRILL ROD

401 HIGH CARBON, HIGH CHROMIUM PRECISION GROUND FLAT STOCK

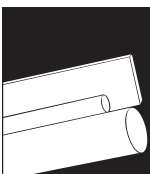
STANDARD TOLERANCE

401 High Carbon, High Chromium Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/16"	1/2"	69097	69232
	3/4"	69098	69233
	1"	69099	69234
	1-1/4"	69100	69235
	1-1/2"	69101	69236
	2"	69102	69237
	2-1/2"	69103	69238
	3"	69104	69239
	4"	69105	69240
3/32"	1/2"	69108	69243
	3/4"	69109	69244
	1"	69110	69245
	1-1/4"	69111	69246
	1-1/2"	69112	69247
	2"	69113	69248
	2-1/2"	69114	69249
	3"	69115	69250
	4"	69116	69251
1/8"	1/2"	69119	69254
	3/4"	69120	69255
	1"	69121	69256
	1-1/4"	69122	69257
	1-1/2"	69123	69258
	2"	69124	69259
	2-1/2"	69125	69260
	3"	69126	69261
	4"	69127	69262
5/32"	1/2"	69130	69265
	3/4"	69131	69266
	1"	69132	69267
	1-1/4"	69133	69268
	1-1/2"	69134	69269
	2"	69135	69270
	2-1/2"	69136	69271
	3"	69137	69272
	4"	69138	69273

401 High Carbon, High Chromium Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
3/16"	1/2"	69141	69276
	3/4"	69142	69277
	1"	69143	69278
	1-1/4"	69144	69279
	1-1/2"	69145	69280
	2"	69146	69281
	2-1/2"	69147	69282
	3"	69148	69283
	4"	69149	69284
1/4"	1/2"	69152	69287
	3/4"	69153	69288
	1"	69154	69289
	1-1/4"	69155	69290
	1-1/2"	69156	69291
	2"	69157	69292
	2-1/2"	69158	69293
	3"	69159	69294
	4"	69160	69295
5/16"	1/2"	69163	69298
	3/4"	69164	69299
	1"	69165	69300
	1-1/4"	69166	69301
	1-1/2"	69167	69302
	2"	69168	69303
	2-1/2"	69169	69304
	3"	69170	69305
	4"	69171	69306
3/8"	1/2"	69174	69309
	3/4"	69175	69310
	1"	69176	69311
	1-1/4"	69177	69312
	1-1/2"	69178	69313
	2"	69179	69314
	2-1/2"	69180	69315
	3"	69181	69316
	4"	69182	69317

401 High Carbon, High Chromium Precision Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/2"	3/4"	69185	69320
	1"	69186	69321
	1-1/4"	69187	69322
	1-1/2"	69188	69323
	2"	69189	69324
	2-1/2"	69190	69325
	3"	69191	69326
	4"	69192	69327
	5"	69193	69328
5/8"	3/4"	69195	69330
	1"	69196	69331
	1-1/4"	69197	69332
	1-1/2"	69198	69333
	2"	69199	69334
	2-1/2"	69200	69335
	3"	69201	69336
	4"	69202	69337
	5"	69203	69338
3/4"	3/4"	69204	69339
	1"	69205	69340
	1-1/4"	69206	69341
	1-1/2"	69207	69342
	2"	69208	69343
	2-1/2"	69209	69344
	3"	69210	69345
	4"	69211	69346
	5"	69212	69347
7/8"	3/4"	69213	69348
	1"	69214	69349
	1-1/4"	69215	69350
	1-1/2"	69216	69351
	2"	69217	69352
	2-1/2"	69218	69353
	3"	69219	69354
	4"	69220	69355
	5"	69221	69356
1"	3/4"	69222	69357
	1"	69223	69358
	1-1/4"	69224	69359
	1-1/2"	69225	69360
	2"	69226	69361
	2-1/2"	69227	69362
	3"	69228	69363
	4"	69229	69364
	5"	69230	69365
6"	69231	69366	

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

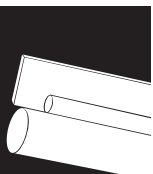
402 HIGH CARBON, HIGH CHROMIUM GROUND FLAT STOCK

OVERSIZE TOLERANCE

402 High Carbon, High Chromium Ground Flat Stock			
Thickness	Width	18" Length	36" Length
1/8"	1/2"	69367	69481
	3/4"	69368	69482
	1"	69369	69483
	1-1/4"	69370	69484
	1-1/2"	69371	69485
	2"	69372	69486
	2-1/2"	69373	69487
	3"	69374	69488
	4"	69375	69489
5/32"	1/2"	69378	69492
	3/4"	69379	69493
	1"	69380	69494
	1-1/4"	69381	69495
	1-1/2"	69382	69496
	2"	69383	69497
	2-1/2"	69384	69498
	3"	69385	69499
	4"	69386	69500
3/16"	1/2"	69389	69503
	3/4"	69390	69504
	1"	69391	69505
	1-1/4"	69392	69506
	1-1/2"	69393	69507
	2"	69394	69508
	2-1/2"	69395	69509
	3"	69396	69510
	4"	69397	69511
1/4"	1/2"	69400	69514
	3/4"	69401	69515
	1"	69402	69516
	1-1/4"	69403	69517
	1-1/2"	69404	69518
	2"	69405	69519
	2-1/2"	69406	69520
	3"	69407	69521
	4"	69408	69522
5/16"	1/2"	69411	69525
	3/4"	69412	69526
	1"	69413	69527
	1-1/4"	69414	69528
	1-1/2"	69415	69529
	2"	69416	69530
	2-1/2"	69417	69531
	3"	69418	69532
	4"	69419	69533
3/8"	1/2"	69422	69536
	3/4"	69423	69537
	1"	69424	69538
	1-1/4"	69425	69539
	1-1/2"	69426	69540
	2"	69427	69541
	2-1/2"	69428	69542
	3"	69429	69543
	4"	69430	69544
1/2"	5"	69431	69545
	6"	69432	69546
	1/2"	69433	69547
	3/4"	69434	69548
	1"	69435	69549
	1-1/4"	69436	69550
	1-1/2"	69437	69551
	2"	69438	69552
	2-1/2"	69439	69553
5/8"	3"	69440	69554
	4"	69441	69555
	5"	69442	69556
	6"	69443	69557
	5/8"	69444	69558
	3/4"	69445	69559
	1"	69446	69560
	1-1/4"	69447	69561
	1-1/2"	69448	69562
3/4"	2"	69449	69563
	2-1/2"	69450	69564
	3"	69451	69565
	4"	69452	69566
	5"	69453	69567
	6"	69454	69568
	3/4"	69455	69569
	1"	69456	69570
	1-1/4"	69457	69571
7/8"	1-1/2"	69458	69572
	2"	69459	69573
	2-1/2"	69460	69574
	3"	69461	69575
	4"	69462	69576
	5"	69463	69577
	6"	69464	69578
	7/8"	69465	69579
	1"	69466	69580
1"	1-1/2"	69467	69581
	2"	69468	69582
	3"	69469	69583
	4"	69470	69584
	6"	69471	69585
	1"	69472	69586
	1-1/4"	69473	69587
	1-1/2"	69474	69588
	2"	69475	69589
1"	2-1/2"	69476	69590
	3"	69477	69591
	4"	69478	69592
	5"	69479	69593
	6"	69480	69594

402 High Carbon, High Chromium Ground Flat Stock			
Thickness	Width	18" Length	36" Length
3/8"	1/2"	69422	69536
	3/4"	69423	69537
	1"	69424	69538
	1-1/4"	69425	69539
	1-1/2"	69426	69540
	2"	69427	69541
	2-1/2"	69428	69542
	3"	69429	69543
	4"	69430	69544
1/2"	5"	69431	69545
	6"	69432	69546
	1/2"	69433	69547
	3/4"	69434	69548
	1"	69435	69549
	1-1/4"	69436	69550
	1-1/2"	69437	69551
	2"	69438	69552
	2-1/2"	69439	69553
5/8"	3"	69440	69554
	4"	69441	69555
	5"	69442	69556
	6"	69443	69557
	5/8"	69444	69558
	3/4"	69445	69559
	1"	69446	69560
	1-1/4"	69447	69561
	1-1/2"	69448	69562
3/4"	2"	69449	69563
	2-1/2"	69450	69564
	3"	69451	69565
	4"	69452	69566
	5"	69453	69567
	6"	69454	69568
	3/4"	69455	69569
	1"	69456	69570
	1-1/4"	69457	69571
7/8"	1-1/2"	69458	69572
	2"	69459	69573
	2-1/2"	69460	69574
	3"	69461	69575
	4"	69462	69576
	5"	69463	69577
	6"	69464	69578
	7/8"	69465	69579
	1"	69466	69580
1"	1-1/2"	69467	69581
	2"	69468	69582
	3"	69469	69583
	4"	69470	69584
	6"	69471	69585
	1"	69472	69586
	1-1/4"	69473	69587
	1-1/2"	69474	69588
	2"	69475	69589
1"	2-1/2"	69476	69590
	3"	69477	69591
	4"	69478	69592
	5"	69479	69593
	6"	69480	69594

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK



SPECIFICATIONS

Furnished in 24" lengths, ground straight and parallel.

ANALYSIS

Starrett 498 Low Carbon Precision Ground Flat Stock is a .20 carbon fine-grained, milled steel, which can be carburized or case hardened. Very similar to AISI 1018.

HEAT TREATMENT

For many applications, stock can be used unhardened. However, if surface hardening is desired, it can be carburized or case hardened. If carburized, a case of 1/32" will be obtained if the steel is held in carburizing salt at 1700° F for three hours.

498 LOW CARBON PRECISION GROUND FLAT STOCK

- Substantial cost reductions over tool steel ground flat stock. There are savings up to 60% because this is a low carbon steel and furnished in 24" lengths. This means that you get one-third more steel at less cost.
- Ideal for a wide variety of parts that don't require more expensive heat treated steels, such as stripper plates, jigs, fixtures, machine and component parts, templates, etc.
- This steel can be carburized or case hardened. After hardening, its physical properties, especially tensile strength, yield point, and Brinell hardness, are substantially higher.
- **NOTE:** Thicknesses of 1/8" and under are made from AISI 1010 material
- Starrett uses its own ground flat stock for many of its precision tool parts

FLAT STOCK AND DRILL ROD

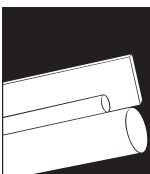
498 LOW CARBON PRECISION GROUND FLAT STOCK

498 Low Carbon Precision Ground Flat Stock		
Thickness	Width	24" Length
1/16"	1/2"	54866
	3/4"	54867
	1"	54868
	1-1/4"	54869
	1-1/2"	54870
	2"	54871
	2-1/2"	54872
	3"	54873
	3-1/2"	54874
	4"	54875
	5"	54876
	6"	54877
3/32"	1/2"	54881
	3/4"	54882
	1"	54883
	1-1/4"	54884
	1-1/2"	54885
	2"	54886
	2-1/2"	54887
	3"	54888
	3-1/2"	58285
	4"	54889
	5"	54890
	6"	54891
8"	54892	
10"	58286	
12"	58287	

498 Low Carbon Precision Ground Flat Stock		
Thickness	Width	24" Length
1/8"	1/2"	54893
	3/4"	54894
	1"	54895
	1-1/4"	54896
	1-1/2"	54897
	2"	54898
	2-1/2"	54899
	3"	54900
	3-1/2"	54901
	4"	54902
	5"	54903
	6"	54904
5/32"	1/2"	54908
	3/4"	54909
	1"	54910
	1-1/4"	54911
	1-1/2"	54912
	2"	54913
	2-1/2"	54914
	3"	54915
	3-1/2"	58290
	4"	54917
	5"	54918
	6"	54919
8"	58291	
10"	58292	
12"	58293	

498 Low Carbon Precision Ground Flat Stock		
Thickness	Width	24" Length
3/16"	3/16"	57247
	1/2"	54921
	3/4"	54922
	1"	54923
	1-1/4"	54924
	1-1/2"	54925
	2"	54926
	2-1/2"	54927
	3"	54928
	3-1/2"	54929
	4"	54930
	5"	54931
1/4"	6"	54932
	8"	54933
	10"	54934
	12"	57248
	1/4"	57249
	1/2"	54935
	3/4"	54936
	1"	54937
	1-1/4"	54938
	1-1/2"	54939
	2"	54940
	2-1/2"	54941
3"	54942	
3-1/2"	54943	
4"	54944	
5"	54945	
6"	54946	
8"	54947	
10"	54948	
12"	54949	

Sizes other than listed priced on application



PRECISION GROUND FLAT STOCK

498 Low CARBON PRECISION GROUND FLAT STOCK

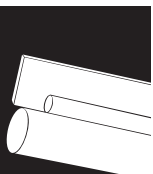
CONTINUED

498 Low Carbon Precision Ground Flat Stock			
Thickness	Width	24" Length	
5/16"	5/16"	57250	
	1/2"	54950	
	3/4"	54951	
	1"	54952	
	1-1/4"	54953	
	1-1/2"	54954	
	2"	54955	
	2-1/2"	54956	
	3"	54957	
	3-1/2"	54958	
	4"	54959	
	5"	54960	
	6"	54961	
3/8"	3/8"	54964	
	1/2"	54965	
	3/4"	54966	
	1"	54967	
	1-1/4"	54968	
	1-1/2"	54969	
	2"	54970	
	2-1/2"	54971	
	3"	54972	
	3-1/2"	54973	
	4"	54974	
	5"	54975	
	6"	54976	
7/16"	7/16"	54982	
	1/2"	54983	
	3/4"	54984	
	1"	54985	
	1-1/4"	54986	
	1-1/2"	54987	
	2"	54988	
	2-1/2"	54989	
	3"	54990	
	1/2"	3-1/2"	54991
		4"	54992
		5"	54993
		6"	54994
7"		54995	
8"		54996	
9"		54997	
10"		54998	
12"		54999	
9/16"		9/16"	55000

498 Low Carbon Precision Ground Flat Stock		
Thickness	Width	24" Length
5/8"	5/8"	55001
	3/4"	55002
	1"	55003
	1-1/4"	55004
	1-1/2"	55005
	2"	55006
	2-1/2"	55007
	3"	55008
	3-1/2"	55009
	4"	55010
	5"	55011
	6"	55012
	3/4"	7"	55013
8"		55014
9"		55015
10"		55016
12"		57253
3/4"		55017
1"		55018
1-1/4"		55019
1-1/2"		55020
2"		55021
2-1/2"		55022
3"		55023
7/8"		3-1/2"	55024
	4"	55025
	5"	55026
	6"	55027
	7"	57254
	8"	55028
	9"	55029
	10"	55030
	12"	55031
	7/8"	55032
	1"	55033
	1-1/4"	55034
	1-1/2"	55035
1"	2"	55036
	2-1/2"	55037
	3"	55038
	3-1/2"	57255
	4"	55039
	6"	55040
	1"	55041
	1-1/4"	55042
	1-1/2"	55043
	2"	55044
	2-1/2"	55045
	3"	55046
	3-1/2"	55047
4"	55048	
5"	55049	
6"	55050	
7"	57256	
8"	55051	
9"	55052	
10"	55053	
12"	55054	
1-1/8"	1-1/8"	58288

498 Low Carbon Precision Ground Flat Stock			
Thickness	Width	24" Length	
1-1/4"	1-1/4"	55055	
	1-1/2"	55056	
	2"	55057	
	2-1/2"	55058	
	3"	55059	
	4"	55060	
	5"	55061	
	6"	55062	
	8"	55063	
	10"	55065	
	12"	57257	
	1-1/2"	1-1/2"	55066
		2"	55067
2-1/2"		55068	
3"		55069	
3-1/2"		55070	
4"		55071	
5"		55072	
6"		55073	
8"		55074	
10"		55075	
2"		2"	55076
2-1/2"		2-1/2"	58289

Sizes other than listed priced on application





PRECISION DRILL ROD

O1 480 PRECISION GROUND AND POLISHED DRILL ROD

AISI/SAE O1 is a general purpose tool steel with good wear resistance, toughness and machinability.

NOMINAL ANALYSIS (AISI O1)

Carbon .....	.90
Chromium .....	.50
Manganese	1.20
Tungsten .....	.50
Vanadium .....	.20

Heat Treatment and Tempering Data available upon request

Tolerances		
Size Range	Diameter	Length
.124" round and less	± .0003"	+ 1/8" - 0
.125" to .499"	± .0005"	+ 1/8" - 0
.500" to 2"	± .0010"	+ 1/8" - 0

FLAT STOCK AND DRILL ROD

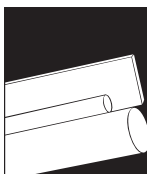
O1 480 PRECISION GROUND AND POLISHED DRILL ROD

Letter Sizes		
Diameter	Decimal	36" Length
A	0.2340	68201
B	0.2380	68202
C	0.2420	68203
D	0.2460	68204
E	0.2500	68205
F	0.2570	68206
G	0.2610	68207
H	0.2660	68208
I	0.2720	68209
J	0.2770	68210
K	0.2810	68211
L	0.2900	68212
M	0.2950	68213
N	0.3020	68214
O	0.3160	68215
P	0.3230	68216
Q	0.3320	68217
R	0.3390	68218
S	0.3480	68219
T	0.3580	68220
U	0.3680	68221
V	0.3770	68222
W	0.3860	68223
X	0.3970	68224
Y	0.4040	68225
Z	0.4130	68226

Number Sizes		
Diameter	Decimal	36" Length
52	0.0630	68251
51	0.0660	68252
50	0.0690	68253
49	0.0720	68254
48	0.0750	68255
47	0.0770	68256
46	0.0790	68257
45	0.0810	68258
44	0.0850	68259
43	0.0880	68260
42	0.0920	68261
41	0.0950	68262
40	0.0970	68263
39	0.0990	68264
38	0.1010	68265
37	0.1030	68266
36	0.1060	68267
35	0.1080	68268
34	0.1100	68269
33	0.1120	68270
32	0.1150	68271
31	0.1200	68272
30	0.1270	68273
29	0.1340	68274
28	0.1390	68275
27	0.1430	68276

Number Sizes		
Diameter	Decimal	36" Length
26	0.1460	68277
25	0.1480	68278
24	0.1510	68279
23	0.1530	68280
22	0.1550	68281
21	0.1570	68282
20	0.1610	68283
19	0.1640	68284
18	0.1680	68285
17	0.1720	68286
16	0.1750	68287
15	0.1780	68288
14	0.1800	68289
13	0.1820	68290
12	0.1850	68291
11	0.1880	68292
10	0.1910	68293
9	0.1940	68294
8	0.1970	68295
7	0.1990	68296
6	0.2010	68297
5	0.2040	68298
4	0.2070	68299
3	0.2120	68300
2	0.2190	68301
1	0.2270	68302

Sizes other than listed priced on application



PRECISION DRILL ROD

O1 480 PRECISION GROUND AND POLISHED DRILL ROD

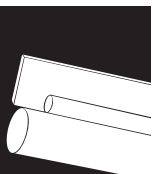
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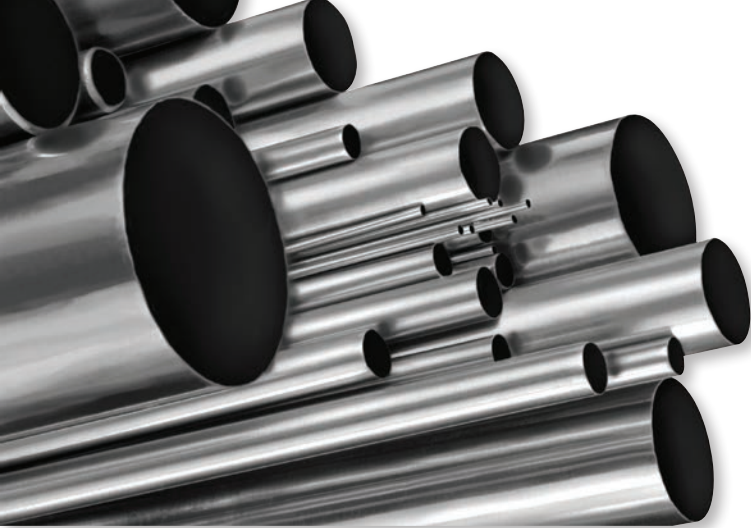
Fractional Sizes		
Diameter	Decimal	36" Length
in		
1/16	0.0625	68303
5/64	0.0781	68304
3/32	0.0938	68305
7/64	0.1094	68306
1/8	0.1250	68307
9/64	0.1406	68308
5/32	0.1563	68309
11/64	0.1719	68310
3/16	0.1875	68311
13/64	0.2031	68312
7/32	0.2188	68313
15/64	0.2344	68314
1/4	0.2500	68315
17/64	0.2656	68316
9/32	0.2813	68317
19/64	0.2969	68318
5/16	0.3125	68319
21/64	0.3281	68320
11/32	0.3438	68321
23/64	0.3594	68322
3/8	0.3750	68323
25/64	0.3906	68324
13/32	0.4063	68325
27/64	0.4219	68326
7/16	0.4375	68327
29/64	0.4531	68328
15/32	0.4688	68329
31/64	0.4844	68330
1/2	0.5000	68331
33/64	0.5156	68332
17/32	0.5313	68333
35/64	0.5469	68334
9/16	0.5625	68335
37/64	0.5781	68336
19/32	0.5938	68337
39/64	0.6094	68338
5/8	0.6250	68339
41/64	0.6406	68340
21/32	0.6563	68341
43/64	0.6719	68342
11/16	0.6875	68343
45/64	0.7031	68344
23/32	0.7188	68345
47/64	0.7344	68346
3/4	0.7500	68347
49/64	0.7656	68348
25/32	0.7813	68349
51/64	0.7969	68350
13/16	0.8125	68351
53/64	0.8281	68352

Fractional Sizes		
Diameter	Decimal	36" Length
in		
27/32	0.8438	68353
55/64	0.8594	68354
7/8	0.8750	68355
57/64	0.8906	68356
29/32	0.9063	68357
59/64	0.9219	68358
15/16	0.9375	68359
61/64	0.9531	68360
31/32	0.9688	68361
63/64	0.9844	68362
1	1.0000	68363
1-1/64	1.0156	68364
1-1/32	1.0313	68365
1-3/64	1.0469	68366
1-1/16	1.0625	68367
1-5/64	1.0781	68368
1-3/32	1.0938	68369
1-7/64	1.1094	68370
1-1/8	1.1250	68371
1-9/64	1.1406	68372
1-5/32	1.1563	68373
1-11/64	1.1719	68374
1-3/16	1.1875	68375
1-13/64	1.2031	68376
1-7/32	1.2188	68377
1-15/64	1.2344	68378
1-1/4	1.2500	68379
1-17/64	1.2656	68380
1-9/32	1.2813	68381
1-19/64	1.2969	68382
1-5/16	1.3125	68383
1-21/64	1.3281	68384
1-11/32	1.3438	68385
1-23/64	1.3594	68386
1-3/8	1.3750	68387
1-25/64	1.3906	68388
1-13/32	1.4063	68389
1-27/64	1.4219	68390
1-7/16	1.4375	68391
1-29/64	1.4531	68392
1-15/32	1.4688	68393
1-31/64	1.4844	68394
1-1/2	1.5000	68395
1-9/16	1.5625	68396
1-5/8	1.6250	68397
1-11/16	1.6875	68398
1-3/4	1.7500	68399
1-13/16	1.8125	68400
1-7/8	1.8750	68401
1-15/16	1.9375	68402
2	2.0000	68403

Metric Sizes		
Diameter	Decimal	36" Length
mm		
2	0.0787	68227
3	0.1181	68228
4	0.1575	68229
5	0.1969	68230
6	0.2362	68231
7	0.2756	68232
8	0.3150	68233
9	0.3543	68234
10	0.3937	68235
11	0.4331	68236
12	0.4724	68237
13	0.5118	68238
14	0.5512	68239
15	0.5906	68240
16	0.6299	68241
17	0.6693	68242
18	0.7087	68243
19	0.7480	68244
20	0.7874	68245
21	0.8268	68246
22	0.8661	68247
23	0.9055	68248
24	0.9449	68249
25	0.9843	68250

Sizes other than listed priced on application





PRECISION DRILL ROD

W1 481 PRECISION GROUND AND POLISHED DRILL ROD

AISI/SAE W1 is a versatile and less expensive tool steel that has superior machinability and maintains good wear resistance and toughness characteristics.

NOMINAL ANALYSIS (AISI W1)

Carbon .....	.90-1.05
Manganese .....	.30-.50

Tolerances

Size Range	Diameter	Length
.124" round and less	± .0003"	+ 1/8" - 0
.125" to .499"	± .0005"	+ 1/8" - 0
.500" to 2"	± .0010"	+ 1/8" - 0

Heat Treatment and Tempering Data available upon request

FLAT STOCK AND DRILL ROD

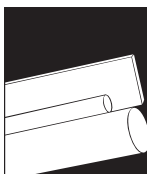
W1 481 PRECISION GROUND AND POLISHED DRILL ROD

Letter Sizes		
Diameter	Decimal	36" Length
A	0.2340	68404
B	0.2380	68405
C	0.2420	68406
D	0.2460	68407
E	0.2500	68408
F	0.2570	68409
G	0.2610	68410
H	0.2660	68411
I	0.2720	68412
J	0.2770	68413
K	0.2810	68414
L	0.2900	68415
M	0.2950	68416
N	0.3020	68417
O	0.3160	68418
P	0.3230	68419
Q	0.3320	68420
R	0.3390	68421
S	0.3480	68422
T	0.3580	68423
U	0.3680	68424
V	0.3770	68425
W	0.3860	68426
X	0.3970	68427
Y	0.4040	68428
Z	0.4130	68429

Number Sizes		
Diameter	Decimal	36" Length
52	0.0630	68430
51	0.0660	68431
50	0.0690	68432
49	0.0720	68433
48	0.0750	68434
47	0.0770	68435
46	0.0790	68436
45	0.0810	68437
44	0.0850	68438
43	0.0880	68439
42	0.0920	68440
41	0.0950	68441
40	0.0970	68442
39	0.0990	68443
38	0.1010	68444
37	0.1030	68445
36	0.1060	68446
35	0.1080	68447
34	0.1100	68448
33	0.1120	68449
32	0.1150	68450
31	0.1200	68451
30	0.1270	68452
29	0.1340	68453
28	0.1390	68454
27	0.1430	68455

Number Sizes		
Diameter	Decimal	36" Length
26	0.1460	68456
25	0.1480	68457
24	0.1510	68458
23	0.1530	68459
22	0.1550	68460
21	0.1570	68461
20	0.1610	68462
19	0.1640	68463
18	0.1680	68464
17	0.1720	68465
16	0.1750	68466
15	0.1780	68467
14	0.1800	68468
13	0.1820	68469
12	0.1850	68470
11	0.1880	68471
10	0.1910	68472
9	0.1940	68473
8	0.1970	68474
7	0.1990	68475
6	0.2010	68476
5	0.2040	68477
4	0.2070	68478
3	0.2120	68479
2	0.2190	68480
1	0.2270	68481

Sizes other than listed priced on application



PRECISION DRILL ROD

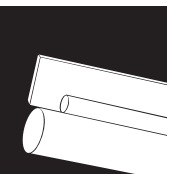
W1 481 PRECISION GROUND AND POLISHED DRILL ROD

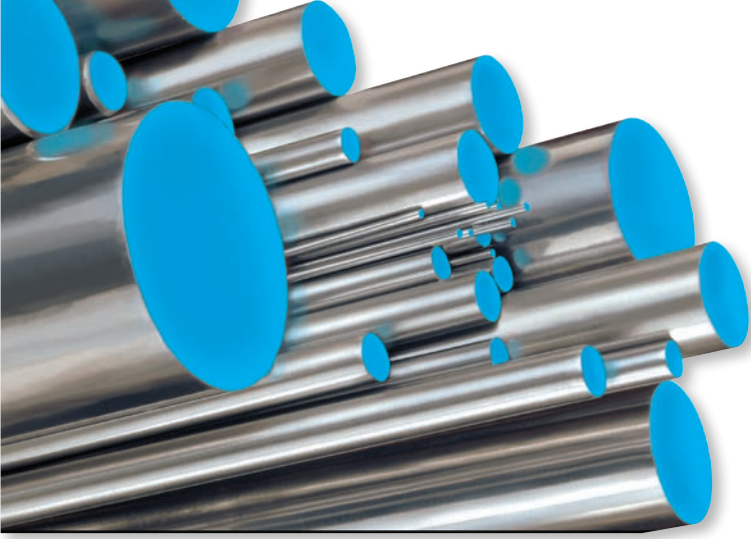
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Fractional Sizes		
Diameter in	Decimal	36" Length
1/16	0.0625	68482
5/64	0.0781	68483
3/32	0.0938	68484
7/64	0.1094	68485
1/8	0.1250	68486
9/64	0.1406	68487
5/32	0.1563	68488
11/64	0.1719	68489
3/16	0.1875	68490
13/64	0.2031	68491
7/32	0.2188	68492
15/64	0.2344	68493
1/4	0.2500	68494
17/64	0.2656	68495
9/32	0.2813	68496
19/64	0.2969	68497
5/16	0.3125	68498
21/64	0.3281	68499
11/32	0.3438	68500
23/64	0.3594	68501
3/8	0.3750	68502
25/64	0.3906	68503
13/32	0.4063	68504
27/64	0.4219	68505
7/16	0.4375	68506
29/64	0.4531	68507
15/32	0.4688	68508
31/64	0.4844	68509
1/2	0.5000	68510
33/64	0.5156	68511
17/32	0.5313	68512
35/64	0.5469	68513
9/16	0.5625	68514
37/64	0.5781	68515
19/32	0.5938	68516
39/64	0.6094	68517
5/8	0.6250	68518
41/64	0.6406	68519
21/32	0.6563	68520
43/64	0.6719	68521
11/16	0.6875	68522
45/64	0.7031	68523
23/32	0.7188	68524
47/64	0.7344	68525
3/4	0.7500	68526
49/64	0.7656	68527
25/32	0.7813	68528
51/64	0.7969	68529
13/16	0.8125	68530
53/64	0.8281	68531

Fractional Sizes		
Diameter in	Decimal	36" Length
27/32	0.8438	68532
55/64	0.8594	68533
7/8	0.8750	68534
57/64	0.8906	68535
29/32	0.9063	68536
59/64	0.9219	68537
15/16	0.9375	68538
61/64	0.9531	68539
31/32	0.9688	68540
63/64	0.9844	68541
1	1.0000	68542
1-1/64	1.0156	68543
1-1/32	1.0313	68544
1-3/64	1.0469	68545
1-1/16	1.0625	68546
1-5/64	1.0781	68547
1-3/32	1.0938	68548
1-7/64	1.1094	68549
1-1/8	1.1250	68550
1-9/64	1.1406	68551
1-5/32	1.1563	68552
1-11/64	1.1719	68553
1-3/16	1.1875	68554
1-13/64	1.2031	68555
1-15/64	1.2344	68557
1-1/4	1.2500	68558
1-17/64	1.2656	68559
1-9/32	1.2813	68560
1-19/64	1.2969	68561
1-5/16	1.3125	68562
1-21/64	1.3281	68563
1-11/32	1.3438	68564
1-23/64	1.3594	68565
1-3/8	1.3750	68566
1-25/64	1.3906	68567
1-13/32	1.4063	68568
1-27/64	1.4219	68569
1-7/16	1.4375	68570
1-29/64	1.4531	68571
1-15/32	1.4688	68572
1-31/64	1.4844	68573
1-1/2	1.5000	68574
1-9/16	1.5625	68575
1-5/8	1.6250	68576
1-11/16	1.6875	68577
1-3/4	1.7500	68578
1-13/16	1.8125	68579
1-7/8	1.8750	68580
1-15/16	1.9375	68581
2	2.0000	68582

Sizes other than listed priced on application





PRECISION DRILL ROD

A2 482 PRECISION GROUND AND POLISHED DRILL ROD

AISI/SAE A2 is a more highly alloyed tool steel that provides excellent wear resistance and toughness and good machinability.

NOMINAL ANALYSIS (AISI A2)

Carbon	1.00
Chromium	5.25
Manganese .....	.60
Molybdenum	1.00
Silicon .....	.40
Vanadium .....	.25

Tolerances

Size Range	Diameter	Length
.124" round and less	± .0003"	+ 1/8" - 0
.125" to .499"	± .0005"	+ 1/8" - 0
.500" to 2"	± .0010"	+ 1/8" - 0

Heat Treatment and Tempering Data available upon request

FLAT STOCK AND DRILL ROD

A2 482 PRECISION GROUND AND POLISHED DRILL ROD

Fractional Sizes		
Diameter in	Decimal	36" Length
1/16	0.0625	68662
5/64	0.0781	68663
3/32	0.0938	68664
7/64	0.1094	68665
1/8	0.1250	68583
9/64	0.1406	68666
5/32	0.1563	68631
11/64	0.1719	68667
3/16	0.1875	68584
13/64	0.2031	68668
7/32	0.2188	68632
15/64	0.2344	68669
1/4	0.2500	68585
17/64	0.2656	68670
9/32	0.2813	68633
19/64	0.2969	68671
5/16	0.3125	68586
21/64	0.3281	68672
11/32	0.3438	68634
23/64	0.3594	68673
3/8	0.3750	68587
25/64	0.3906	68674
13/32	0.4063	68675
27/64	0.4219	68676

Fractional Sizes		
Diameter in	Decimal	36" Length
7/16	0.4375	68588
29/64	0.4531	68677
15/32	0.4688	68678
31/64	0.4844	68679
1/2	0.5000	68589
17/32	0.5313	68680
9/16	0.5625	68590
19/32	0.5938	68681
5/8	0.6250	68591
21/32	0.6563	68682
11/16	0.6875	68592
23/32	0.7188	68683
3/4	0.7500	68593
13/16	0.8125	68594
7/8	0.8750	68595
15/16	0.9375	68684
1	1.0000	68596
11/16	1.0625	68685
1-1/8	1.1250	68597
1-1/4	1.2500	68598
13/8	1.3750	68686
1-1/2	1.5000	68599
13/4	1.7500	68687
2	2.0000	68688

Sizes other than listed priced on application

