

**Starrett®**

**PRECISION GROUND  
FLAT STOCK & 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
- ◆ Fixtures
- ◆ Dies
- ◆ Test gages
- ◆ Shims
- ◆ Stamps
- ◆ Templates
- ◆ Jigs
- ◆ Parallels
- ◆ Test tools
- ◆ Flat gages
- ◆ Punches
- ◆ Cutters
- ◆ Buttons

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

**Nos. 495 and 496** are (AISI 01) 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.

**Nos. 497 and 499** are A-2 5% chromium air-hardening steel. These steels have high wear and abrasion resistance.

**No. 498** Low carbon steel is used where deep hardening is not necessary, although it can be carburized or case hardened.

**No. 344** is 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.

### 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.



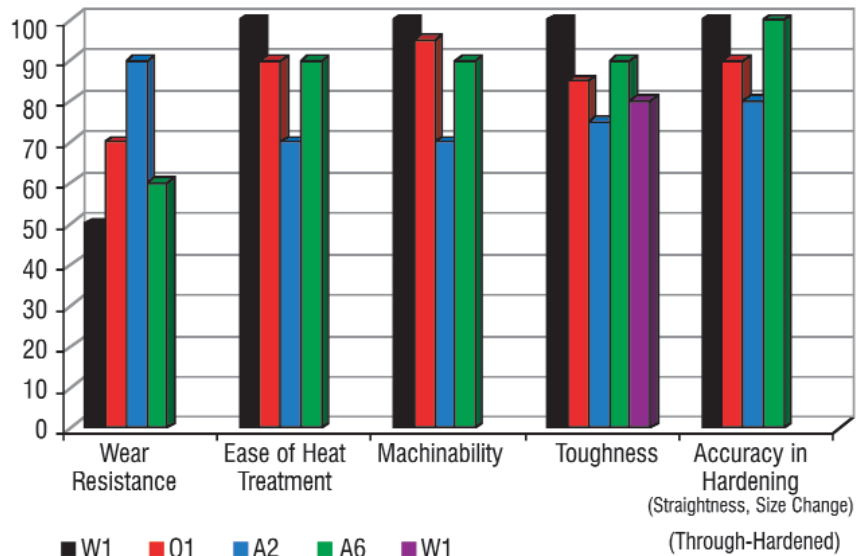


*Cut costs and save time - make your own parts like these from Drill Rod.*

### Flat Stock Tolerances

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

### Comparative Feature Properties



### Drill Rod Tolerances

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



**No. 496 Oil Hardening  
Standard**

**No. 495 Oil Hardening  
Oversize**

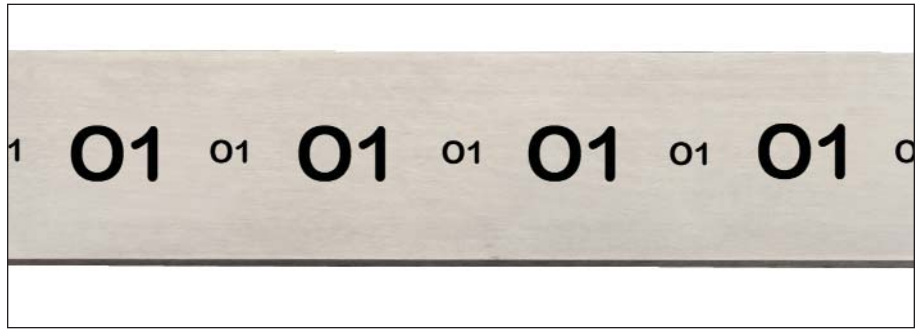
- ◆ Stock is dimensionally stable – use it for the most intricate work
- ◆ Deep hardening characteristics and fine grain structure
- ◆ Machines freely – fully spheroidized, annealed
- ◆ Full length identification – eliminates confusion with other steels
- ◆ The Starrett Company uses its own ground flat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

**Specifications**

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

**Nominal Analysis (AISI 01)**

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



**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.

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

**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 table may also be used as a guide depending on type of work.

**Cutting Tools**

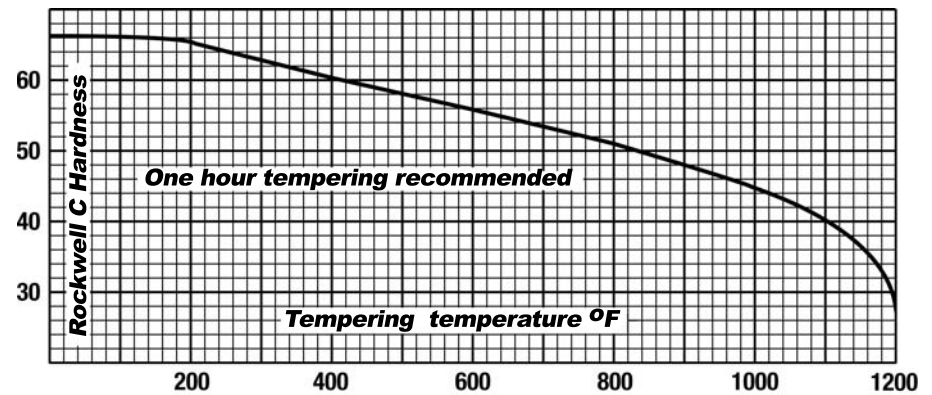
- ◆ 300°-350° F (Light Straw)

**Solid Punches and Dies**

- ◆ 400°-450° F (Straw)

**Spring Temper**

- ◆ 750°-800° F (Blue)



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



**No. 496 Oil Hardening (Standard Tolerance) 18" and 36" Lengths**

| Thickness    | Width        | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------|--------------|-----------------------|-----------------------|
| <b>1/64"</b> | 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                 |                       |
|              | 4"           | 53932                 | 59141                 |
|              | <b>1/32"</b> | 1/2"                  | 53933                 |
| 3/4"         |              | 53934                 | 59143                 |
| 1"           |              | 53935                 | 59144                 |
| 1-1/4"       |              | 53936                 |                       |
| 1-1/2"       |              | 53937                 | 59145                 |
| 2"           |              | 53938                 | 58901                 |
| 2-1/2"       |              | 53939                 |                       |
| 3"           |              | 53940                 | 59147                 |
| 4"           |              | 53941                 | 59148                 |
| 6"           |              | 53942                 |                       |
| <b>3/64"</b> | 1/2"         | 53943                 | 59149                 |
|              | 3/4"         | 53944                 | 59150                 |
|              | 1"           | 53945                 | 58902                 |
|              | 1-1/4"       | 53946                 | 59171                 |
|              | 1-1/2"       | 53947                 | 57685                 |
|              | 2"           | 53948                 | 59152                 |
|              | 2-1/2"       | 53949                 |                       |
|              | 3"           | 53950                 |                       |
|              | 3-1/2"       | 53951                 |                       |
|              | 4"           | 53952                 | 59153                 |
| 6"           | 53953        |                       |                       |
| <b>1/16"</b> | 1/4"         | 57226                 | 58891                 |
|              | 3/8"         | 57227                 |                       |
|              | 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                 |                       |
| <b>5/64"</b> | 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        |                       |                       |

| Thickness    | Width        | 18" Length<br>EDP No. | 36" Length<br>EDP No. |  |
|--------------|--------------|-----------------------|-----------------------|--|
| <b>3/32"</b> | 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                 |  |
|              | 6"           | 53988                 | 54289                 |  |
|              | 8"           | 53989                 | 57682                 |  |
|              | <b>7/64"</b> | 1/2"                  | 53990                 |  |
|              |              | 3/4"                  | 53991                 |  |
| 1"           |              | 53992                 |                       |  |
| 1-1/4"       |              | 53993                 |                       |  |
| 1-1/2"       |              | 53994                 |                       |  |
| 2"           |              | 53995                 |                       |  |
| 3"           |              | 53996                 |                       |  |
| 4"           |              | 53997                 |                       |  |
| <b>1/8"</b>  | 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                 |  |
|              | 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                 |                       |  |
| <b>9/64"</b> | 9/64"        | 54019                 |                       |  |
|              | 1/2"         | 54020                 |                       |  |
|              | 3/4"         | 54021                 |                       |  |
|              | 1"           | 54022                 |                       |  |
|              | 1-1/2"       | 54023                 |                       |  |
|              | 2"           | 54024                 |                       |  |
|              | 3"           | 54025                 |                       |  |
|              | 4"           | 54026                 |                       |  |
| <b>5/32"</b> | 5/32"        | 54027                 |                       |  |
|              | 1/2"         | 54028                 | 54324                 |  |
|              | 3/4"         | 54029                 | 54325                 |  |
|              | 1"           | 54030                 | 54326                 |  |
|              | 1-1/4"       | 54031                 | 54327                 |  |
|              | 1-1/2"       | 54032                 | 54328                 |  |

| Thickness                | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------------------|--------|-----------------------|-----------------------|
| <b>5/32"<br/>(Cont.)</b> | 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                 |
|                          | 8"     | 54041                 | 54337                 |
| <b>3/16"</b>             | 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                 |
| 3"                       | 54051  | 54346                 |                       |
| 3-1/2"                   | 54052  | 54347                 |                       |
| 4"                       | 54053  | 54348                 |                       |
| 5"                       | 54054  | 54349                 |                       |
| 6"                       | 54055  | 54350                 |                       |
| 8"                       | 54056  | 54351                 |                       |
| 10"                      | 54057  | 54352                 |                       |
| <b>7/32"</b>             | 7/32"  | 54058                 |                       |
|                          | 1/2"   | 54059                 | 54353                 |
|                          | 3/4"   | 54060                 | 54354                 |
|                          | 1"     | 54061                 | 54355                 |
|                          | 1-1/4" | 54062                 | 54356                 |
|                          | 1-1/2" | 54063                 | 54357                 |
|                          | 2"     | 54064                 | 54358                 |
|                          | 3"     | 54065                 | 54359                 |
| 4"                       | 54066  | 54360                 |                       |
| 6"                       | 54067  |                       |                       |
| <b>1/4"</b>              | 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                 |                       |

**NOTE:** Prices on application for other lengths, widths and thicknesses.

(Continued on next page.)



**No. 496 Oil Hardening (Standard Tolerance) 18" and 36" Lengths (continued)**

| Thickness    | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------|--------|-----------------------|-----------------------|
| <b>9/32"</b> | 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                 |
| <b>5/16"</b> | 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                 |                       |
| <b>3/8"</b>  | 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                 |                       |
| <b>7/16"</b> | 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                 |                       |

| Thickness    | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------|--------|-----------------------|-----------------------|
| <b>1/2"</b>  | 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                 |
|              | 6"     | 54160                 | 54450                 |
| 7"           | 54161  | 54451                 |                       |
| 8"           | 54162  | 54452                 |                       |
| 10"          | 54163  | 54453                 |                       |
| 12"          | 54164  | 59159                 |                       |
| 14"          | 54165  |                       |                       |
| <b>9/16"</b> | 9/16"  | 54166                 | 54455                 |
|              | 3/4"   | 54167                 | 54456                 |
|              | 1"     | 54168                 | 54457                 |
|              | 1-1/4" | 54169                 | 54458                 |
|              | 1-1/2" | 54170                 | 54459                 |
| 2"           | 54171  | 54460                 |                       |
| <b>5/8"</b>  | 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                 |                       |
| 8"           | 54185  | 54474                 |                       |
| 10"          | 54186  | 54475                 |                       |
| 12"          | 57235  | 57242                 |                       |
| <b>3/4"</b>  | 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                 |

| Thickness     | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|---------------|--------|-----------------------|-----------------------|
| <b>7/8"</b>   | 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                 |
|               | 3"     | 54208                 | 54497                 |
|               | 4"     | 54209                 | 54498                 |
|               | 6"     | 54210                 | 54499                 |
| <b>1"</b>     | 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                 |
|               | 4"     | 54218                 | 54507                 |
|               | 4-1/2" | 54219                 | 54508                 |
|               | 5"     | 54220                 | 54509                 |
|               | 6"     | 54221                 | 54510                 |
|               | 8"     | 54222                 | 54511                 |
| 10"           | 54223  | 54512                 |                       |
| 12"           | 54224  | 54513                 |                       |
| <b>1-1/8"</b> | 1-1/2" | 54225                 | 54514                 |
|               | 2"     | 54226                 | 54515                 |
|               | 3"     | 54227                 | 54516                 |
|               | 4"     | 54228                 | 54517                 |
|               | 6"     | 54229                 | 54518                 |
| <b>1-1/4"</b> | 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                 |
|               | 8"     | 54238                 | 54527                 |
|               | 10"    | 54239                 | 54528                 |
| <b>1-1/2"</b> | 1-1/2" | 54240                 | 54529                 |
|               | 2"     | 54241                 | 54530                 |
|               | 2-1/2" | 54242                 | 54531                 |
|               | 3"     | 54243                 | 54532                 |
|               | 3-1/2" | 54244                 | 54533                 |
|               | 4"     | 54245                 | 54534                 |
|               | 5"     | 54246                 | 54535                 |
|               | 6"     | 54247                 | 54536                 |
|               | 8"     | 54248                 | 54537                 |
|               | 10"    | 54249                 | 54538                 |
|               | 12"    | 59189                 |                       |
| <b>2"</b>     | 2"     | 54250                 | 54539                 |
|               | 3"     | 54251                 | 54540                 |
|               | 4"     | 54252                 | 54541                 |
|               | 6"     | 54253                 | 54542                 |

NOTE: Prices on application for other lengths, widths and thicknesses.

(Continued on next page.)



**No. 495 Oil Hardening (Oversize Tolerance) 18" and 36" Lengths**

| Thickness    | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------|--------|-----------------------|-----------------------|
| <b>3/16"</b> | 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                 |
| <b>1/4"</b>  | 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                 |
|              | 1-3/4" | 56977                 |                       |
|              | 2"     | 56978                 | 56828                 |
|              | 2-1/2" | 56979                 | 56829                 |
|              | 3"     | 56980                 | 56830                 |
| <b>5/16"</b> | 5/16"  | 56987                 | 56835                 |
|              | 1/2"   | 56988                 | 56836                 |
|              | 3/4"   | 56989                 | 56837                 |
|              | 1"     | 56990                 | 56838                 |
|              | 1-1/4" | 56991                 | 56839                 |
|              | 1-1/2" | 56992                 | 56840                 |
|              | 2"     | 56993                 | 56841                 |
|              | 2-1/2" | 56994                 | 56842                 |
|              | 3"     | 56995                 | 56843                 |
|              | 4"     | 56996                 | 56844                 |
| 5"           | 56997  | 56845                 |                       |
| 6"           |        |                       |                       |

| Thickness   | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|-------------|--------|-----------------------|-----------------------|
| <b>3/8"</b> | 3/8"   | 56998                 | 56846                 |
|             | 1/2"   | 56999                 | 56847                 |
|             | 3/4"   | 57000                 | 56848                 |
|             | 1"     | 57001                 | 56849                 |
|             | 1-1/4" | 57002                 | 56850                 |
|             | 1-1/2" | 57003                 | 56851                 |
|             | 2"     | 57004                 | 56852                 |
|             | 2-1/2" | 57005                 | 56853                 |
|             | 3"     | 57006                 | 56854                 |
|             | 3-1/2" | 57007                 | 56855                 |
| <b>1/2"</b> | 4"     | 57008                 | 56856                 |
|             | 4-1/2" | 57009                 | 56857                 |
|             | 5"     | 57010                 |                       |
|             | 6"     | 57011                 |                       |
|             | 8"     | 57012                 |                       |
|             | 12"    | 57013                 |                       |
|             | 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  | 56866                 |                       |
| 4"          | 57023  | 56867                 |                       |
| 4-1/2"      | 57024  | 56868                 |                       |
| 5"          | 57025  | 56869                 |                       |
| 6"          | 57026  | 56870                 |                       |
| 8"          | 57027  |                       |                       |
| 10"         | 57028  |                       |                       |
| 12"         | 57029  |                       |                       |

| Thickness   | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|-------------|--------|-----------------------|-----------------------|
| <b>5/8"</b> | 5/8"   | 57030                 | 56871                 |
|             | 3/4"   | 57031                 | 56872                 |
|             | 1"     | 57032                 | 56873                 |
|             | 1-1/4" | 57033                 | 56874                 |
|             | 1-1/2" | 57034                 | 56875                 |
|             | 2"     | 57035                 | 56876                 |
|             | 2-1/2" | 57036                 | 56877                 |
|             | 3"     | 57037                 | 56878                 |
|             | 3-1/2" | 57038                 | 56879                 |
|             | 4"     | 57039                 | 56880                 |
| <b>3/4"</b> | 5"     | 57040                 |                       |
|             | 6"     | 57041                 |                       |
|             | 3/4"   | 57042                 | 56881                 |
|             | 1"     | 57043                 | 56882                 |
|             | 1-1/4" | 57044                 | 56883                 |
|             | 1-1/2" | 57045                 | 56884                 |
|             | 2"     | 57046                 | 56885                 |
|             | 2-1/2" | 57047                 | 56886                 |
|             | 3"     | 57048                 |                       |
|             | 3-1/2" | 57049                 | 56887                 |
| <b>1"</b>   | 4"     | 57050                 | 56888                 |
|             | 5"     | 57051                 | 56889                 |
|             | 6"     | 57052                 | 56890                 |
|             | 8"     | 57053                 | 56891                 |
|             | 1"     | 57054                 | 56892                 |
|             | 1-1/4" | 57055                 | 56893                 |
|             | 1-1/2" | 57056                 | 56894                 |
|             | 2"     | 57057                 |                       |
|             | 2-1/2" | 57058                 |                       |
|             | 3"     | 57059                 |                       |
| 3-1/2"      | 57060  |                       |                       |
| 4"          | 57061  |                       |                       |
| 5"          | 57062  |                       |                       |
| 6"          | 57063  |                       |                       |

NOTE: Prices on application for other lengths, widths and thicknesses.



**No. 497 Air Hardening  
Standard**

**No. 499 Air Hardening  
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
- ◆ The Starrett Company uses its own ground flat stock for many of its precision tool parts

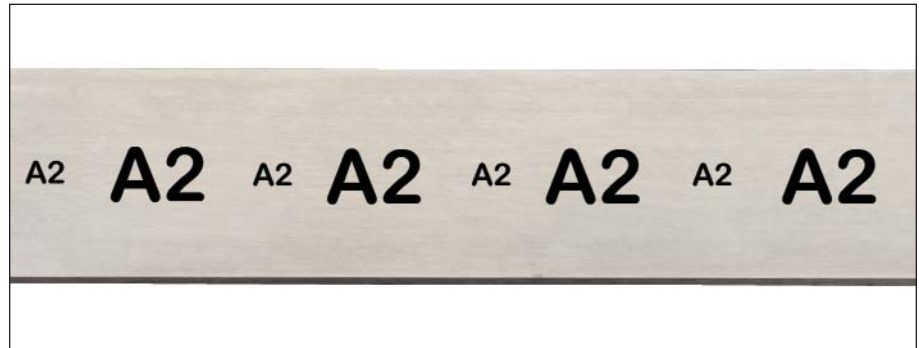
**Specifications**

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

**Nominal Analysis (AISI A2)**

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

**NOTE:** No. 499, 1-1/4" and over is Blanchard ground with saw cut edges.



**Hardening**

Nos. 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.

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

**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 table may also be used as a guide, depending on the type of work.

**Light Blanking Punches and Dies**

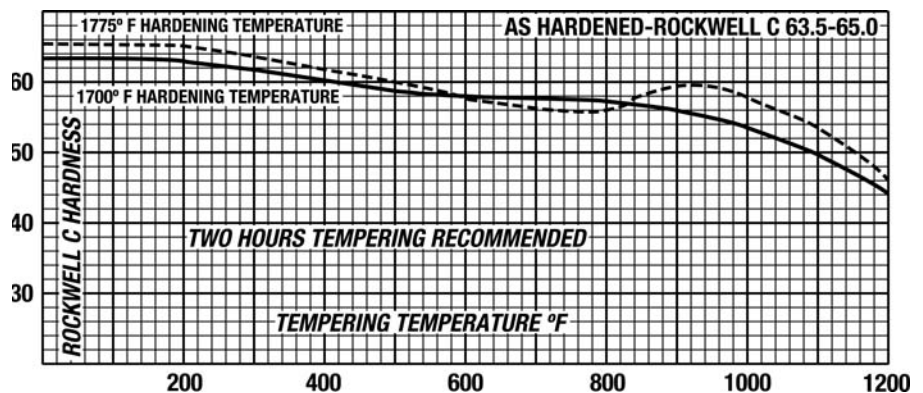
- ◆ 400°-425° F

**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.







**No. 497 Air Hardening (Standard Tolerance) 18" and 36" Lengths**

| Thickness | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. | Thickness | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. | Thickness | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|-----------|--------|-----------------------|-----------------------|-----------|--------|-----------------------|-----------------------|-----------|--------|-----------------------|-----------------------|
| 1/16"     | 1/2"   | 57489                 | 57301                 | 3/16"     | 3/16"  | 57517                 | 57329                 | 3/8"      | 3/8"   | 57531                 | 57343                 |
|           | 3/4"   | 57490                 | 57302                 |           | 1/2"   | 57518                 | 57330                 |           | 1/2"   | 57532                 | 57344                 |
|           | 1"     | 57491                 | 57303                 |           | 3/4"   | 57519                 | 57331                 |           | 3/4"   | 57533                 | 57345                 |
|           | 1-1/4" | 57492                 | 57304                 |           | 1"     | 54610                 | 54567                 |           | 1"     | 54728                 | 54643                 |
|           | 1-1/2" | 57493                 | 57305                 |           | 1-1/4" | 54611                 | 54568                 |           | 1-1/4" | 54729                 | 54644                 |
|           | 2"     | 57494                 | 57306                 |           | 1-1/2" | 54612                 | 54569                 |           | 1-1/2" | 54730                 | 54645                 |
|           | 2-1/2" | 57495                 | 57307                 |           | 1-3/4" | 57520                 | 57332                 |           | 1-3/4" | 57534                 | 57346                 |
|           | 3"     | 57496                 | 57308                 |           | 2"     | 54613                 | 54570                 |           | 2"     | 54731                 | 54646                 |
|           | 4"     | 57497                 | 57309                 |           | 2-1/2" | 54614                 | 54571                 |           | 2-1/2" | 54732                 | 54647                 |
| 3/32"     | 1/2"   | 57498                 | 57310                 |           | 3"     | 54615                 | 54572                 |           | 3"     | 54733                 | 54648                 |
|           | 3/4"   | 57499                 | 57311                 |           | 3-1/2" | 54616                 | 54573                 |           | 3-1/2" | 54734                 | 54649                 |
|           | 1"     | 57500                 | 57312                 |           | 4"     | 54617                 | 54574                 |           | 4"     | 54735                 | 54650                 |
|           | 1-1/4" | 57501                 | 57313                 | 5"        | 54618  | 54575                 | 5"                    | 54737     | 54652  |                       |                       |
|           | 1-1/2" | 57502                 | 57314                 | 6"        | 54619  | 54576                 | 6"                    | 54739     | 54654  |                       |                       |
|           | 2"     | 57503                 | 57315                 | 7"        | 57521  | 57333                 | 8"                    | 59133     | 59165  |                       |                       |
|           | 2-1/2" | 57504                 | 57316                 | 8"        | 57522  | 57334                 | 12"                   | 59134     | 59166  |                       |                       |
|           | 3"     | 57505                 | 57317                 | 12"       | 59129  | 59161                 | 1/2"                  | 1/2"      | 56495  | 56505                 |                       |
| 4"        | 57506  | 57318                 | 1/4"                  | 1/4"      | 57523  | 57335                 |                       | 5/8"      | 57535  | 57347                 |                       |
| 1/8"      | 1/2"   | 57243                 |                       | 57245     | 1/2"   | 57524                 |                       | 57336     | 3/4"   | 56494                 | 56506                 |
|           | 5/8"   | 57507                 |                       | 57319     | 3/4"   | 57525                 |                       | 57337     | 1"     | 56493                 | 56507                 |
|           | 3/4"   | 57244                 |                       | 57246     | 1"     | 54620                 |                       | 54577     | 1-1/4" | 57536                 | 57348                 |
|           | 1"     | 54589                 |                       | 54546     | 1-1/4" | 54621                 |                       | 54578     | 1-1/2" | 57537                 | 57349                 |
|           | 1-1/4" | 54590                 |                       | 54547     | 1-1/2" | 54622                 |                       | 54579     | 1-3/4" | 57538                 | 57350                 |
|           | 1-1/2" | 54591                 |                       | 54548     | 1-3/4" | 57526                 |                       | 57338     | 2"     | 54748                 | 54663                 |
|           | 1-3/4" | 57508                 |                       | 57320     | 2"     | 54623                 |                       | 54580     | 2-1/2" | 54749                 | 54664                 |
|           | 2"     | 54592                 |                       | 54549     | 2-1/2" | 54624                 |                       | 54581     | 3"     | 54750                 | 54665                 |
|           | 2-1/2" | 54593                 |                       | 54550     | 3"     | 54625                 |                       | 54582     | 3-1/2" | 54751                 | 54666                 |
|           | 3"     | 54594                 |                       | 54551     | 3-1/2" | 54626                 |                       | 54583     | 4"     | 54752                 | 54667                 |
|           | 3-1/2" | 54595                 |                       | 54552     | 4"     | 54627                 | 54584                 | 5"        | 54754  | 54669                 |                       |
|           | 4"     | 54596                 | 54553                 | 5"        | 54629  | 54586                 | 6"                    | 54755     | 54670  |                       |                       |
| 5"        | 54598  | 54555                 | 6"                    | 54631     | 54588  | 8"                    | 54757                 | 54672     |        |                       |                       |
| 6"        | 54599  | 54556                 | 8"                    | 59130     | 59162  | 12"                   | 59135                 | 59167     |        |                       |                       |
| 7"        | 57509  | 57321                 | 12"                   | 59131     | 59163  | 5/8"                  | 5/8"                  | 56499     | 56508  |                       |                       |
| 8"        | 57510  | 57322                 | 5/16"                 | 5/16"     | 57527  |                       | 57339                 | 3/4"      | 56498  | 56509                 |                       |
| 10"       | 57511  | 57323                 |                       | 1/2"      | 57528  |                       | 57340                 | 1"        | 56497  | 56510                 |                       |
| 12"       | 57512  | 57324                 |                       | 3/4"      | 57529  |                       | 57341                 | 1-1/2"    | 56496  | 56511                 |                       |
| 5/32"     | 1/2"   | 57513                 |                       | 57325     | 1"     |                       | 54717                 | 54632     | 2"     | 54760                 | 54675                 |
|           | 3/4"   | 57514                 |                       | 57326     | 1-1/4" |                       | 54718                 | 54633     | 2-1/2" | 54761                 | 54676                 |
|           | 1"     | 54600                 |                       | 54557     | 1-1/2" |                       | 54719                 | 54634     | 3"     | 54762                 | 54677                 |
|           | 1-1/4" | 54601                 |                       | 54558     | 1-3/4" |                       | 57530                 | 57342     | 3-1/2" | 54763                 | 54678                 |
|           | 1-1/2" | 54602                 |                       | 54559     | 2"     |                       | 54720                 | 54635     | 4"     | 54764                 | 54679                 |
|           | 1-3/4" | 57515                 |                       | 57327     | 2-1/2" |                       | 54721                 | 54636     | 5"     | 54765                 | 54680                 |
|           | 2"     | 54603                 |                       | 54560     | 3"     |                       | 54722                 | 54637     | 6"     | 54766                 | 54681                 |
|           | 2-1/2" | 54604                 |                       | 54561     | 3-1/2" |                       | 54723                 | 54638     | 8"     | 59136                 | 59168                 |
|           | 3"     | 54605                 |                       | 54562     | 4"     | 54724                 | 54639                 | 3/4"      | 3/4"   | 54770                 | 54685                 |
|           | 3-1/2" | 54606                 | 54563                 | 5"        | 54726  | 54641                 | 1"                    |           | 56501  | 56512                 |                       |
|           | 4"     | 54607                 | 54564                 | 6"        | 54727  | 54642                 | 1-1/4"                |           | 57539  | 57351                 |                       |
|           | 5"     | 54608                 | 54565                 | 8"        | 59132  | 59164                 | 1-1/2"                |           | 56500  | 56513                 |                       |
| 6"        | 54609  | 54566                 |                       |           |        | 2"                    | 54771                 |           | 54686  |                       |                       |
| 8"        | 57516  | 57328                 |                       |           |        | 2-1/2"                | 54772                 |           | 54687  |                       |                       |
|           |        |                       |                       |           |        | 3"                    | 54773                 | 54688     |        |                       |                       |
|           |        |                       |                       |           |        | 4"                    | 54775                 | 54690     |        |                       |                       |
|           |        |                       |                       |           |        | 5"                    | 54777                 | 54692     |        |                       |                       |
|           |        |                       |                       |           |        | 6"                    | 54778                 | 54693     |        |                       |                       |

(Continued on next page.)



**No. 497 Air Hardening (Standard Tolerance) 18" and 36" Lengths (continued)**

| Thickness                          | Width  | 18" Length EDP No. | 36" Length EDP No. |
|------------------------------------|--------|--------------------|--------------------|
| <b>7/8"</b>                        | 7/8"   | 54781              | 54696              |
|                                    | 1"     | 56503              | 56514              |
|                                    | 1-1/2" | 56502              | 56515              |
|                                    | 2"     | 54782              | 54697              |
|                                    | 2-1/2" |                    | 54698              |
|                                    | 3"     | 54784              | 54699              |
|                                    | 4"     | 54785              | 54700              |
| <b>1"</b><br><i>(1" to 2-1/2")</i> | 6"     | 54786              | 54701              |
|                                    | 1"     | 54787              | 54702              |
|                                    | 1-1/4" | 57540              | 57352              |
|                                    | 1-1/2" | 56504              | 56516              |
|                                    | 2"     | 54788              | 54703              |
| 2-1/2"                             | 54789  | 54704              |                    |

| Thickness                      | Width  | 18" Length EDP No. | 36" Length EDP No. |
|--------------------------------|--------|--------------------|--------------------|
| <b>1"</b><br><i>(3" to 6")</i> | 3"     | 54790              | 54705              |
|                                | 4"     | 54792              | 54707              |
|                                | 5"     | 54794              | 54709              |
|                                | 6"     | 54795              | 54710              |
| <b>1-1/4"</b>                  | 1-1/4" | 54834              | 57684              |
|                                | 1-1/2" | 57683              | 57686              |
|                                | 2"     | 54835              | 57687              |
|                                | 2-1/2" | 54836              | 57688              |
|                                | 3"     | 54837              | 57689              |
|                                | 4"     | 54838              | 57690              |
|                                | 5"     | 54839              | 57691              |
|                                | 6"     | 54840              | 57692              |

| Thickness     | Width  | 18" Length EDP No. | 36" Length EDP No. |
|---------------|--------|--------------------|--------------------|
| <b>1-1/2"</b> | 1-1/2" | 54843              | 57693              |
|               | 2"     | 54844              | 57694              |
|               | 2-1/2" | 54845              | 57695              |
|               | 3"     | 54846              | 57696              |
|               | 3-1/2" | 54847              | 57697              |
|               | 4"     | 54848              | 57698              |
| <b>2"</b>     | 6"     | 54850              | 57699              |
|               | 2"     | 54853              | 57700              |
|               | 2-1/2" | 54854              | 57701              |
|               | 3"     | 54855              | 57702              |
| 4"            | 54857  | 57703              |                    |

**No. 499 Air Hardening (Oversize Tolerance) 18" and 36" Lengths**

| Thickness    | Width  | 18" Length EDP No. | 36" Length EDP No. |
|--------------|--------|--------------------|--------------------|
| <b>1/8"</b>  | 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              |
| <b>5/32"</b> | 7"     | 57555              | 57367              |
|              | 8"     | 57556              | 57368              |
|              | 10"    | 57557              | 57369              |
|              | 12"    | 57558              | 57370              |
|              | 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              |                    |

| Thickness    | Width  | 18" Length EDP No. | 36" Length EDP No. |
|--------------|--------|--------------------|--------------------|
| <b>3/16"</b> | 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              |
| <b>1/4"</b>  | 5"     | 57576              | 57388              |
|              | 6"     | 57577              | 57389              |
|              | 8"     | 57578              | 57390              |
|              | 10"    | 57579              | 57391              |
|              | 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              |                    |

| Thickness    | Width  | 18" Length EDP No. | 36" Length EDP No. |
|--------------|--------|--------------------|--------------------|
| <b>5/16"</b> | 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              |
| <b>3/8"</b>  | 3-1/2" | 57594              | 57406              |
|              | 4"     | 57183              | 56917              |
|              | 5"     | 57184              | 56918              |
|              | 6"     | 57595              | 57407              |
|              | 8"     | 57596              | 57408              |
|              | 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              |                    |

**NOTE:** No. 499, 1-1/4" and over is Blanchard ground with saw cut edges.

(Continued on next page.)



**No. 499 Air Hardening (Oversize Tolerance) 18" and 36" Lengths (continued)**

| Thickness    | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------|--------|-----------------------|-----------------------|
| <b>1/2"</b>  | 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                 |                       |
| <b>9/16"</b> | 2"     | 57615                 | 57427                 |
|              | 2-1/2" | 57616                 | 57428                 |
|              | 3"     | 57617                 | 57429                 |
|              | 4"     | 57618                 | 57430                 |
| <b>5/8"</b>  | 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                 |                       |

| Thickness   | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|-------------|--------|-----------------------|-----------------------|
| <b>3/4"</b> | 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                 |                       |
| <b>7/8"</b> | 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                 |
|             | 3"     | 57641                 | 57453                 |
| 3-1/2"      | 57642  | 57454                 |                       |
| 4"          | 57643  | 57455                 |                       |
| 5"          | 57644  | 57456                 |                       |
| 6"          | 57645  | 57457                 |                       |
| <b>1"</b>   | 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                 |                       |

| Thickness     | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|---------------|--------|-----------------------|-----------------------|
| <b>1-1/4"</b> | 1-1/4" | 57656                 | 57468                 |
|               | 1-1/2" | 57657                 | 57469                 |
|               | 2"     | 57658                 | 57470                 |
|               | 2-1/2" | 57659                 | 57471                 |
|               | 3"     | 57660                 | 57472                 |
|               | 4"     | 57661                 | 57473                 |
| <b>1-1/2"</b> | 5"     | 57662                 | 57474                 |
|               | 6"     | 57663                 | 57475                 |
|               | 1-1/2" | 57664                 | 57476                 |
|               | 2"     | 57665                 | 57477                 |
|               | 2-1/2" | 57666                 | 57478                 |
|               | 3"     | 57667                 | 57479                 |
|               | 3-1/2" | 57668                 | 57480                 |
|               | 4"     | 57669                 | 57481                 |
| 6"            | 57670  | 57482                 |                       |
| 8"            | 59137  | 59169                 |                       |
| 12"           | 59138  | 59170                 |                       |
| <b>2"</b>     | 2"     | 57671                 | 57483                 |
|               | 2-1/2" | 57672                 | 57484                 |
|               | 3"     | 57673                 | 57485                 |
|               | 4"     | 57674                 | 57486                 |
| <b>2-1/2"</b> | 2-1/2" | 57675                 | 57487                 |
| <b>3"</b>     | 3"     | 57676                 | 57488                 |

**NOTE:** No. 499, 1-1/4" and over is Blanchard ground with saw cut edges.

**NOTE:** Prices on application for other lengths, widths and thicknesses.



**No. 344  
A6 Air Hardening**

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   | —    |



Heat Treatment and Tempering Data available upon request.

**No. 344, A6 Air Hardening 36" Lengths**

| Thickness    | Width        | 36" Length EDP No. |
|--------------|--------------|--------------------|
| <b>1/16"</b> | 1/4"         | <b>58907</b>       |
|              | 5/16"        | <b>58908</b>       |
|              | 3/8"         | <b>58909</b>       |
|              | 1/2"         | <b>58910</b>       |
|              | 5/8"         | <b>58911</b>       |
|              | 3/4"         | <b>58912</b>       |
|              | 7/8"         | <b>58913</b>       |
|              | 1"           | <b>58914</b>       |
|              | 1-1/4"       | <b>58915</b>       |
|              | 1-1/2"       | <b>58916</b>       |
|              | 1-3/4"       | <b>58917</b>       |
|              | 2"           | <b>58918</b>       |
|              | 2-1/2"       | <b>58919</b>       |
|              | 3"           | <b>58920</b>       |
|              | 3-1/2"       | <b>58921</b>       |
|              | 4"           | <b>58922</b>       |
| 5"           | <b>58923</b> |                    |
| 6"           | <b>58924</b> |                    |

| Thickness    | Width        | 36" Length EDP No. |
|--------------|--------------|--------------------|
| <b>3/32"</b> | 1/4"         | <b>58925</b>       |
|              | 5/16"        | <b>58926</b>       |
|              | 3/8"         | <b>58927</b>       |
|              | 1/2"         | <b>58928</b>       |
|              | 5/8"         | <b>58929</b>       |
|              | 3/4"         | <b>58930</b>       |
|              | 7/8"         | <b>58931</b>       |
|              | 1"           | <b>58932</b>       |
|              | 1-1/4"       | <b>58933</b>       |
|              | 1-1/2"       | <b>58934</b>       |
|              | 1-3/4"       | <b>58935</b>       |
|              | 2"           | <b>58936</b>       |
|              | 2-1/2"       | <b>58937</b>       |
|              | 3"           | <b>58938</b>       |
|              | 3-1/2"       | <b>58939</b>       |
|              | 4"           | <b>58940</b>       |
| 5"           | <b>58941</b> |                    |
| 6"           | <b>58942</b> |                    |

| Thickness   | Width        | 36" Length EDP No. |
|-------------|--------------|--------------------|
| <b>1/8"</b> | 1/4"         | <b>58943</b>       |
|             | 5/16"        | <b>58944</b>       |
|             | 3/8"         | <b>58945</b>       |
|             | 1/2"         | <b>58946</b>       |
|             | 5/8"         | <b>58947</b>       |
|             | 3/4"         | <b>58948</b>       |
|             | 7/8"         | <b>58949</b>       |
|             | 1"           | <b>58950</b>       |
|             | 1-1/4"       | <b>58951</b>       |
|             | 1-1/2"       | <b>58952</b>       |
|             | 1-3/4"       | <b>58953</b>       |
|             | 2"           | <b>58954</b>       |
|             | 2-1/2"       | <b>58955</b>       |
|             | 3"           | <b>58956</b>       |
|             | 3-1/2"       | <b>58957</b>       |
|             | 4"           | <b>58958</b>       |
| 5"          | <b>58959</b> |                    |
| 6"          | <b>58960</b> |                    |
| 7"          | <b>58961</b> |                    |
| 8"          | <b>58962</b> |                    |
| 10"         | <b>58963</b> |                    |
| 12"         | <b>58964</b> |                    |

**NOTE:** No. 499, 1-1/4" and over is Blanchard ground with saw cut edges.

**NOTE:** Prices on application for other lengths, widths and thicknesses.

(Continued on next page.)



**No. 344, A6 Air Hardening 36" Lengths (continued)**

| Thickness    | Width  | 36" Length EDP No. | Thickness               | Width  | 36" Length EDP No. | Thickness   | Width  | 36" Length EDP No. |
|--------------|--------|--------------------|-------------------------|--------|--------------------|-------------|--------|--------------------|
| <b>3/16"</b> | 3/16"  | 58965              | <b>5/16"</b><br>(cont.) | 2"     | 59020              | <b>5/8"</b> | 5/8"   | 59074              |
|              | 1/4"   | 58966              |                         | 2-1/2" | 59021              |             | 3/4"   | 59075              |
|              | 5/16"  | 58967              |                         | 3"     | 59022              |             | 7/8"   | 59076              |
|              | 3/8"   | 58968              |                         | 3-1/2" | 59023              |             | 1"     | 59077              |
|              | 1/2"   | 58969              |                         | 4"     | 59024              |             | 1-1/4" | 59078              |
|              | 5/8"   | 58970              |                         | 4-1/2" | 59025              |             | 1-1/2" | 59079              |
|              | 3/4"   | 58971              |                         | 5"     | 59026              |             | 1-3/4" | 59080              |
|              | 7/8"   | 58972              |                         | 5-1/2" | 59027              |             | 2"     | 59081              |
|              | 1"     | 58973              |                         | 6"     | 59028              |             | 2-1/2" | 59082              |
|              | 1-1/4" | 58974              |                         | 8"     | 59029              |             | 3"     | 59083              |
|              | 1-1/2" | 58975              |                         | 10"    | 59030              | 3-1/2"      | 59084  |                    |
|              | 1-3/4" | 58976              |                         | 12"    | 59031              | 4"          | 59085  |                    |
|              | 2"     | 58977              | <b>3/8"</b>             | 3/8"   | 59032              | 4-1/2"      | 59086  |                    |
|              | 2-1/2" | 58978              |                         | 1/2"   | 59033              | 5"          | 59087  |                    |
|              | 3"     | 58979              |                         | 5/8"   | 59034              | 5-1/2"      | 59088  |                    |
|              | 3-1/2" | 58980              |                         | 3/4"   | 59035              | 6"          | 59089  |                    |
|              | 4"     | 58981              |                         | 7/8"   | 59036              | 7"          | 59090  |                    |
|              | 5"     | 58982              |                         | 1"     | 59037              | 8"          | 59091  |                    |
|              | 6"     | 58983              |                         | 1-1/4" | 59038              | 10"         | 59092  |                    |
|              | 7"     | 58984              |                         | 1-1/2" | 59039              | <b>3/4"</b> | 3/4"   | 59093              |
| 8"           | 58985  | 1-3/4"             |                         | 59040  | 7/8"               |             | 59094  |                    |
| 10"          | 58986  | 2"                 |                         | 59041  | 1"                 |             | 59095  |                    |
| 12"          | 58987  | 2-1/2"             | 59042                   | 1-1/4" | 59096              |             |        |                    |
| <b>1/4"</b>  | 1/4"   | 58988              | 3"                      | 59043  | 1-1/2"             |             | 59097  |                    |
|              | 5/16"  | 58989              | 3-1/2"                  | 59044  | 1-3/4"             |             | 59098  |                    |
|              | 3/8"   | 58990              | 4"                      | 59045  | 2"                 |             | 59099  |                    |
|              | 1/2"   | 58991              | 4-1/2"                  | 59046  | 2-1/2"             |             | 59100  |                    |
|              | 5/8"   | 58992              | 5"                      | 59047  | 3"                 |             | 59101  |                    |
|              | 3/4"   | 58993              | 6"                      | 59048  | 3-1/2"             |             | 59102  |                    |
|              | 7/8"   | 58994              | 7"                      | 59049  | 4"                 | 59103       |        |                    |
|              | 1"     | 58995              | 8"                      | 59050  | 4-1/2"             | 59104       |        |                    |
|              | 1-1/4" | 58996              | 10"                     | 59051  | 5"                 | 59105       |        |                    |
|              | 1-1/2" | 58997              | 12"                     | 59052  | 5-1/2"             | 59106       |        |                    |
|              | 1-3/4" | 58998              | <b>1/2"</b>             | 1/2"   | 59053              | 6"          | 59107  |                    |
|              | 2"     | 58999              |                         | 5/8"   | 59054              | 7"          | 59108  |                    |
|              | 2-1/2" | 59000              |                         | 3/4"   | 59055              | 8"          | 59109  |                    |
|              | 3"     | 59001              |                         | 7/8"   | 59056              | 10"         | 59110  |                    |
|              | 3-1/2" | 59002              |                         | 1"     | 59057              | <b>1"</b>   | 1"     | 59111              |
|              | 4"     | 59003              |                         | 1-1/4" | 59058              |             | 1-1/4" | 59112              |
|              | 5"     | 59004              |                         | 1-1/2" | 59059              |             | 1-1/2" | 59113              |
|              | 6"     | 59005              |                         | 1-3/4" | 59060              |             | 1-3/4" | 59114              |
| 7"           | 59006  | 2"                 |                         | 59061  | 2"                 |             | 59115  |                    |
| 8"           | 59007  | 2-1/2"             |                         | 59062  | 2-1/2"             |             | 59116  |                    |
| 10"          | 59008  | 3"                 | 59063                   | 3"     | 59117              |             |        |                    |
| 12"          | 59009  | 3-1/2"             | 59064                   | 3-1/2" | 59118              |             |        |                    |
| <b>5/16"</b> | 5/16"  | 59010              | 4"                      | 59065  | 4"                 |             | 59119  |                    |
|              | 3/8"   | 59011              | 4-1/2"                  | 59066  | 4-1/2"             |             | 59120  |                    |
|              | 1/2"   | 59012              | 5"                      | 59067  | 5"                 | 59121       |        |                    |
|              | 5/8"   | 59013              | 5-1/2"                  | 59068  | 5-1/2"             | 59122       |        |                    |
|              | 3/4"   | 59014              | 6"                      | 59069  | 6"                 | 59123       |        |                    |
|              | 7/8"   | 59015              | 7"                      | 59070  | 7"                 | 59124       |        |                    |
|              | 1"     | 59016              | 8"                      | 59071  | 8"                 | 59125       |        |                    |
|              | 1-1/4" | 59017              | 10"                     | 59072  | 10"                | 59126       |        |                    |
|              | 1-1/2" | 59018              | 12"                     | 59073  |                    |             |        |                    |
|              | 1-3/4" | 59019              |                         |        |                    |             |        |                    |

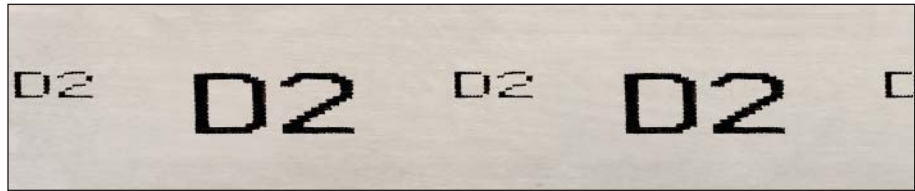
NOTE: Prices on application for other lengths, widths and thicknesses.



**NEW**

**No. 401 & 402**

- ◆ 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" (610mm) and 32" lengths, ground straight and parallel.

**No. 401 High Carbon, High Chromium  
(Standard Tolerance)  
18" & 36" Lengths**

| Thickness    | Width  | 18" Length EDP No. | 36" Length EDP No. |
|--------------|--------|--------------------|--------------------|
| <b>1/16"</b> | 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              |
|              | 5"     | 69106              | 69241              |
| 6"           | 69107  | 69242              |                    |
| <b>3/32"</b> | 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              |
|              | 5"     | 69117              | 69252              |
| 6"           | 69118  | 69253              |                    |
| <b>1/8"</b>  | 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"     | 69128              | 69263              |
| 6"           | 69129  | 69264              |                    |
| <b>5/32"</b> | 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              |
|              | 5"     | 69139              | 69274              |
| 6"           | 69140  | 69275              |                    |

| Thickness    | Width  | 18" Length EDP No. | 36" Length EDP No. |
|--------------|--------|--------------------|--------------------|
| <b>3/16"</b> | 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              |
|              | 5"     | 69150              | 69285              |
| 6"           | 69151  | 69286              |                    |
| <b>1/4"</b>  | 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"     | 69161              | 69296              |
| 6"           | 69162  | 69297              |                    |
| <b>5/16"</b> | 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              |
|              | 5"     | 69172              | 69307              |
| 6"           | 69173  | 69308              |                    |
| <b>3/8"</b>  | 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              |
|              | 5"     | 69183              | 69318              |
| 6"           | 69184  | 69319              |                    |

| Thickness   | Width  | 18" Length EDP No. | 36" Length EDP No. |
|-------------|--------|--------------------|--------------------|
| <b>1/2"</b> | 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              |
|             | 6"     | 69194              | 69329              |
| <b>5/8"</b> | 5/8"   | 69195              | 69330              |
|             | 3/4"   | 69196              | 69331              |
|             | 1"     | 69197              | 69332              |
|             | 1-1/4" | 69198              | 69333              |
|             | 1-1/2" | 69199              | 69334              |
|             | 2"     | 69200              | 69335              |
|             | 2-1/2" | 69201              | 69336              |
|             | 3"     | 69202              | 69337              |
|             | 4"     | 69203              | 69338              |
|             | 5"     | 69204              | 69339              |
| 6"          | 69205  | 69340              |                    |
| <b>3/4"</b> | 3/4"   | 69206              | 69341              |
|             | 1"     | 69207              | 69342              |
|             | 1-1/4" | 69208              | 69343              |
|             | 1-1/2" | 69209              | 69344              |
|             | 2"     | 69210              | 69345              |
|             | 2-1/2" | 69211              | 69346              |
|             | 3"     | 69212              | 69347              |
|             | 4"     | 69213              | 69348              |
|             | 5"     | 69214              | 69349              |
|             | 6"     | 69215              | 69350              |
| <b>7/8"</b> | 7/8"   | 69216              | 69351              |
|             | 1"     | 69217              | 69352              |
|             | 2"     | 69218              | 69353              |
|             | 3"     | 69219              | 69354              |
|             | 4"     | 69220              | 69355              |
|             | 5"     | 69221              | 69356              |
|             | 6"     | 69222              | 69357              |
| <b>1"</b>   | 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              |                    |



**No. 402 High Carbon, High Chromium (Oversize) 18" & 36" Lengths**

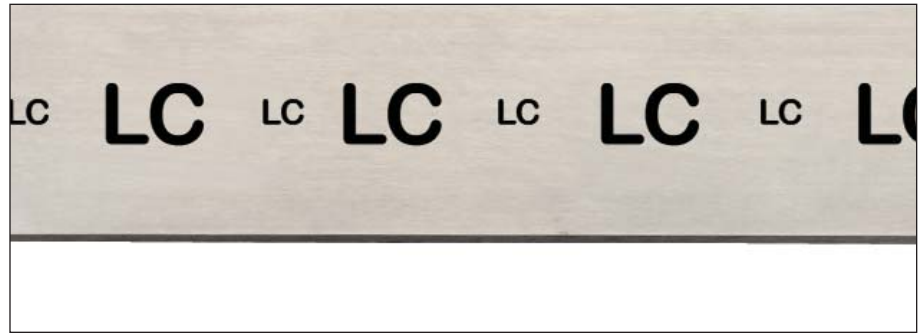
| Thickness    | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. | Thickness    | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. | Thickness   | Width  | 18" Length<br>EDP No. | 36" Length<br>EDP No. |
|--------------|--------|-----------------------|-----------------------|--------------|--------|-----------------------|-----------------------|-------------|--------|-----------------------|-----------------------|
| <b>1/8"</b>  | 1/2"   | 69367                 | 69481                 | <b>5/16"</b> | 1/2"   | 69411                 | 69525                 | <b>3/4"</b> | 3/4"   | 69455                 | 69569                 |
|              | 3/4"   | 69368                 | 69482                 |              | 3/4"   | 69412                 | 69526                 |             | 1"     | 69456                 | 69570                 |
|              | 1"     | 69369                 | 69483                 |              | 1"     | 69413                 | 69527                 |             | 1-1/4" | 69457                 | 69571                 |
|              | 1-1/4" | 69370                 | 69484                 |              | 1-1/4" | 69414                 | 69528                 |             | 1-1/2" | 69458                 | 69572                 |
|              | 1-1/2" | 69371                 | 69485                 |              | 1-1/2" | 69415                 | 69529                 |             | 2"     | 69459                 | 69573                 |
|              | 2"     | 69372                 | 69486                 |              | 2"     | 69416                 | 69530                 |             | 2-1/2" | 69460                 | 69574                 |
|              | 2-1/2" | 69373                 | 69487                 |              | 2-1/2" | 69417                 | 69531                 |             | 3"     | 69461                 | 69575                 |
|              | 3"     | 69374                 | 69488                 |              | 3"     | 69418                 | 69532                 |             | 4"     | 69462                 | 69576                 |
|              | 4"     | 69375                 | 69489                 |              | 4"     | 69419                 | 69533                 |             | 5"     | 69463                 | 69577                 |
|              | 5"     | 69376                 | 69490                 |              | 5"     | 69420                 | 69534                 |             | 6"     | 69464                 | 69578                 |
| 6"           | 69377  | 69491                 | 6"                    | 69421        | 69535  |                       |                       |             |        |                       |                       |
| <b>5/32"</b> | 1/2"   | 69378                 | 69492                 | <b>3/8"</b>  | 1/2"   | 69422                 | 69536                 | <b>7/8"</b> | 7/8"   | 69465                 | 69579                 |
|              | 3/4"   | 69379                 | 69493                 |              | 3/4"   | 69423                 | 69537                 |             | 1"     | 69466                 | 69580                 |
|              | 1"     | 69380                 | 69494                 |              | 1"     | 69424                 | 69538                 |             | 1-1/2" | 69467                 | 69581                 |
|              | 1-1/4" | 69381                 | 69495                 |              | 1-1/4" | 69425                 | 69539                 |             | 2"     | 69468                 | 69582                 |
|              | 1-1/2" | 69382                 | 69496                 |              | 1-1/2" | 69426                 | 69540                 |             | 3"     | 69469                 | 69583                 |
|              | 2"     | 69383                 | 69497                 |              | 2"     | 69427                 | 69541                 |             | 4"     | 69470                 | 69584                 |
|              | 2-1/2" | 69384                 | 69498                 |              | 2-1/2" | 69428                 | 69542                 | 6"          | 69471  | 69585                 |                       |
|              | 3"     | 69385                 | 69499                 |              | 3"     | 69429                 | 69543                 | <b>1"</b>   | 1"     | 69472                 | 69586                 |
|              | 4"     | 69386                 | 69500                 |              | 4"     | 69430                 | 69544                 |             | 1-1/4" | 69473                 | 69587                 |
|              | 5"     | 69387                 | 69501                 |              | 5"     | 69431                 | 69545                 |             | 1-1/2" | 69474                 | 69588                 |
| 6"           | 69388  | 69502                 | 6"                    | 69432        | 69546  | 2"                    | 69475                 |             | 69589  |                       |                       |
|              |        |                       |                       |              |        | 2-1/2"                | 69476                 |             | 69590  |                       |                       |
|              |        |                       |                       |              |        | 3"                    | 69477                 |             | 69591  |                       |                       |
| <b>3/16"</b> | 3/16"  | 69389                 | 69503                 | <b>1/2"</b>  | 1/2"   | 69433                 | 69547                 | 4"          | 69478  | 69592                 |                       |
|              | 1/2"   | 69390                 | 69504                 |              | 3/4"   | 69434                 | 69548                 | 5"          | 69479  | 69593                 |                       |
|              | 3/4"   | 69391                 | 69505                 |              | 1"     | 69435                 | 69549                 | 6"          | 69480  | 69594                 |                       |
|              | 1"     | 69392                 | 69506                 |              | 1-1/4" | 69436                 | 69550                 |             |        |                       |                       |
|              | 1-1/4" | 69393                 | 69507                 |              | 1-1/2" | 69437                 | 69551                 |             |        |                       |                       |
|              | 1-1/2" | 69394                 | 69508                 |              | 2"     | 69438                 | 69552                 |             |        |                       |                       |
|              | 2"     | 69395                 | 69509                 |              | 2-1/2" | 69439                 | 69553                 |             |        |                       |                       |
|              | 2-1/2" | 69396                 | 69510                 |              | 3"     | 69440                 | 69554                 |             |        |                       |                       |
|              | 3"     | 69397                 | 69511                 |              | 4"     | 69441                 | 69555                 |             |        |                       |                       |
|              | 4"     | 69398                 | 69512                 |              | 5"     | 69442                 | 69556                 |             |        |                       |                       |
| 5"           | 69399  | 69513                 | 6"                    | 69443        | 69557  |                       |                       |             |        |                       |                       |
| <b>1/4"</b>  | 1/2"   | 69400                 | 69514                 | <b>5/8"</b>  | 5/8"   | 69444                 | 69558                 |             |        |                       |                       |
|              | 3/4"   | 69401                 | 69515                 |              | 3/4"   | 69445                 | 69559                 |             |        |                       |                       |
|              | 1"     | 69402                 | 69516                 |              | 1"     | 69446                 | 69560                 |             |        |                       |                       |
|              | 1-1/4" | 69403                 | 69517                 |              | 1-1/4" | 69447                 | 69561                 |             |        |                       |                       |
|              | 1-1/2" | 69404                 | 69518                 |              | 1-1/2" | 69448                 | 69562                 |             |        |                       |                       |
|              | 2"     | 69405                 | 69519                 |              | 2"     | 69449                 | 69563                 |             |        |                       |                       |
|              | 2-1/2" | 66406                 | 69520                 |              | 2-1/2" | 69450                 | 69564                 |             |        |                       |                       |
|              | 3"     | 69407                 | 69521                 |              | 3"     | 69451                 | 69565                 |             |        |                       |                       |
|              | 4"     | 69408                 | 69522                 |              | 4"     | 69452                 | 69566                 |             |        |                       |                       |
|              | 5"     | 69409                 | 69523                 |              | 5"     | 69453                 | 69567                 |             |        |                       |                       |
| 6"           | 69410  | 69524                 | 6"                    | 69454        | 69568  |                       |                       |             |        |                       |                       |

**NEW**



## No. 498 Low Carbon

- ◆ **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
- ◆ The Starrett Company uses its own ground flat stock for many of its precision tool parts



### Analysis

Starrett No. 498 Low Carbon Precision Ground Flat Stock is a .20 carbon fine-grained, killed 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.

### Specifications

Furnished in 24" (610mm) lengths, ground straight and parallel.

## No. 498 Low Carbon 24" Lengths

| Thickness | Width  | 24" Length EDP No. |
|-----------|--------|--------------------|
| 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              |
|           | 8"     | 54878              |
| 10"       | 54879  |                    |
| 12"       | 54880  |                    |

| Thickness | Width  | 24" Length EDP No. |
|-----------|--------|--------------------|
| 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  |                    |

| Thickness | Width  | 24" Length EDP No. |
|-----------|--------|--------------------|
| 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              |
|           | 8"     | 54905              |
| 10"       | 54906  |                    |
| 12"       | 54907  |                    |

NOTE: Prices on application for other lengths, widths and thicknesses.

(Continued on next page.)





**No. 498 Low Carbon 24" Lengths (continued)**

| Thickness    | Width  | 24" Length EDP No. |
|--------------|--------|--------------------|
| <b>5/32"</b> | 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  |                    |
| <b>3/16"</b> | 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              |
| 6"           | 54932  |                    |
| 8"           | 54933  |                    |
| 10"          | 54934  |                    |
| 12"          | 57248  |                    |
| <b>1/4"</b>  | 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  |                    |
| <b>5/16"</b> | 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  |                    |
| 8"           | 54962  |                    |
| 10"          | 57251  |                    |
| 12"          | 57252  |                    |

| Thickness    | Width  | 24" Length EDP No. |
|--------------|--------|--------------------|
| <b>3/8"</b>  | 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"           | 54977  |                    |
| 8"           | 54978  |                    |
| 9"           | 54979  |                    |
| 10"          | 54980  |                    |
| 12"          | 54981  |                    |
| <b>7/16"</b> | 7/16"  | 54982              |
| <b>1/2"</b>  | 1/2"   | 54983              |
|              | 3/4"   | 54984              |
|              | 1"     | 54985              |
|              | 1-1/4" | 54986              |
|              | 1-1/2" | 54987              |
|              | 2"     | 54988              |
|              | 2-1/2" | 54989              |
|              | 3"     | 54990              |
|              | 3-1/2" | 54991              |
|              | 4"     | 54992              |
|              | 5"     | 54993              |
|              | 6"     | 54994              |
| 7"           | 54995  |                    |
| 8"           | 54996  |                    |
| 9"           | 54997  |                    |
| 10"          | 54998  |                    |
| 12"          | 54999  |                    |
| <b>9/16"</b> | 9/16"  | 55000              |
| <b>5/8"</b>  | 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              |
| 7"           | 55013  |                    |
| 8"           | 55014  |                    |
| 9"           | 55015  |                    |
| 10"          | 55016  |                    |
| 12"          | 57253  |                    |
| <b>3/4"</b>  | 3/4"   | 55017              |
|              | 1"     | 55018              |
|              | 1-1/4" | 55019              |
|              | 1-1/2" | 55020              |
|              | 2"     | 55021              |
| 2-1/2"       | 55022  |                    |

| Thickness           | Width       | 24" Length EDP No. |       |
|---------------------|-------------|--------------------|-------|
| <b>3/4" (Cont.)</b> | 3"          | 55023              |       |
|                     | 3-1/2"      | 55024              |       |
|                     | 4"          | 55025              |       |
|                     | 5"          | 55026              |       |
|                     | 6"          | 55027              |       |
|                     | 7"          | 57254              |       |
|                     | 8"          | 55028              |       |
|                     | 9"          | 55029              |       |
|                     | 10"         | 55030              |       |
|                     | 12"         | 55031              |       |
|                     | <b>7/8"</b> | 7/8"               | 55032 |
|                     |             | 1"                 | 55033 |
| 1-1/4"              |             | 55034              |       |
| 1-1/2"              |             | 55035              |       |
| 2"                  |             | 55036              |       |
| 2-1/2"              |             | 55037              |       |
| 3"                  | 55038       |                    |       |
| 3-1/2"              | 57255       |                    |       |
| 4"                  | 55039       |                    |       |
| 6"                  | 55040       |                    |       |
| <b>1"</b>           | 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       |                    |       |
| <b>1-1/8"</b>       | 1-1/8"      | 58288              |       |
| <b>1-1/4"</b>       | 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       |                    |       |
| <b>1-1/2"</b>       | 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       |                    |       |
| <b>2"</b>           | 2"          | 55076              |       |
| <b>2-1/2"</b>       | 2-1/2"      | 58289              |       |

**NOTE:** Prices on application for other lengths, widths and thicknesses.



## 01 Ground & Polished Drill Rod

### No. 480 3' Lengths

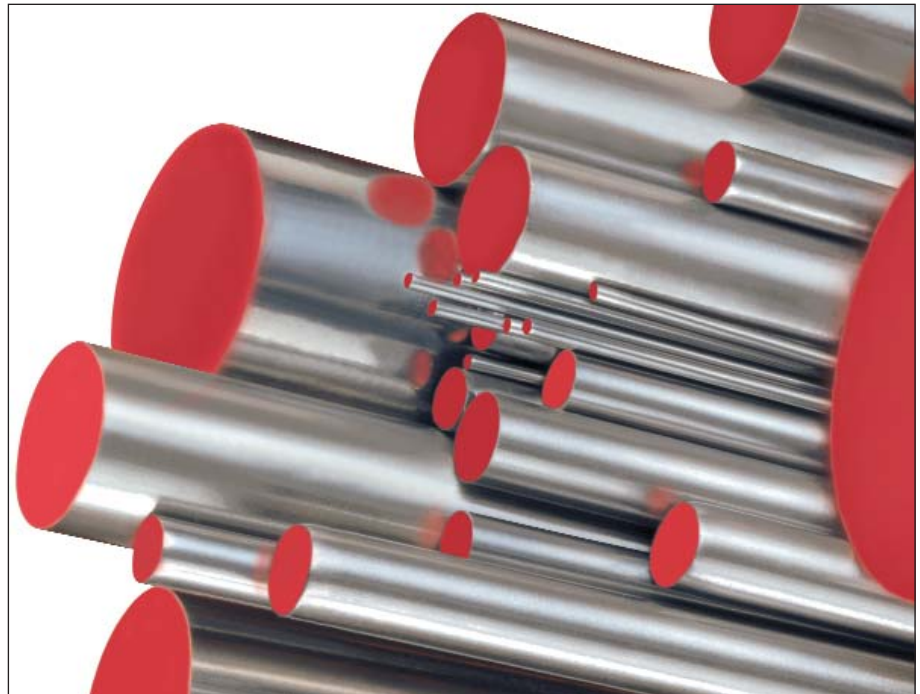
AISI/SAE 01 is a general purpose tool steel with good wear resistance, toughness and machinability.

#### Tolerances

| Size Range           | Diameter | Length     |
|----------------------|----------|------------|
| .124" round and less | ± .0003" | + 1/8" - 0 |
| .125" to 1.499"      | ± .0005" | + 1/8" - 0 |
| 1.50" to 2"          | ± .0075" | + 1/8" - 0 |

#### Nominal Analysis (AISI 01)

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



Heat Treatment and Tempering Data available upon request.

## 01 No. 480 Drill Rod 36" Lengths

#### Fractional Sizes

| Diameter | Decimal | 36" Length<br>EDP No. |
|----------|---------|-----------------------|
| 1/16"    | 0.0625  | <b>68303</b>          |
| 5/64"    | 0.0781  | <b>68304</b>          |
| 3/32"    | 0.0938  | <b>68305</b>          |
| 7/64"    | 0.1094  | <b>68306</b>          |
| 1/8"     | 0.1250  | <b>68307</b>          |
| 9/64"    | 0.1406  | <b>68308</b>          |
| 5/32"    | 0.1563  | <b>68309</b>          |
| 11/64"   | 0.1719  | <b>68310</b>          |
| 3/16"    | 0.1875  | <b>68311</b>          |
| 13/64"   | 0.2031  | <b>68312</b>          |
| 7/32"    | 0.2188  | <b>68313</b>          |
| 15/64"   | 0.2344  | <b>68314</b>          |
| 1/4"     | 0.2500  | <b>68315</b>          |
| 17/64"   | 0.2656  | <b>68316</b>          |
| 9/32"    | 0.2813  | <b>68317</b>          |
| 19/64"   | 0.2969  | <b>68318</b>          |
| 5/16"    | 0.3125  | <b>68319</b>          |
| 21/64"   | 0.3281  | <b>68320</b>          |
| 11/32"   | 0.3438  | <b>68321</b>          |
| 23/64"   | 0.3594  | <b>68322</b>          |
| 3/8"     | 0.3750  | <b>68323</b>          |
| 25/64"   | 0.3906  | <b>68324</b>          |
| 13/32"   | 0.4063  | <b>68325</b>          |
| 27/64"   | 0.4219  | <b>68326</b>          |
| 7/16"    | 0.4375  | <b>68327</b>          |
| 29/64"   | 0.4531  | <b>68328</b>          |

#### Fractional Sizes

| Diameter | Decimal | 36" Length<br>EDP No. |
|----------|---------|-----------------------|
| 15/32"   | 0.4688  | <b>68329</b>          |
| 31/64"   | 0.4844  | <b>68330</b>          |
| 1/2"     | 0.5000  | <b>68331</b>          |
| 33/64"   | 0.5156  | <b>68332</b>          |
| 17/32"   | 0.5313  | <b>68333</b>          |
| 35/64"   | 0.5469  | <b>68334</b>          |
| 9/16"    | 0.5625  | <b>68335</b>          |
| 37/64"   | 0.5781  | <b>68336</b>          |
| 19/32"   | 0.5938  | <b>68337</b>          |
| 39/64"   | 0.6094  | <b>68338</b>          |
| 5/8"     | 0.6250  | <b>68339</b>          |
| 41/64"   | 0.6406  | <b>68340</b>          |
| 21/32"   | 0.6563  | <b>68341</b>          |
| 43/64"   | 0.6719  | <b>68342</b>          |
| 11/16"   | 0.6875  | <b>68343</b>          |
| 45/64"   | 0.7031  | <b>68344</b>          |
| 23/32"   | 0.7188  | <b>68345</b>          |
| 47/64"   | 0.7344  | <b>68346</b>          |
| 3/4"     | 0.7500  | <b>68347</b>          |
| 49/64"   | 0.7656  | <b>68348</b>          |
| 25/32"   | 0.7813  | <b>68349</b>          |
| 51/64"   | 0.7969  | <b>68350</b>          |
| 13/16"   | 0.8125  | <b>68351</b>          |
| 53/64"   | 0.8281  | <b>68352</b>          |
| 27/32"   | 0.8438  | <b>68353</b>          |

#### Fractional Sizes

| Diameter | Decimal | 36" Length<br>EDP No. |
|----------|---------|-----------------------|
| 55/64"   | 0.8594  | <b>68354</b>          |
| 7/8"     | 0.8750  | <b>68355</b>          |
| 57/64"   | 0.8906  | <b>68356</b>          |
| 29/32"   | 0.9063  | <b>68357</b>          |
| 59/64"   | 0.9219  | <b>68358</b>          |
| 15/16"   | 0.9375  | <b>68359</b>          |
| 61/64"   | 0.9531  | <b>68360</b>          |
| 31/32"   | 0.9688  | <b>68361</b>          |
| 63/64"   | 0.9844  | <b>68362</b>          |
| 1"       | 1.0000  | <b>68363</b>          |
| 1-1/64"  | 1.0156  | <b>68364</b>          |
| 1-1/32"  | 1.0313  | <b>68365</b>          |
| 1-3/64"  | 1.0469  | <b>68366</b>          |
| 1-1/16"  | 1.0625  | <b>68367</b>          |
| 1-5/64"  | 1.0781  | <b>68368</b>          |
| 1-3/32"  | 1.0938  | <b>68369</b>          |
| 1-7/64"  | 1.1094  | <b>68370</b>          |
| 1-1/8"   | 1.1250  | <b>68371</b>          |
| 1-9/64"  | 1.1406  | <b>68372</b>          |
| 1-5/32"  | 1.1563  | <b>68373</b>          |
| 1-11/64" | 1.1719  | <b>68374</b>          |
| 1-3/16"  | 1.1875  | <b>68375</b>          |
| 1-13/64" | 1.2031  | <b>68376</b>          |
| 1-7/32"  | 1.2188  | <b>68377</b>          |
| 1-15/64" | 1.2344  | <b>68378</b>          |

**NOTE:** Prices on application for other lengths, widths and thicknesses.

(Continued on next page.)



**01 No. 480 Drill Rod 36" Lengths (continued)**

**Fractional Sizes (Cont.)**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 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              |

**Letter Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 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        | 0.2902  | 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              |

**Letter Sizes (Cont.)**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 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 EDP No. |
|----------|---------|--------------------|
| 52       | 0.063   | 68251              |
| 51       | 0.066   | 68252              |
| 50       | 0.069   | 68253              |
| 49       | 0.072   | 68254              |
| 48       | 0.075   | 68255              |
| 47       | 0.077   | 68256              |
| 46       | 0.079   | 68257              |
| 45       | 0.081   | 68258              |
| 44       | 0.085   | 68259              |
| 43       | 0.088   | 68260              |
| 42       | 0.092   | 68261              |
| 41       | 0.095   | 68262              |
| 40       | 0.097   | 68263              |
| 39       | 0.099   | 68264              |
| 38       | 0.101   | 68265              |
| 37       | 0.103   | 68266              |
| 36       | 0.106   | 68267              |
| 35       | 0.108   | 68268              |
| 34       | 0.110   | 68269              |
| 33       | 0.112   | 68270              |
| 32       | 0.115   | 68271              |
| 31       | 0.120   | 68272              |
| 30       | 0.127   | 68273              |
| 29       | 0.134   | 68274              |
| 28       | 0.139   | 68275              |
| 27       | 0.143   | 68276              |
| 26       | 0.146   | 68277              |
| 25       | 0.148   | 68278              |
| 24       | 0.151   | 68279              |
| 23       | 0.153   | 68280              |
| 22       | 0.155   | 68281              |
| 21       | 0.157   | 68282              |
| 20       | 0.161   | 68283              |

**Number Sizes (Cont.)**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 19       | 0.164   | 68284              |
| 18       | 0.168   | 68285              |
| 17       | 0.172   | 68286              |
| 16       | 0.175   | 68287              |
| 15       | 0.178   | 68288              |
| 14       | 0.180   | 68289              |
| 13       | 0.182   | 68290              |
| 12       | 0.185   | 68291              |
| 11       | 0.188   | 68292              |
| 10       | 0.191   | 68293              |
| 9        | 0.194   | 68294              |
| 8        | 0.197   | 68295              |
| 7        | 0.199   | 68296              |
| 6        | 0.201   | 68297              |
| 5        | 0.204   | 68298              |
| 4        | 0.207   | 68299              |
| 3        | 0.212   | 68300              |
| 2        | 0.219   | 68301              |
| 1        | 0.227   | 68302              |

**Metric Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 2mm      | 0.0787  | 68227              |
| 3mm      | 0.1181  | 68228              |
| 4mm      | 0.1575  | 68229              |
| 5mm      | 0.1969  | 68230              |
| 6mm      | 0.2362  | 68231              |
| 7mm      | 0.2756  | 68232              |
| 8mm      | 0.3150  | 68233              |
| 9mm      | 0.3543  | 68234              |
| 10mm     | 0.3937  | 68235              |
| 11mm     | 0.4331  | 68236              |
| 12mm     | 0.4724  | 68237              |
| 13mm     | 0.5118  | 68238              |
| 14mm     | 0.5512  | 68239              |
| 15mm     | 0.5906  | 68240              |
| 16mm     | 0.6299  | 68241              |
| 17mm     | 0.6693  | 68242              |
| 18mm     | 0.7087  | 68243              |
| 19mm     | 0.7480  | 68244              |
| 20mm     | 0.7874  | 68245              |
| 21mm     | 0.8268  | 68246              |
| 22mm     | 0.8661  | 68247              |
| 23mm     | 0.9055  | 68248              |
| 24mm     | 0.9449  | 68249              |
| 25mm     | 0.9843  | 68250              |

**NOTE:** Prices on application for other lengths, widths and thicknesses.



## A2 Ground & Polished Drill Rod

### No. 482 3' Lengths

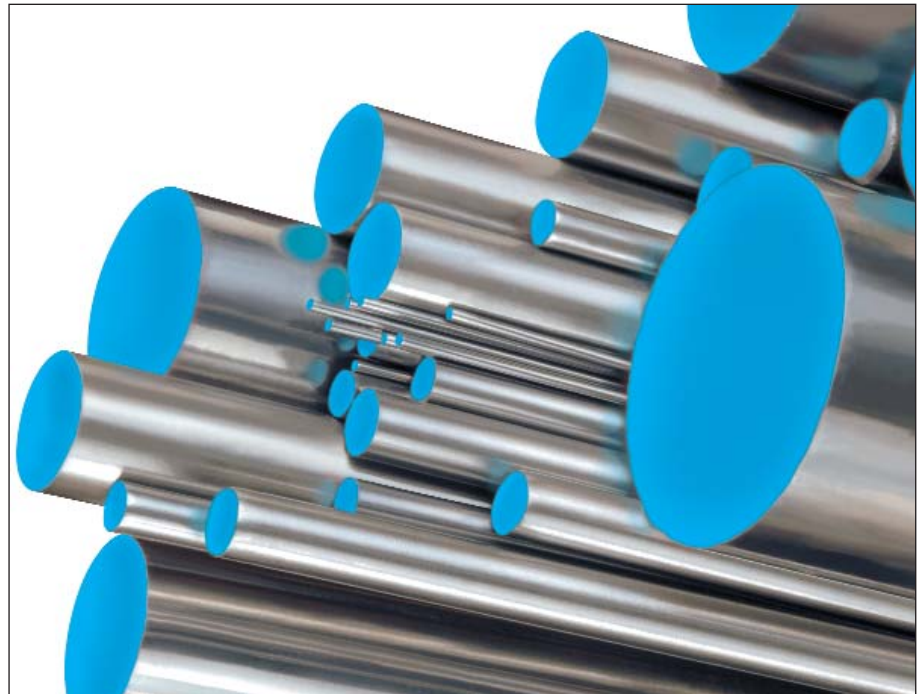
AISI/SAE A2 is a more highly alloyed tool steel that provides excellent wear resistance and toughness and good machinability.

#### Tolerances

| Size Range           | Diameter | Length   |
|----------------------|----------|----------|
| .124" round and less | ±.0003"  | +1/8"- 0 |
| .125" to 1.499"      | ±.0005"  | +1/8"- 0 |
| 1.50" to 2"          | ±.0075"  | +1/8"- 0 |

#### Nominal Analysis (AISI A2)

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



Heat Treatment and Tempering Data available upon request.

## A2 No. 482 Drill Rod 36" Lengths

#### Fractional Sizes

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 1/16"    | 0.0625  | <b>68662</b>       |
| 5/64"    | 0.0871  | <b>68663</b>       |
| 3/32"    | 0.0938  | <b>68664</b>       |
| 7/64"    | 0.1094  | <b>68665</b>       |
| 1/8"     | 0.1250  | <b>68583</b>       |
| 9/64"    | 0.1406  | <b>68666</b>       |
| 5/32"    | 0.1563  | <b>68631</b>       |
| 11/64"   | 0.1719  | <b>68667</b>       |
| 3/16"    | 0.1875  | <b>68584</b>       |
| 13/64"   | 0.2031  | <b>68668</b>       |
| 7/32"    | 0.2188  | <b>68632</b>       |
| 15/64"   | 0.2344  | <b>68669</b>       |
| 1/4"     | 0.2500  | <b>68585</b>       |
| 17/64"   | 0.2656  | <b>68670</b>       |
| 9/32"    | 0.2813  | <b>68633</b>       |
| 19/64"   | 0.2969  | <b>68671</b>       |

#### Fractional Sizes

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 5/16"    | 0.3125  | <b>68586</b>       |
| 21/64"   | 0.3281  | <b>68672</b>       |
| 11/32"   | 0.3438  | <b>68634</b>       |
| 23/64"   | 0.3594  | <b>68673</b>       |
| 3/8"     | 0.3450  | <b>68587</b>       |
| 25/64"   | 0.3906  | <b>68674</b>       |
| 13/32"   | 0.4063  | <b>68675</b>       |
| 27/64"   | 0.4219  | <b>68676</b>       |
| 7/16"    | 0.4375  | <b>68588</b>       |
| 29/64"   | 0.4531  | <b>68677</b>       |
| 15/32"   | 0.4688  | <b>68678</b>       |
| 31/64"   | 0.4844  | <b>68679</b>       |
| 1/2"     | 0.5000  | <b>68589</b>       |
| 17/32"   | 0.5313  | <b>68680</b>       |
| 9/16"    | 0.5625  | <b>68590</b>       |
| 19/32"   | 0.5938  | <b>68681</b>       |

#### Fractional Sizes

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 5/8"     | 0.6250  | <b>68591</b>       |
| 21/32"   | 0.6563  | <b>68682</b>       |
| 11/16"   | 0.6875  | <b>68592</b>       |
| 23/32"   | 0.7188  | <b>68683</b>       |
| 3/4"     | 0.7500  | <b>68593</b>       |
| 13/16"   | 0.8125  | <b>68594</b>       |
| 7/8"     | 0.8750  | <b>68595</b>       |
| 15/16"   | 0.9375  | <b>68684</b>       |
| 1"       | 1.0000  | <b>68596</b>       |
| 1-1/16"  | 1.0625  | <b>68685</b>       |
| 1-1/8"   | 1.1250  | <b>68597</b>       |
| 1-1/4"   | 1.2500  | <b>68598</b>       |
| 1-3/8"   | 1.3750  | <b>68686</b>       |
| 1-1/2"   | 1.5000  | <b>68599</b>       |
| 1-3/4"   | 1.7500  | <b>68687</b>       |
| 2"       | 2.0000  | <b>68688</b>       |

**NOTE:** Prices on application for other lengths, widths and thicknesses.



**W1 Ground & Polished  
Drill Rod**

**No. 481 3' Lengths**

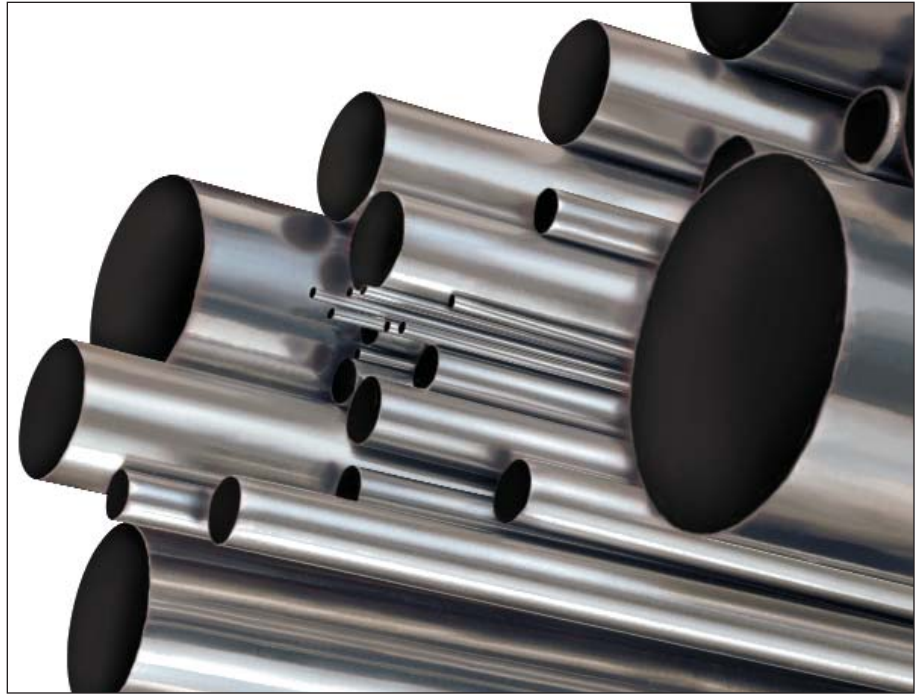
AISI/SAE W1 is a versatile and less expensive tool steel that has superior machinability and maintains good wear resistance and toughness characteristics.

**Tolerances**

| Size Range           | Diameter | Length   |
|----------------------|----------|----------|
| .124" round and less | ±.0003"  | +1/8"- 0 |
| .125" to 1.499"      | ±.0005"  | +1/8"- 0 |
| 1.50" to 2"          | ±.0075"  | +1/8"- 0 |

**Nominal Analysis (AISI W1)**

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



Heat Treatment and Tempering Data available upon request.

**W1 No. 481 Drill Rod 36" Lengths**

**Fractional Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 1/16"    | 0.0625  | <b>68482</b>       |
| 5/64"    | 0.0781  | <b>68483</b>       |
| 3/32"    | 0.0938  | <b>68484</b>       |
| 7/64"    | 0.1094  | <b>68485</b>       |
| 1/8"     | 0.1250  | <b>68486</b>       |
| 9/64"    | 0.1406  | <b>68487</b>       |
| 5/32"    | 0.1563  | <b>68488</b>       |
| 11/64"   | 0.1719  | <b>68489</b>       |
| 3/16"    | 0.1875  | <b>68490</b>       |
| 13/64"   | 0.2031  | <b>68491</b>       |
| 7/32"    | 0.2188  | <b>68492</b>       |
| 15/64"   | 0.2344  | <b>68493</b>       |
| 1/4"     | 0.2500  | <b>68494</b>       |
| 17/64"   | 0.2656  | <b>68495</b>       |
| 9/32"    | 0.2813  | <b>68496</b>       |
| 19/64"   | 0.2969  | <b>68497</b>       |
| 5/16"    | 0.3125  | <b>68498</b>       |
| 21/64"   | 0.3281  | <b>68499</b>       |
| 11/32"   | 0.3438  | <b>68500</b>       |
| 23/64"   | 0.3594  | <b>68501</b>       |
| 3/8"     | 0.3750  | <b>68502</b>       |
| 25/64"   | 0.3906  | <b>68503</b>       |
| 13/32"   | 0.4063  | <b>68504</b>       |
| 27/64"   | 0.4219  | <b>68505</b>       |
| 7/16"    | 0.4375  | <b>68506</b>       |
| 29/64"   | 0.4531  | <b>68507</b>       |

**Fractional Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 15/32"   | 0.4688  | <b>68508</b>       |
| 31/64"   | 0.4844  | <b>68509</b>       |
| 1/2"     | 0.5000  | <b>68510</b>       |
| 33/64"   | 0.5156  | <b>68511</b>       |
| 17/32"   | 0.5313  | <b>68512</b>       |
| 35/64"   | 0.5469  | <b>68513</b>       |
| 9/16"    | 0.5625  | <b>68514</b>       |
| 37/64"   | 0.5781  | <b>68515</b>       |
| 19/32"   | 0.5938  | <b>68516</b>       |
| 39/64"   | 0.6094  | <b>68517</b>       |
| 5/8"     | 0.6250  | <b>68518</b>       |
| 41/64"   | 0.6406  | <b>68519</b>       |
| 21/32"   | 0.6563  | <b>68520</b>       |
| 43/64"   | 0.6719  | <b>68521</b>       |
| 11/16"   | 0.6875  | <b>68522</b>       |
| 45/64"   | 0.7031  | <b>68523</b>       |
| 23/32"   | 0.7188  | <b>68524</b>       |
| 47/64"   | 0.7344  | <b>68525</b>       |
| 3/4"     | 0.7500  | <b>68526</b>       |
| 49/64"   | 0.7656  | <b>68527</b>       |
| 25/32"   | 0.7813  | <b>68528</b>       |
| 51/64"   | 0.7969  | <b>68529</b>       |
| 13/16"   | 0.8125  | <b>68530</b>       |
| 53/64"   | 0.8281  | <b>68531</b>       |
| 27/32"   | 0.8438  | <b>68532</b>       |
| 55/64"   | 0.8594  | <b>68533</b>       |

**Fractional Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 7/8"     | 0.8750  | <b>68534</b>       |
| 57/64"   | 0.8906  | <b>68535</b>       |
| 29/32"   | 0.9063  | <b>68536</b>       |
| 59/64"   | 0.9219  | <b>68537</b>       |
| 15/16"   | 0.9375  | <b>68538</b>       |
| 61/64"   | 0.9531  | <b>68539</b>       |
| 31/32"   | 0.9688  | <b>68540</b>       |
| 63/64"   | 0.9844  | <b>68541</b>       |
| 1"       | 1.0000  | <b>68542</b>       |
| 1-1/64"  | 1.0156  | <b>68543</b>       |
| 1-1/32"  | 1.0313  | <b>68544</b>       |
| 1-3/64"  | 1.0469  | <b>68545</b>       |
| 1-1/16"  | 1.0625  | <b>68546</b>       |
| 1-5/64"  | 1.0781  | <b>68547</b>       |
| 1-3/32"  | 1.0938  | <b>68548</b>       |
| 1-7/64"  | 1.1094  | <b>68549</b>       |
| 1-1/8"   | 1.1250  | <b>68550</b>       |
| 1-9/64"  | 1.1406  | <b>68551</b>       |
| 1-5/32"  | 1.1563  | <b>68552</b>       |
| 1-11/64" | 1.1719  | <b>68553</b>       |
| 1-3/16"  | 1.1875  | <b>68554</b>       |
| 1-13/64" | 1.2031  | <b>68555</b>       |
| 1-7/32"  | 1.2188  | <b>68556</b>       |
| 1-15/64" | 1.2344  | <b>68557</b>       |
| 1-1/4"   | 1.2500  | <b>68558</b>       |
| 1-17/64" | 1.2656  | <b>68559</b>       |

NOTE: Prices on application for other lengths, widths and thicknesses.

(Continued on next page.)



**W1 No. 481 Drill Rod 36" Lengths (continued)**

**Fractional Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 1-9/32"  | 1.2813  | <b>68560</b>       |
| 1-19/64" | 1.2969  | <b>68561</b>       |
| 1-5/16"  | 1.3125  | <b>68562</b>       |
| 1-21/64" | 1.3281  | <b>68563</b>       |
| 1-11/32" | 1.3438  | <b>68564</b>       |
| 1-23/64" | 1.3594  | <b>68565</b>       |
| 1-3/8"   | 1.3750  | <b>68566</b>       |
| 1-25/64" | 1.3906  | <b>68567</b>       |
| 1-13/32" | 1.4063  | <b>68568</b>       |
| 1-27/64" | 1.4219  | <b>68569</b>       |
| 1-7/16"  | 1.4375  | <b>68570</b>       |
| 1-29/64" | 1.4531  | <b>68571</b>       |
| 1-15/32" | 1.4688  | <b>68572</b>       |
| 1-31/64" | 1.4844  | <b>68573</b>       |
| 1-1/2"   | 1.5000  | <b>68574</b>       |
| 1-9/16"  | 1.5625  | <b>68575</b>       |
| 1-5/8"   | 1.6250  | <b>68576</b>       |
| 1-11/16" | 1.6875  | <b>68577</b>       |
| 1-3/4"   | 1.7500  | <b>68578</b>       |
| 1-13/16" | 1.8125  | <b>68579</b>       |
| 1-7/8"   | 1.8750  | <b>68580</b>       |
| 1-15/16" | 1.9375  | <b>68581</b>       |
| 2"       | 2.0000  | <b>68582</b>       |

**Letter Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| A        | 0.2340  | <b>68404</b>       |
| B        | 0.2380  | <b>68405</b>       |
| C        | 0.2420  | <b>68406</b>       |
| D        | 0.2460  | <b>68407</b>       |
| E        | 0.2500  | <b>68408</b>       |
| F        | 0.2570  | <b>68409</b>       |
| G        | 0.2610  | <b>68410</b>       |
| H        | 0.2660  | <b>68411</b>       |
| I        | 0.2720  | <b>68412</b>       |
| J        | 0.2770  | <b>68413</b>       |
| K        | 0.2810  | <b>68414</b>       |
| L        | 0.2900  | <b>68415</b>       |
| M        | 0.2950  | <b>68416</b>       |
| N        | 0.3020  | <b>68417</b>       |
| O        | 0.3160  | <b>68418</b>       |
| P        | 0.3230  | <b>68419</b>       |
| Q        | 0.3320  | <b>68420</b>       |
| R        | 0.3390  | <b>68421</b>       |
| S        | 0.3480  | <b>68422</b>       |
| T        | 0.3580  | <b>68423</b>       |
| U        | 0.3680  | <b>68424</b>       |
| V        | 0.3770  | <b>68425</b>       |
| W        | 0.3860  | <b>68426</b>       |
| X        | 0.3970  | <b>68427</b>       |
| Y        | 0.4040  | <b>68428</b>       |
| Z        | 0.4130  | <b>68429</b>       |

**Number Sizes**

| Diameter | Decimal | 36" Length EDP No. |
|----------|---------|--------------------|
| 52       | 0.0630  | <b>68430</b>       |
| 51       | 0.0660  | <b>68431</b>       |
| 50       | 0.0690  | <b>68432</b>       |
| 49       | 0.0720  | <b>68433</b>       |
| 48       | 0.0750  | <b>68434</b>       |
| 47       | 0.0770  | <b>68435</b>       |
| 46       | 0.0790  | <b>68436</b>       |
| 45       | 0.0810  | <b>68437</b>       |
| 44       | 0.0850  | <b>68438</b>       |
| 43       | 0.0880  | <b>68439</b>       |
| 42       | 0.0920  | <b>68440</b>       |
| 41       | 0.0950  | <b>68441</b>       |
| 40       | 0.0970  | <b>68442</b>       |
| 39       | 0.0990  | <b>68443</b>       |
| 38       | 0.1010  | <b>68444</b>       |
| 37       | 0.1030  | <b>68445</b>       |
| 36       | 0.1060  | <b>68446</b>       |
| 35       | 0.1080  | <b>68447</b>       |
| 34       | 0.1100  | <b>68448</b>       |
| 33       | 0.1120  | <b>68449</b>       |
| 32       | 0.1150  | <b>68450</b>       |
| 31       | 0.1200  | <b>68451</b>       |
| 30       | 0.1270  | <b>68452</b>       |
| 29       | 0.1340  | <b>68453</b>       |
| 28       | 0.1390  | <b>68454</b>       |
| 27       | 0.1430  | <b>68455</b>       |
| 26       | 0.1460  | <b>68456</b>       |
| 25       | 0.1480  | <b>68457</b>       |
| 24       | 0.1510  | <b>68458</b>       |
| 23       | 0.1530  | <b>68459</b>       |
| 22       | 0.1550  | <b>68460</b>       |
| 21       | 0.1570  | <b>68461</b>       |
| 20       | 0.1610  | <b>68462</b>       |
| 19       | 0.1640  | <b>68463</b>       |
| 18       | 0.1680  | <b>68464</b>       |
| 17       | 0.1720  | <b>68465</b>       |
| 16       | 0.1750  | <b>68466</b>       |
| 15       | 0.1780  | <b>68467</b>       |
| 14       | 0.1800  | <b>68468</b>       |
| 13       | 0.1820  | <b>68469</b>       |
| 12       | 0.1850  | <b>68470</b>       |
| 11       | 0.1880  | <b>68471</b>       |
| 10       | 0.1910  | <b>68472</b>       |
| 9        | 0.1940  | <b>68473</b>       |
| 8        | 0.1970  | <b>68474</b>       |
| 7        | 0.1990  | <b>68475</b>       |
| 6        | 0.2010  | <b>68476</b>       |
| 5        | 0.2040  | <b>68477</b>       |
| 4        | 0.2070  | <b>68478</b>       |
| 3        | 0.2120  | <b>68479</b>       |
| 2        | 0.2190  | <b>68480</b>       |
| 1        | 0.2270  | <b>68481</b>       |

**NOTE:** Prices on application for other lengths, widths and thicknesses.