

# 5xD



TiN coated



External Coolant



Straight Shank

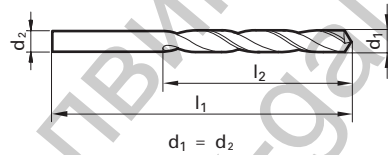
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## Series 651

### General Purpose

HSS, general purpose (Type N), jobber length, 118° point, Form A web thinned >2.36mm dia., standard straight shank, RH helix

Cut / Shank Dia. = h8 tolerance range



Application Materials:



Universal Steels



Cast Iron



General Steels

| Diameter (d1) |             |               |       |       |       |
|---------------|-------------|---------------|-------|-------|-------|
| Dec. inch     | Fract. inch | Wire / letter | mm    | l1 mm | l2 mm |
| 0.0079        |             | 92            | 0.200 | 19.00 | 2.50  |
| 0.0098        |             | 87            | 0.250 | 19.00 | 3.00  |
| 0.0110        |             | 85            | 0.280 | 19.00 | 3.00  |
| 0.0118        |             |               | 0.300 | 19.00 | 3.00  |
| 0.0122        |             | 83            | 0.310 | 19.00 | 4.00  |
| 0.0130        |             | 81            | 0.330 | 19.00 | 4.00  |
| 0.0134        |             | 80            | 0.340 | 19.00 | 4.00  |
| 0.0142        |             |               | 0.360 | 19.00 | 4.00  |
| 0.0146        |             | 79            | 0.370 | 19.00 | 4.00  |
| 0.0150        |             |               | 0.380 | 19.00 | 4.00  |

| Diameter (d1) |             |               |       |       |       |
|---------------|-------------|---------------|-------|-------|-------|
| Dec. inch     | Fract. inch | Wire / letter | mm    | l1 mm | l2 mm |
| 0.0154        |             |               | 0.390 | 20.00 | 5.00  |
| 0.0157        | 1/64        |               | 0.400 | 20.00 | 5.00  |
| 0.0161        |             | 78            | 0.410 | 20.00 | 5.00  |
| 0.0165        |             |               | 0.420 | 20.00 | 5.00  |
| 0.0169        |             |               | 0.430 | 20.00 | 5.00  |
| 0.0173        |             |               | 0.440 | 20.00 | 5.00  |
| 0.0177        |             |               | 0.450 | 20.00 | 5.00  |
| 0.0181        |             | 77            | 0.460 | 20.00 | 5.00  |
| 0.0185        |             |               | 0.470 | 20.00 | 5.00  |
| 0.0189        |             |               | 0.480 | 20.00 | 5.00  |

| Diameter (d1) |             |               |       |       |       |
|---------------|-------------|---------------|-------|-------|-------|
| Dec. inch     | Fract. inch | Wire / letter | mm    | l1 mm | l2 mm |
| 0.0193        |             |               | 0.490 | 22.00 | 6.00  |
| 0.0197        |             |               | 0.500 | 22.00 | 6.00  |
| 0.0201        |             | 76            | 0.510 | 22.00 | 6.00  |
| 0.0205        |             |               | 0.520 | 22.00 | 6.00  |
| 0.0209        |             | 75            | 0.530 | 22.00 | 6.00  |
| 0.0213        |             |               | 0.540 | 24.00 | 7.00  |
| 0.0217        |             |               | 0.550 | 24.00 | 7.00  |
| 0.0224        |             | 74            | 0.570 | 24.00 | 7.00  |
| 0.0228        |             |               | 0.580 | 24.00 | 7.00  |
| 0.0232        |             |               | 0.590 | 24.00 | 7.00  |

To order: Series number + mm, ex. 5518 3.000

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| Dec.<br>inch | Diameter (d1)  |                  | l1<br>mm | l2<br>mm |
|--------------|----------------|------------------|----------|----------|
|              | Fract.<br>inch | Wire /<br>letter |          |          |
| 0.0236       |                |                  | 6.00     | 7.00     |
| 0.0240       |                | 73               | 6.10     | 8.00     |
| 0.0248       |                |                  | 6.30     | 8.00     |
| 0.0252       |                | 72               | 6.40     | 8.00     |
| 0.0256       |                |                  | 6.50     | 8.00     |
| 0.0260       |                | 71               | 6.60     | 8.00     |
| 0.0268       |                |                  | 6.80     | 9.00     |
| 0.0272       |                |                  | 6.90     | 9.00     |
| 0.0276       |                |                  | 7.00     | 9.00     |
| 0.0280       |                | 70               | 7.10     | 9.00     |
| 0.0283       |                |                  | 7.20     | 9.00     |
| 0.0291       |                | 69               | 7.40     | 9.00     |
| 0.0295       |                |                  | 7.50     | 9.00     |
| 0.0303       |                |                  | 7.70     | 10.00    |
| 0.0307       |                |                  | 7.80     | 10.00    |
| 0.0311       |                | 1/32             | 7.90     | 10.00    |
| 0.0315       |                |                  | 8.00     | 10.00    |
| 0.0319       |                | 67               | 8.10     | 10.00    |
| 0.0323       |                |                  | 8.20     | 10.00    |
| 0.0327       |                |                  | 8.30     | 10.00    |
| 0.0331       |                | 66               | 8.40     | 10.00    |
| 0.0335       |                |                  | 8.50     | 10.00    |
| 0.0339       |                |                  | 8.60     | 11.00    |
| 0.0346       |                |                  | 8.80     | 11.00    |
| 0.0350       |                | 65               | 8.90     | 11.00    |
| 0.0354       |                |                  | 9.00     | 11.00    |
| 0.0358       |                | 64               | 9.10     | 11.00    |
| 0.0362       |                |                  | 9.20     | 11.00    |
| 0.0366       |                |                  | 9.30     | 11.00    |
| 0.0370       |                | 63               | 9.40     | 11.00    |
| 0.0374       |                |                  | 9.50     | 11.00    |
| 0.0378       |                |                  | 9.60     | 12.00    |
| 0.0382       |                | 62               | 9.70     | 12.00    |
| 0.0386       |                |                  | 9.80     | 12.00    |
| 0.0390       |                | 61               | 9.90     | 12.00    |
| 0.0394       |                |                  | 1.000    | 12.00    |
| 0.0402       |                | 60               | 1.020    | 12.00    |
| 0.0406       |                |                  | 1.030    | 12.00    |
| 0.0409       |                | 59               | 1.040    | 12.00    |
| 0.0413       |                |                  | 1.050    | 12.00    |
| 0.0421       |                | 58               | 1.070    | 14.00    |
| 0.0425       |                |                  | 1.080    | 14.00    |
| 0.0429       |                | 57               | 1.090    | 14.00    |
| 0.0433       |                |                  | 1.100    | 14.00    |
| 0.0437       |                |                  | 1.110    | 14.00    |
| 0.0441       |                |                  | 1.120    | 14.00    |
| 0.0445       |                |                  | 1.130    | 14.00    |
| 0.0449       |                |                  | 1.140    | 14.00    |
| 0.0453       |                |                  | 1.150    | 14.00    |
| 0.0457       |                |                  | 1.160    | 14.00    |
| 0.0461       |                |                  | 1.170    | 14.00    |
| 0.0465       |                | 56               | 1.180    | 14.00    |
| 0.0469       |                | 3/64             | 1.190    | 16.00    |
| 0.0472       |                |                  | 1.200    | 16.00    |
| 0.0476       |                |                  | 1.210    | 16.00    |
| 0.0480       |                |                  | 1.220    | 16.00    |
| 0.0488       |                |                  | 1.240    | 16.00    |
| 0.0492       |                |                  | 1.250    | 16.00    |
| 0.0496       |                |                  | 1.260    | 16.00    |
| 0.0500       |                |                  | 1.270    | 16.00    |
| 0.0504       |                |                  | 1.280    | 16.00    |
| 0.0512       |                |                  | 1.300    | 16.00    |
| 0.0516       |                |                  | 1.310    | 16.00    |
| 0.0520       |                | 55               | 1.320    | 16.00    |
| 0.0528       |                |                  | 1.340    | 18.00    |
| 0.0531       |                |                  | 1.350    | 18.00    |
| 0.0551       |                | 54               | 1.400    | 18.00    |

| Dec.<br>inch | Diameter (d1)  |                  | l1<br>mm | l2<br>mm |
|--------------|----------------|------------------|----------|----------|
|              | Fract.<br>inch | Wire /<br>letter |          |          |
| 0.0559       |                |                  | 1.420    | 18.00    |
| 0.0563       |                |                  | 1.430    | 18.00    |
| 0.0571       |                |                  | 1.450    | 18.00    |
| 0.0575       |                |                  | 1.460    | 18.00    |
| 0.0579       |                |                  | 1.470    | 18.00    |
| 0.0583       |                |                  | 1.480    | 18.00    |
| 0.0591       |                |                  | 1.500    | 18.00    |
| 0.0594       |                | 53               | 1.510    | 20.00    |
| 0.0598       |                |                  | 1.520    | 20.00    |
| 0.0602       |                |                  | 1.530    | 20.00    |
| 0.0606       |                |                  | 1.540    | 20.00    |
| 0.0610       |                |                  | 1.550    | 20.00    |
| 0.0618       |                |                  | 1.570    | 20.00    |
| 0.0626       |                | 1/16             | 1.590    | 20.00    |
| 0.0630       |                |                  | 1.600    | 20.00    |
| 0.0634       |                | 52               | 1.610    | 20.00    |
| 0.0638       |                |                  | 1.620    | 20.00    |
| 0.0646       |                |                  | 1.640    | 20.00    |
| 0.0650       |                |                  | 1.650    | 20.00    |
| 0.0661       |                |                  | 1.680    | 20.00    |
| 0.0669       |                | 51               | 1.700    | 20.00    |
| 0.0673       |                |                  | 1.710    | 22.00    |
| 0.0681       |                |                  | 1.730    | 22.00    |
| 0.0689       |                |                  | 1.750    | 22.00    |
| 0.0697       |                |                  | 1.770    | 22.00    |
| 0.0701       |                | 50               | 1.780    | 22.00    |
| 0.0709       |                |                  | 1.800    | 22.00    |
| 0.0717       |                |                  | 1.820    | 22.00    |
| 0.0720       |                |                  | 1.830    | 22.00    |
| 0.0724       |                |                  | 1.840    | 22.00    |
| 0.0728       |                | 49               | 1.850    | 22.00    |
| 0.0736       |                |                  | 1.870    | 22.00    |
| 0.0748       |                |                  | 1.900    | 22.00    |
| 0.0760       |                | 48               | 1.930    | 24.00    |
| 0.0768       |                |                  | 1.950    | 24.00    |
| 0.0772       |                |                  | 1.960    | 24.00    |
| 0.0776       |                |                  | 1.970    | 24.00    |
| 0.0780       |                | 5/64             | 1.980    | 24.00    |
| 0.0783       |                | 47               | 1.990    | 24.00    |
| 0.0787       |                |                  | 2.000    | 24.00    |
| 0.0795       |                |                  | 2.020    | 24.00    |
| 0.0799       |                |                  | 2.030    | 24.00    |
| 0.0807       |                |                  | 2.050    | 24.00    |
| 0.0811       |                | 46               | 2.060    | 24.00    |
| 0.0819       |                | 45               | 2.080    | 24.00    |
| 0.0827       |                |                  | 2.100    | 24.00    |
| 0.0846       |                |                  | 2.150    | 27.00    |
| 0.0858       |                | 44               | 2.180    | 27.00    |
| 0.0866       |                |                  | 2.200    | 27.00    |
| 0.0886       |                |                  | 2.250    | 27.00    |
| 0.0890       |                | 43               | 2.260    | 27.00    |
| 0.0906       |                |                  | 2.300    | 27.00    |
| 0.0925       |                |                  | 2.350    | 27.00    |
| 0.0933       |                | 42               | 2.370    | 30.00    |
| 0.0937       |                | 3/32             | 2.380    | 30.00    |
| 0.0945       |                |                  | 2.400    | 30.00    |
| 0.0961       |                | 41               | 2.440    | 30.00    |
| 0.0965       |                |                  | 2.450    | 30.00    |
| 0.0980       |                | 40               | 2.490    | 30.00    |
| 0.0984       |                |                  | 2.500    | 30.00    |
| 0.0996       |                | 39               | 2.530    | 30.00    |
| 0.1004       |                |                  | 2.550    | 30.00    |
| 0.1016       |                | 38               | 2.580    | 30.00    |
| 0.1024       |                |                  | 2.600    | 30.00    |
| 0.1039       |                | 37               | 2.640    | 30.00    |
| 0.1043       |                |                  | 2.650    | 30.00    |
| 0.1063       |                |                  | 2.700    | 33.00    |

| Dec.<br>inch | Diameter (d1)  |                  | l1<br>mm | l2<br>mm |
|--------------|----------------|------------------|----------|----------|
|              | Fract.<br>inch | Wire /<br>letter |          |          |
| 0.1067       |                | 36               | 2.710    | 33.00    |
| 0.1083       |                |                  | 2.750    | 33.00    |
| 0.1094       |                | 7/64             | 2.780    | 33.00    |
| 0.1098       |                | 35               | 2.790    | 33.00    |
| 0.1102       |                |                  | 2.800    | 33.00    |
| 0.1110       |                | 34               | 2.820    | 33.00    |
| 0.1122       |                |                  | 2.850    | 33.00    |
| 0.1130       |                | 33               | 2.870    | 33.00    |
| 0.1142       |                |                  | 2.900    | 33.00    |
| 0.1161       |                | 32               | 2.950    | 33.00    |
| 0.1181       |                |                  | 3.000    | 33.00    |
| 0.1201       |                | 31               | 3.050    | 36.00    |
| 0.1220       |                |                  | 3.100    | 36.00    |
| 0.1240       |                |                  | 3.150    | 36.00    |
| 0.1248       |                | 1/8              | 3.170    | 36.00    |
| 0.1260       |                |                  | 3.200    | 36.00    |
| 0.1280       |                |                  | 3.250    | 36.00    |
| 0.1283       |                | 30               | 3.260    | 36.00    |
| 0.1299       |                |                  | 3.300    | 36.00    |
| 0.1319       |                |                  | 3.350    | 36.00    |
| 0.1339       |                |                  | 3.400    | 39.00    |
| 0.1358       |                | 29               | 3.450    | 39.00    |
| 0.1378       |                |                  | 3.500    | 39.00    |
| 0.1398       |                |                  | 3.550    | 39.00    |
| 0.1406       |                | 9/64             | 3.570    | 39.00    |
| 0.1417       |                |                  | 3.600    | 39.00    |
| 0.1437       |                |                  | 3.650    | 39.00    |
| 0.1441       |                | 27               | 3.660    | 39.00    |
| 0.1457       |                |                  | 3.700    | 39.00    |
| 0.1469       |                | 26               | 3.730    | 39.00    |
| 0.1476       |                |                  | 3.750    | 39.00    |
| 0.1496       |                | 25               | 3.800    | 43.00    |
| 0.1516       |                |                  | 3.850    | 43.00    |
| 0.1520       |                | 24               | 3.860    | 43.00    |
| 0.1535       |                |                  | 3.900    | 43.00    |
| 0.1539       |                | 23               | 3.910    | 43.00    |
| 0.1555       |                |                  | 3.950    | 43.00    |
| 0.1563       |                | 5/32             | 3.970    | 43.00    |
| 0.1571       |                | 22               | 3.990    | 43.00    |
| 0.1575       |                |                  | 4.000    | 43.00    |
| 0.1591       |                | 21               | 4.040    | 43.00    |
| 0.1594       |                |                  | 4.050    | 43.00    |
| 0.1610       |                | 20               | 4.090    | 43.00    |
| 0.1614       |                |                  | 4.100    | 43.00    |
| 0.1634       |                |                  | 4.150    | 43.00    |
| 0.1654       |                |                  | 4.200    | 43.00    |
| 0.1661       |                | 19               | 4.220    | 43.00    |
| 0.1673       |                |                  | 4.250    | 43.00    |
| 0.1693       |                | 18               | 4.300    | 47.00    |
| 0.1713       |                |                  | 4.350    | 47.00    |
| 0.1720       |                | 11/64            | 4.370    | 47.00    |
| 0.1728       |                | 17               | 4.390    | 47.00    |
| 0.1732       |                |                  | 4.400    | 47.00    |
| 0.1752       |                |                  | 4.450    | 47.00    |
| 0.1772       |                | 16               | 4.500    | 47.00    |
| 0.1799       |                | 15               | 4.570    | 47.00    |
| 0.1811       |                |                  | 4.600    | 47.00    |
| 0.1819       |                | 14               | 4.620    | 47.00    |
| 0.1831       |                |                  | 4.650    | 47.00    |
| 0.1850       |                | 13               | 4.700    | 47.00    |
| 0.1870       |                |                  | 4.750    | 47.00    |
| 0.1874       |                | 3/16             | 4.760    | 52.00    |
| 0.1890       |                | 12               | 4.800    | 52.00    |
| 0.1909       |                | 11               | 4.850    | 52.00    |
| 0.1929       |                |                  | 4.900    | 52.00    |
| 0.1937       |                | 10               | 4.920    | 52.00    |
| 0.1949       |                |                  | 4.950    | 52.00    |

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| Diameter (d1) |             |               |       |        |       |
|---------------|-------------|---------------|-------|--------|-------|
| Dec. inch     | Fract. inch | Wire / letter | mm    | I1 mm  | I2 mm |
| 0.1961        |             | 9             | 4.980 | 86.00  | 52.00 |
| 0.1969        |             |               | 5.000 | 86.00  | 52.00 |
| 0.1988        |             |               | 5.050 | 86.00  | 52.00 |
| 0.1992        |             | 8             | 5.060 | 86.00  | 52.00 |
| 0.2008        |             |               | 5.100 | 86.00  | 52.00 |
| 0.2012        |             | 7             | 5.110 | 86.00  | 52.00 |
| 0.2031        | 13/64       |               | 5.160 | 86.00  | 52.00 |
| 0.2039        |             | 6             | 5.180 | 86.00  | 52.00 |
| 0.2047        |             |               | 5.200 | 86.00  | 52.00 |
| 0.2055        |             | 5             | 5.220 | 86.00  | 52.00 |
| 0.2067        |             |               | 5.250 | 86.00  | 52.00 |
| 0.2087        |             |               | 5.300 | 86.00  | 52.00 |
| 0.2091        |             | 4             | 5.310 | 93.00  | 57.00 |
| 0.2126        |             |               | 5.400 | 93.00  | 57.00 |
| 0.2130        |             | 3             | 5.410 | 93.00  | 57.00 |
| 0.2146        |             |               | 5.450 | 93.00  | 57.00 |
| 0.2165        |             |               | 5.500 | 93.00  | 57.00 |
| 0.2189        | 7/32        |               | 5.560 | 93.00  | 57.00 |
| 0.2205        |             |               | 5.600 | 93.00  | 57.00 |
| 0.2209        |             | 2             | 5.610 | 93.00  | 57.00 |
| 0.2224        |             |               | 5.650 | 93.00  | 57.00 |
| 0.2244        |             |               | 5.700 | 93.00  | 57.00 |
| 0.2264        |             |               | 5.750 | 93.00  | 57.00 |
| 0.2280        |             | 1             | 5.790 | 93.00  | 57.00 |
| 0.2283        |             |               | 5.800 | 93.00  | 57.00 |
| 0.2323        |             |               | 5.900 | 93.00  | 57.00 |
| 0.2339        |             | A             | 5.940 | 93.00  | 57.00 |
| 0.2343        | 15/64       |               | 5.950 | 93.00  | 57.00 |
| 0.2362        |             |               | 6.000 | 93.00  | 57.00 |
| 0.2378        |             | B             | 6.040 | 101.00 | 63.00 |
| 0.2382        |             |               | 6.050 | 101.00 | 63.00 |
| 0.2402        |             |               | 6.100 | 101.00 | 63.00 |
| 0.2421        |             | C             | 6.150 | 101.00 | 63.00 |
| 0.2441        |             |               | 6.200 | 101.00 | 63.00 |
| 0.2461        |             | D             | 6.250 | 101.00 | 63.00 |
| 0.2480        |             |               | 6.300 | 101.00 | 63.00 |
| 0.2500        | 1/4         | E             | 6.350 | 101.00 | 63.00 |
| 0.2520        |             |               | 6.400 | 101.00 | 63.00 |
| 0.2559        |             |               | 6.500 | 101.00 | 63.00 |
| 0.2571        |             | F             | 6.530 | 101.00 | 63.00 |
| 0.2598        |             |               | 6.600 | 101.00 | 63.00 |
| 0.2610        |             | G             | 6.630 | 101.00 | 63.00 |
| 0.2638        |             |               | 6.700 | 101.00 | 63.00 |
| 0.2657        | 17/64       | H             | 6.750 | 109.00 | 69.00 |
| 0.2677        |             |               | 6.800 | 109.00 | 69.00 |
| 0.2697        |             |               | 6.850 | 109.00 | 69.00 |
| 0.2717        |             | I             | 6.900 | 109.00 | 69.00 |
| 0.2756        |             |               | 7.000 | 109.00 | 69.00 |
| 0.2768        |             | J             | 7.030 | 109.00 | 69.00 |
| 0.2795        |             |               | 7.100 | 109.00 | 69.00 |
| 0.2811        | 9/32        | K             | 7.140 | 109.00 | 69.00 |
| 0.2835        |             |               | 7.200 | 109.00 | 69.00 |
| 0.2854        |             |               | 7.250 | 109.00 | 69.00 |
| 0.2874        |             |               | 7.300 | 109.00 | 69.00 |
| 0.2902        |             | L             | 7.370 | 109.00 | 69.00 |
| 0.2913        |             |               | 7.400 | 109.00 | 69.00 |
| 0.2933        |             |               | 7.450 | 109.00 | 69.00 |
| 0.2949        |             | M             | 7.490 | 109.00 | 69.00 |
| 0.2953        |             |               | 7.500 | 109.00 | 69.00 |
| 0.2969        | 19/64       |               | 7.540 | 117.00 | 75.00 |
| 0.2992        |             |               | 7.600 | 117.00 | 75.00 |
| 0.3020        |             | N             | 7.670 | 117.00 | 75.00 |
| 0.3031        |             |               | 7.700 | 117.00 | 75.00 |
| 0.3051        |             |               | 7.750 | 117.00 | 75.00 |
| 0.3071        |             |               | 7.800 | 117.00 | 75.00 |
| 0.3110        |             |               | 7.900 | 117.00 | 75.00 |

| Diameter (d1) |             |               |        |        |       |
|---------------|-------------|---------------|--------|--------|-------|
| Dec. inch     | Fract. inch | Wire / letter | mm     | I1 mm  | I2 mm |
| 0.3126        | 5/16        |               | 7.940  | 117.00 | 75.00 |
| 0.3150        |             |               | 8.000  | 117.00 | 75.00 |
| 0.3161        |             | O             | 8.030  | 117.00 | 75.00 |
| 0.3189        |             |               | 8.100  | 117.00 | 75.00 |
| 0.3228        |             | P             | 8.200  | 117.00 | 75.00 |
| 0.3248        |             |               | 8.250  | 117.00 | 75.00 |
| 0.3268        |             |               | 8.300  | 117.00 | 75.00 |
| 0.3280        | 21/64       |               | 8.330  | 117.00 | 75.00 |
| 0.3307        |             |               | 8.400  | 117.00 | 75.00 |
| 0.3319        |             | Q             | 8.430  | 117.00 | 75.00 |
| 0.3346        |             |               | 8.500  | 117.00 | 75.00 |
| 0.3386        |             |               | 8.600  | 125.00 | 81.00 |
| 0.3390        |             | R             | 8.610  | 125.00 | 81.00 |
| 0.3425        |             |               | 8.700  | 125.00 | 81.00 |
| 0.3437        | 11/32       |               | 8.730  | 125.00 | 81.00 |
| 0.3445        |             |               | 8.750  | 125.00 | 81.00 |
| 0.3465        |             |               | 8.800  | 125.00 | 81.00 |
| 0.3480        |             | S             | 8.840  | 125.00 | 81.00 |
| 0.3484        |             |               | 8.850  | 125.00 | 81.00 |
| 0.3504        |             |               | 8.900  | 125.00 | 81.00 |
| 0.3543        |             |               | 9.000  | 125.00 | 81.00 |
| 0.3579        |             | T             | 9.090  | 125.00 | 81.00 |
| 0.3583        |             |               | 9.100  | 125.00 | 81.00 |
| 0.3594        | 23/64       |               | 9.130  | 125.00 | 81.00 |
| 0.3622        |             |               | 9.200  | 125.00 | 81.00 |
| 0.3642        |             |               | 9.250  | 125.00 | 81.00 |
| 0.3661        |             |               | 9.300  | 125.00 | 81.00 |
| 0.3677        |             | U             | 9.340  | 125.00 | 81.00 |
| 0.3701        |             |               | 9.400  | 125.00 | 81.00 |
| 0.3740        |             |               | 9.500  | 125.00 | 81.00 |
| 0.3748        | 3/8         |               | 9.520  | 133.00 | 87.00 |
| 0.3760        |             |               | 9.550  | 133.00 | 87.00 |
| 0.3772        |             | V             | 9.580  | 133.00 | 87.00 |
| 0.3780        |             |               | 9.600  | 133.00 | 87.00 |
| 0.3819        |             |               | 9.700  | 133.00 | 87.00 |
| 0.3839        |             |               | 9.750  | 133.00 | 87.00 |
| 0.3858        |             | W             | 9.800  | 133.00 | 87.00 |
| 0.3898        |             |               | 9.900  | 133.00 | 87.00 |
| 0.3906        | 25/64       |               | 9.920  | 133.00 | 87.00 |
| 0.3937        |             |               | 10.000 | 133.00 | 87.00 |
| 0.3961        |             |               | 10.060 | 133.00 | 87.00 |
| 0.3969        |             | X             | 10.080 | 133.00 | 87.00 |
| 0.3976        |             |               | 10.100 | 133.00 | 87.00 |
| 0.4016        |             |               | 10.200 | 133.00 | 87.00 |
| 0.4035        |             |               | 10.250 | 133.00 | 87.00 |
| 0.4039        |             | Y             | 10.260 | 133.00 | 87.00 |
| 0.4055        |             |               | 10.300 | 133.00 | 87.00 |
| 0.4063        | 13/32       |               | 10.320 | 133.00 | 87.00 |
| 0.4094        |             |               | 10.400 | 133.00 | 87.00 |
| 0.4130        |             | Z             | 10.490 | 133.00 | 87.00 |
| 0.4134        |             |               | 10.500 | 133.00 | 87.00 |
| 0.4154        |             |               | 10.550 | 133.00 | 87.00 |
| 0.4173        |             |               | 10.600 | 133.00 | 87.00 |
| 0.4213        |             |               | 10.700 | 142.00 | 94.00 |
| 0.4220        | 27/64       |               | 10.720 | 142.00 | 94.00 |
| 0.4232        |             |               | 10.750 | 142.00 | 94.00 |
| 0.4252        |             |               | 10.800 | 142.00 | 94.00 |
| 0.4291        |             |               | 10.900 | 142.00 | 94.00 |
| 0.4331        |             |               | 11.000 | 142.00 | 94.00 |
| 0.4370        |             |               | 11.100 | 142.00 | 94.00 |
| 0.4374        | 7/16        |               | 11.110 | 142.00 | 94.00 |
| 0.4409        |             |               | 11.200 | 142.00 | 94.00 |
| 0.4429        |             |               | 11.250 | 142.00 | 94.00 |
| 0.4449        |             |               | 11.300 | 142.00 | 94.00 |
| 0.4488        |             |               | 11.400 | 142.00 | 94.00 |
| 0.4528        |             |               | 11.500 | 142.00 | 94.00 |

| Diameter (d1) |             |               |        |        |        |
|---------------|-------------|---------------|--------|--------|--------|
| Dec. inch     | Fract. inch | Wire / letter | mm     | I1 mm  | I2 mm  |
| 0.4531        | 29/64       |               | 11.510 | 142.00 | 94.00  |
| 0.4587        |             |               | 11.650 | 142.00 | 94.00  |
| 0.4606        |             |               | 11.700 | 142.00 | 94.00  |
| 0.4646        |             |               | 11.800 | 142.00 | 94.00  |
| 0.4689        | 15/32       |               | 11.910 | 151.00 | 101.00 |
| 0.4724        |             |               | 12.000 | 151.00 | 101.00 |
| 0.4764        |             |               | 12.100 | 151.00 | 101.00 |
| 0.4803        |             |               | 12.200 | 151.00 | 101.00 |
| 0.4843        | 31/64       |               | 12.300 | 151.00 | 101.00 |
| 0.4882        |             |               | 12.400 | 151.00 | 101.00 |
| 0.4921        |             |               | 12.500 | 151.00 | 101.00 |
| 0.4961        |             |               | 12.600 | 151.00 | 101.00 |
| 0.5000        | 1/2         |               | 12.700 | 151.00 | 101.00 |
| 0.5039        |             |               | 12.800 | 151.00 | 101.00 |
| 0.5079        |             |               | 12.900 | 151.00 | 101.00 |
| 0.5118        |             |               | 13.000 | 151.00 | 101.00 |
| 0.5157        | 33/64       |               | 13.100 | 151.00 | 101.00 |
| 0.5197        |             |               | 13.200 | 151.00 | 101.00 |
| 0.5217        |             |               | 13.250 | 160.00 | 108.00 |
| 0.5311        | 17/32       |               | 13.490 | 160.00 | 108.00 |
| 0.5315        |             |               | 13.500 | 160.00 | 108.00 |
| 0.5394        |             |               | 13.700 | 160.00 | 108.00 |
| 0.5433        |             |               | 13.800 | 160.00 | 108.00 |
| 0.5469        | 35/64       |               | 13.890 | 160.00 | 108.00 |
| 0.5472        |             |               | 13.900 | 160.00 | 108.00 |
| 0.5512        |             |               | 14.000 | 160.00 | 108.00 |
| 0.5591        |             |               | 14.200 | 169.00 | 114.00 |
| 0.5610        |             |               | 14.250 | 169.00 | 114.00 |
| 0.5626        | 9/16        |               | 14.290 | 169.00 | 114.00 |
| 0.5709        |             |               | 14.500 | 169.00 | 114.00 |
| 0.5748        |             |               | 14.600 | 169.00 | 114.00 |
| 0.5780        | 37/64       |               | 14.680 | 169.00 | 114.00 |
| 0.5807        |             |               | 14.750 | 169.00 | 114.00 |
| 0.5827        |             |               | 14.800 | 169.00 | 114.00 |
| 0.5906        |             |               | 15.000 | 169.00 | 114.00 |
| 0.5937        | 19/32       |               | 15.080 | 178.00 | 120.00 |
| 0.6004        |             |               | 15.250 | 178.00 | 120.00 |
| 0.6094        | 39/64       |               | 15.480 | 178.00 | 120.00 |
| 0.6102        |             |               | 15.500 | 178.00 | 120.00 |
| 0.6201        |             |               | 15.750 | 178.00 | 120.00 |
| 0.6220        |             |               | 15.800 | 178.00 | 120.00 |
| 0.6248        | 5/8         |               | 15.870 | 178.00 | 120.00 |
| 0.6299        |             |               | 16.000 | 178.00 | 120.00 |
| 0.6594        |             |               | 16.750 | 184.00 | 125.00 |
| 0.6693        |             |               | 17.000 | 184.00 | 125.00 |
| 0.6890        |             |               | 17.500 | 191.00 | 130.00 |
| 0.7087        |             |               | 18.000 | 191.00 | 130.00 |
| 0.7283        |             |               | 18.500 | 198.00 | 135.00 |
| 0.7480        |             |               | 19.000 | 198.00 | 135.00 |

### Alternative Drill Series:

- #205 HSS, GT100, 5xD, 118 pt, Bright
- #657 Cobalt, Ti, 5xD, 130 pt, TiN
- #305 Cobalt, GP, 5xD, 118 pt, Oxide
- #530 PM Cobalt, GT500, 5xD, 130 pt, FIREX