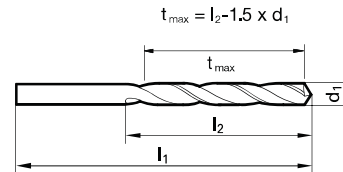


Tool material **HSS**

Surface

- P** Steel ● web thinning ≥ Ø 1.000 • relieved cone • wide flutes • in case of unsatisfactory chip evacuation
  - M** Stainless steel ○
  - K** Cast iron ● cast iron and steels up to 1000 N/mm<sup>2</sup> • Not recommended for: CrNi steels, stainless steels
  - N** Aluminum ●
  - S** Titanium alloys ○
  - H** Hardened steel ○
- =Optimal  
○=Limited



Speeds and feeds information on pg. 498

Shank diameter = cut diameter

| Diameter (d <sub>1</sub> ) |          |      | l <sub>1</sub><br>mm | t <sub>max</sub><br>mm | l <sub>2</sub><br>mm | EDP #         |
|----------------------------|----------|------|----------------------|------------------------|----------------------|---------------|
| inch                       | wire/ltr | mm   |                      |                        |                      |               |
| 0.0394                     |          | 1.00 | 56.00                | 31.50                  | 33.00                | 9005350010000 |
| 0.0402                     | #60      | 1.02 | 56.00                | 31.47                  | 33.00                | 9005350010200 |
| 0.0409                     | #59      | 1.04 | 56.00                | 31.44                  | 33.00                | 9005350010400 |
| 0.0413                     |          | 1.05 | 56.00                | 31.43                  | 33.00                | 9005350010500 |
| 0.0421                     | #58      | 1.07 | 60.00                | 35.40                  | 37.00                | 9005350010700 |
| 0.0429                     | #57      | 1.09 | 60.00                | 35.37                  | 37.00                | 9005350010900 |
| 0.0433                     |          | 1.10 | 60.00                | 35.35                  | 37.00                | 9005350011000 |
| 0.0453                     |          | 1.15 | 60.00                | 35.28                  | 37.00                | 9005350011500 |
| 0.0465                     | #56      | 1.18 | 60.00                | 35.23                  | 37.00                | 9005350011800 |
| 0.0469                     | 3/64     | 1.19 | 65.00                | 39.22                  | 41.00                | 9005350011900 |
| 0.0472                     |          | 1.20 | 65.00                | 39.20                  | 41.00                | 9005350012000 |
| 0.0492                     |          | 1.25 | 65.00                | 39.13                  | 41.00                | 9005350012500 |
| 0.0512                     |          | 1.30 | 65.00                | 39.05                  | 41.00                | 9005350013000 |
| 0.0520                     | #55      | 1.32 | 65.00                | 39.02                  | 41.00                | 9005350013200 |
| 0.0531                     |          | 1.35 | 70.00                | 42.98                  | 45.00                | 9005350013500 |
| 0.0551                     | #54      | 1.40 | 70.00                | 42.90                  | 45.00                | 9005350014000 |
| 0.0571                     |          | 1.45 | 70.00                | 42.83                  | 45.00                | 9005350014500 |
| 0.0591                     |          | 1.50 | 70.00                | 42.75                  | 45.00                | 9005350015000 |
| 0.0594                     | #53      | 1.51 | 76.00                | 47.74                  | 50.00                | 9005350015100 |
| 0.0598                     |          | 1.52 | 76.00                | 47.72                  | 50.00                | 9005350015200 |
| 0.0610                     |          | 1.55 | 76.00                | 47.68                  | 50.00                | 9005350015500 |
| 0.0626                     | 1/16     | 1.59 | 76.00                | 47.62                  | 50.00                | 9005350015900 |
| 0.0630                     |          | 1.60 | 76.00                | 47.60                  | 50.00                | 9005350016000 |
| 0.0650                     |          | 1.65 | 76.00                | 47.53                  | 50.00                | 9005350016500 |
| 0.0657                     |          | 1.67 | 76.00                | 47.50                  | 50.00                | 9005350016700 |
| 0.0669                     | #51      | 1.70 | 76.00                | 47.45                  | 50.00                | 9005350017000 |
| 0.0689                     |          | 1.75 | 80.00                | 50.38                  | 53.00                | 9005350017500 |
| 0.0701                     | #50      | 1.78 | 80.00                | 50.33                  | 53.00                | 9005350017800 |
| 0.0709                     |          | 1.80 | 80.00                | 50.30                  | 53.00                | 9005350018000 |
| 0.0728                     | #49      | 1.85 | 80.00                | 50.23                  | 53.00                | 9005350018500 |
| 0.0748                     |          | 1.90 | 80.00                | 50.15                  | 53.00                | 9005350019000 |
| 0.0760                     | #48      | 1.93 | 85.00                | 53.11                  | 56.00                | 9005350019300 |
| 0.0768                     |          | 1.95 | 85.00                | 53.08                  | 56.00                | 9005350019500 |
| 0.0780                     | 5/64     | 1.98 | 85.00                | 53.03                  | 56.00                | 9005350019800 |
| 0.0783                     | #47      | 1.99 | 85.00                | 53.02                  | 56.00                | 9005350019900 |
| 0.0787                     |          | 2.00 | 85.00                | 53.00                  | 56.00                | 9005350020000 |
| 0.0807                     |          | 2.05 | 85.00                | 52.93                  | 56.00                | 9005350020500 |
| 0.0811                     | #46      | 2.06 | 85.00                | 52.91                  | 56.00                | 9005350020600 |
| 0.0819                     | #45      | 2.08 | 85.00                | 52.88                  | 56.00                | 9005350020800 |
| 0.0827                     |          | 2.10 | 85.00                | 52.85                  | 56.00                | 9005350021000 |
| 0.0846                     |          | 2.15 | 90.00                | 55.78                  | 59.00                | 9005350021500 |
| 0.0858                     | #44      | 2.18 | 90.00                | 55.73                  | 59.00                | 9005350021800 |
| 0.0866                     |          | 2.20 | 90.00                | 55.70                  | 59.00                | 9005350022000 |

| Diameter (d <sub>1</sub> ) |          |      | l <sub>1</sub><br>mm | t <sub>max</sub><br>mm | l <sub>2</sub><br>mm | EDP #         |
|----------------------------|----------|------|----------------------|------------------------|----------------------|---------------|
| inch                       | wire/ltr | mm   |                      |                        |                      |               |
| 0.0886                     |          | 2.25 | 90.00                | 55.63                  | 59.00                | 9005350022500 |
| 0.0890                     | #43      | 2.26 | 90.00                | 55.61                  | 59.00                | 9005350022600 |
| 0.0906                     |          | 2.30 | 90.00                | 55.55                  | 59.00                | 9005350023000 |
| 0.0925                     |          | 2.35 | 90.00                | 55.48                  | 59.00                | 9005350023500 |
| 0.0933                     | #42      | 2.37 | 95.00                | 58.45                  | 62.00                | 9005350023700 |
| 0.0937                     | 3/32     | 2.38 | 95.00                | 58.43                  | 62.00                | 9005350023800 |
| 0.0945                     |          | 2.40 | 95.00                | 58.40                  | 62.00                | 9005350024000 |
| 0.0961                     | #41      | 2.44 | 95.00                | 58.34                  | 62.00                | 9005350024400 |
| 0.0965                     |          | 2.45 | 95.00                | 58.33                  | 62.00                | 9005350024500 |
| 0.0980                     | #40      | 2.49 | 95.00                | 58.27                  | 62.00                | 9005350024900 |
| 0.0984                     |          | 2.50 | 95.00                | 58.25                  | 62.00                | 9005350025000 |
| 0.0996                     | #39      | 2.53 | 95.00                | 58.21                  | 62.00                | 9005350025300 |
| 0.1004                     |          | 2.55 | 95.00                | 58.18                  | 62.00                | 9005350025500 |
| 0.1016                     | #38      | 2.58 | 95.00                | 58.13                  | 62.00                | 9005350025800 |
| 0.1024                     |          | 2.60 | 95.00                | 58.10                  | 62.00                | 9005350026000 |
| 0.1039                     | #37      | 2.64 | 95.00                | 58.04                  | 62.00                | 9005350026400 |
| 0.1043                     |          | 2.65 | 95.00                | 58.03                  | 62.00                | 9005350026500 |
| 0.1063                     |          | 2.70 | 100.00               | 61.95                  | 66.00                | 9005350027000 |
| 0.1067                     | #36      | 2.71 | 100.00               | 61.94                  | 66.00                | 9005350027100 |
| 0.1083                     |          | 2.75 | 100.00               | 61.88                  | 66.00                | 9005350027500 |
| 0.1094                     | 7/64     | 2.78 | 100.00               | 61.83                  | 66.00                | 9005350027800 |
| 0.1098                     | #35      | 2.79 | 100.00               | 61.82                  | 66.00                | 9005350027900 |
| 0.1102                     |          | 2.80 | 100.00               | 61.80                  | 66.00                | 9005350028000 |
| 0.1110                     | #34      | 2.82 | 100.00               | 61.77                  | 66.00                | 9005350028200 |
| 0.1114                     |          | 2.83 | 100.00               | 61.76                  | 66.00                | 9005350028300 |
| 0.1122                     |          | 2.85 | 100.00               | 61.73                  | 66.00                | 9005350028500 |
| 0.1130                     | #33      | 2.87 | 100.00               | 61.70                  | 66.00                | 9005350028700 |
| 0.1142                     |          | 2.90 | 100.00               | 61.65                  | 66.00                | 9005350029000 |
| 0.1161                     | #32      | 2.95 | 100.00               | 61.58                  | 66.00                | 9005350029500 |
| 0.1181                     |          | 3.00 | 100.00               | 61.50                  | 66.00                | 9005350030000 |
| 0.1201                     | #31      | 3.05 | 106.00               | 64.43                  | 69.00                | 9005350030500 |
| 0.1220                     |          | 3.10 | 106.00               | 64.35                  | 69.00                | 9005350031000 |
| 0.1240                     |          | 3.15 | 106.00               | 64.28                  | 69.00                | 9005350031500 |
| 0.1248                     | 1/8      | 3.17 | 106.00               | 64.25                  | 69.00                | 9005350031700 |
| 0.1260                     |          | 3.20 | 106.00               | 64.20                  | 69.00                | 9005350032000 |
| 0.1280                     |          | 3.25 | 106.00               | 64.13                  | 69.00                | 9005350032500 |
| 0.1283                     | #30      | 3.26 | 106.00               | 64.11                  | 69.00                | 9005350032600 |
| 0.1287                     |          | 3.27 | 106.00               | 64.10                  | 69.00                | 9005350032700 |
| 0.1299                     |          | 3.30 | 106.00               | 64.05                  | 69.00                | 9005350033000 |
| 0.1339                     |          | 3.40 | 112.00               | 67.90                  | 73.00                | 9005350034000 |
| 0.1358                     | #29      | 3.45 | 112.00               | 67.83                  | 73.00                | 9005350034500 |
| 0.1378                     |          | 3.50 | 112.00               | 67.75                  | 73.00                | 9005350035000 |
| 0.1406                     | 9/64 #28 | 3.57 | 112.00               | 67.65                  | 73.00                | 9005350035700 |

Taper Length

| Diameter (d <sub>1</sub> ) |          |      | l <sub>1</sub><br>mm | t <sub>max</sub><br>mm | l <sub>2</sub><br>mm | EDP #         |
|----------------------------|----------|------|----------------------|------------------------|----------------------|---------------|
| inch                       | wire/ltr | mm   |                      |                        |                      |               |
| 0.1417                     |          | 3.60 | 112.00               | 67.60                  | 73.00                | 9005350036000 |
| 0.1441                     | #27      | 3.66 | 112.00               | 67.51                  | 73.00                | 9005350036600 |
| 0.1457                     |          | 3.70 | 112.00               | 67.45                  | 73.00                | 9005350037000 |
| 0.1469                     | #26      | 3.73 | 112.00               | 67.41                  | 73.00                | 9005350037300 |
| 0.1476                     |          | 3.75 | 112.00               | 67.38                  | 73.00                | 9005350037500 |
| 0.1496                     | #25      | 3.80 | 119.00               | 72.30                  | 78.00                | 9005350038000 |
| 0.1520                     | #24      | 3.86 | 119.00               | 72.21                  | 78.00                | 9005350038600 |
| 0.1535                     |          | 3.90 | 119.00               | 72.15                  | 78.00                | 9005350039000 |
| 0.1539                     | #23      | 3.91 | 119.00               | 72.14                  | 78.00                | 9005350039100 |
| 0.1563                     | 5/32     | 3.97 | 119.00               | 72.05                  | 78.00                | 9005350039700 |
| 0.1571                     | #22      | 3.99 | 119.00               | 72.02                  | 78.00                | 9005350039900 |
| 0.1575                     |          | 4.00 | 119.00               | 72.00                  | 78.00                | 9005350040000 |
| 0.1591                     | #21      | 4.04 | 119.00               | 71.94                  | 78.00                | 9005350040400 |
| 0.1610                     | #20      | 4.09 | 119.00               | 71.87                  | 78.00                | 9005350040900 |
| 0.1614                     |          | 4.10 | 119.00               | 71.85                  | 78.00                | 9005350041000 |
| 0.1634                     |          | 4.15 | 119.00               | 71.78                  | 78.00                | 9005350041500 |
| 0.1654                     |          | 4.20 | 119.00               | 71.70                  | 78.00                | 9005350042000 |
| 0.1661                     | #19      | 4.22 | 119.00               | 71.67                  | 78.00                | 9005350042200 |
| 0.1673                     |          | 4.25 | 119.00               | 71.63                  | 78.00                | 9005350042500 |
| 0.1693                     | #18      | 4.30 | 126.00               | 75.55                  | 82.00                | 9005350043000 |
| 0.1713                     |          | 4.35 | 126.00               | 75.48                  | 82.00                | 9005350043500 |
| 0.1720                     | 11/64    | 4.37 | 126.00               | 75.45                  | 82.00                | 9005350043700 |
| 0.1728                     | #17      | 4.39 | 126.00               | 75.42                  | 82.00                | 9005350043900 |
| 0.1732                     |          | 4.40 | 126.00               | 75.40                  | 82.00                | 9005350044000 |
| 0.1772                     | #16      | 4.50 | 126.00               | 75.25                  | 82.00                | 9005350045000 |
| 0.1799                     | #15      | 4.57 | 126.00               | 75.15                  | 82.00                | 9005350045700 |
| 0.1811                     |          | 4.60 | 126.00               | 75.10                  | 82.00                | 9005350046000 |
| 0.1819                     | #14      | 4.62 | 126.00               | 75.07                  | 82.00                | 9005350046200 |
| 0.1850                     | #13      | 4.70 | 126.00               | 74.95                  | 82.00                | 9005350047000 |
| 0.1870                     |          | 4.75 | 126.00               | 74.88                  | 82.00                | 9005350047500 |
| 0.1874                     | 3/16     | 4.76 | 132.00               | 79.86                  | 87.00                | 9005350047600 |
| 0.1890                     | #12      | 4.80 | 132.00               | 79.80                  | 87.00                | 9005350048000 |
| 0.1909                     | #11      | 4.85 | 132.00               | 79.73                  | 87.00                | 9005350048500 |
| 0.1929                     |          | 4.90 | 132.00               | 79.65                  | 87.00                | 9005350049000 |
| 0.1937                     | #10      | 4.92 | 132.00               | 79.62                  | 87.00                | 9005350049200 |
| 0.1961                     | #9       | 4.98 | 132.00               | 79.53                  | 87.00                | 9005350049800 |
| 0.1969                     |          | 5.00 | 132.00               | 79.50                  | 87.00                | 9005350050000 |
| 0.1988                     |          | 5.05 | 132.00               | 79.43                  | 87.00                | 9005350050500 |
| 0.1992                     | #8       | 5.06 | 132.00               | 79.41                  | 87.00                | 9005350050600 |
| 0.2008                     |          | 5.10 | 132.00               | 79.35                  | 87.00                | 9005350051000 |
| 0.2012                     | #7       | 5.11 | 132.00               | 79.34                  | 87.00                | 9005350051100 |
| 0.2031                     | 13/64    | 5.16 | 132.00               | 79.26                  | 87.00                | 9005350051600 |
| 0.2039                     | #6       | 5.18 | 132.00               | 79.23                  | 87.00                | 9005350051800 |
| 0.2047                     |          | 5.20 | 132.00               | 79.20                  | 87.00                | 9005350052000 |
| 0.2055                     | #5       | 5.22 | 132.00               | 79.17                  | 87.00                | 9005350052200 |
| 0.2067                     |          | 5.25 | 132.00               | 79.13                  | 87.00                | 9005350052500 |
| 0.2087                     |          | 5.30 | 132.00               | 79.05                  | 87.00                | 9005350053000 |
| 0.2091                     | #4       | 5.31 | 139.00               | 83.04                  | 91.00                | 9005350053100 |
| 0.2126                     |          | 5.40 | 139.00               | 82.90                  | 91.00                | 9005350054000 |
| 0.2130                     | #3       | 5.41 | 139.00               | 82.89                  | 91.00                | 9005350054100 |
| 0.2165                     |          | 5.50 | 139.00               | 82.75                  | 91.00                | 9005350055000 |
| 0.2189                     | 7/32     | 5.56 | 139.00               | 82.66                  | 91.00                | 9005350055600 |
| 0.2205                     |          | 5.60 | 139.00               | 82.60                  | 91.00                | 9005350056000 |
| 0.2209                     | #2       | 5.61 | 139.00               | 82.59                  | 91.00                | 9005350056100 |
| 0.2244                     |          | 5.70 | 139.00               | 82.45                  | 91.00                | 9005350057000 |
| 0.2264                     |          | 5.75 | 139.00               | 82.38                  | 91.00                | 9005350057500 |
| 0.2280                     | #1       | 5.79 | 139.00               | 82.32                  | 91.00                | 9005350057900 |
| 0.2283                     |          | 5.80 | 139.00               | 82.30                  | 91.00                | 9005350058000 |
| 0.2323                     |          | 5.90 | 139.00               | 82.15                  | 91.00                | 9005350059000 |
| 0.2339                     | A        | 5.94 | 139.00               | 82.09                  | 91.00                | 9005350059400 |
| 0.2343                     | 15/64    | 5.95 | 139.00               | 82.08                  | 91.00                | 9005350059500 |
| 0.2362                     |          | 6.00 | 139.00               | 82.00                  | 91.00                | 9005350060000 |
| 0.2378                     | B        | 6.04 | 148.00               | 87.94                  | 97.00                | 9005350060400 |
| 0.2382                     |          | 6.05 | 148.00               | 87.93                  | 97.00                | 9005350060500 |
| 0.2402                     |          | 6.10 | 148.00               | 87.85                  | 97.00                | 9005350061000 |

| Diameter (d <sub>1</sub> ) |          |      | l <sub>1</sub><br>mm | t <sub>max</sub><br>mm | l <sub>2</sub><br>mm | EDP #         |               |
|----------------------------|----------|------|----------------------|------------------------|----------------------|---------------|---------------|
| inch                       | wire/ltr | mm   |                      |                        |                      |               |               |
| 0.2421                     | C        | 6.15 | 148.00               | 87.78                  | 97.00                | 9005350061500 |               |
| 0.2441                     |          | 6.20 | 148.00               | 87.70                  | 97.00                | 9005350062000 |               |
| 0.2461                     | D        | 6.25 | 148.00               | 87.63                  | 97.00                | 9005350062500 |               |
| 0.2480                     |          | 6.30 | 148.00               | 87.55                  | 97.00                | 9005350063000 |               |
| 0.2500                     | 1/4      | E    | 6.35                 | 148.00                 | 87.48                | 97.00         | 9005350063500 |
| 0.2520                     |          | 6.40 | 148.00               | 87.40                  | 97.00                | 9005350064000 |               |
| 0.2559                     |          | 6.50 | 148.00               | 87.25                  | 97.00                | 9005350065000 |               |
| 0.2571                     |          | 6.53 | 148.00               | 87.21                  | 97.00                | 9005350065300 |               |
| 0.2598                     |          | 6.60 | 148.00               | 87.10                  | 97.00                | 9005350066000 |               |
| 0.2610                     | G        | 6.63 | 148.00               | 87.06                  | 97.00                | 9005350066300 |               |
| 0.2638                     |          | 6.70 | 148.00               | 86.95                  | 97.00                | 9005350067000 |               |
| 0.2657                     | 17/64    | H    | 6.75                 | 156.00                 | 91.88                | 102.00        | 9005350067500 |
| 0.2677                     |          | 6.80 | 156.00               | 91.80                  | 102.00               | 9005350068000 |               |
| 0.2717                     | I        | 6.90 | 156.00               | 91.65                  | 102.00               | 9005350069000 |               |
| 0.2756                     |          | 7.00 | 156.00               | 91.50                  | 102.00               | 9005350070000 |               |
| 0.2768                     | J        | 7.03 | 156.00               | 91.46                  | 102.00               | 9005350070300 |               |
| 0.2772                     |          | 7.04 | 156.00               | 91.44                  | 102.00               | 9005350070400 |               |
| 0.2795                     |          | 7.10 | 156.00               | 91.35                  | 102.00               | 9005350071000 |               |
| 0.2811                     | 9/32     | K    | 7.14                 | 156.00                 | 91.29                | 102.00        | 9005350071400 |
| 0.2835                     |          | 7.20 | 156.00               | 91.20                  | 102.00               | 9005350072000 |               |
| 0.2874                     |          | 7.30 | 156.00               | 91.05                  | 102.00               | 9005350073000 |               |
| 0.2902                     | L        | 7.37 | 156.00               | 90.95                  | 102.00               | 9005350073700 |               |
| 0.2913                     |          | 7.40 | 156.00               | 90.90                  | 102.00               | 9005350074000 |               |
| 0.2933                     |          | 7.45 | 156.00               | 90.83                  | 102.00               | 9005350074500 |               |
| 0.2949                     | M        | 7.49 | 156.00               | 90.77                  | 102.00               | 9005350074900 |               |
| 0.2953                     |          | 7.50 | 156.00               | 90.75                  | 102.00               | 9005350075000 |               |
| 0.2969                     | 19/64    | 7.54 | 165.00               | 97.69                  | 109.00               | 9005350075400 |               |
| 0.2992                     |          | 7.60 | 165.00               | 97.60                  | 109.00               | 9005350076000 |               |
| 0.3020                     | N        | 7.67 | 165.00               | 97.50                  | 109.00               | 9005350076700 |               |
| 0.3031                     |          | 7.70 | 165.00               | 97.45                  | 109.00               | 9005350077000 |               |
| 0.3051                     |          | 7.75 | 165.00               | 97.38                  | 109.00               | 9005350077500 |               |
| 0.3071                     |          | 7.80 | 165.00               | 97.30                  | 109.00               | 9005350078000 |               |
| 0.3091                     |          | 7.85 | 165.00               | 97.23                  | 109.00               | 9005350078500 |               |
| 0.3110                     |          | 7.90 | 165.00               | 97.15                  | 109.00               | 9005350079000 |               |
| 0.3126                     | 5/16     | 7.94 | 165.00               | 97.09                  | 109.00               | 9005350079400 |               |
| 0.3150                     |          | 8.00 | 165.00               | 97.00                  | 109.00               | 9005350080000 |               |
| 0.3161                     | O        | 8.03 | 165.00               | 96.96                  | 109.00               | 9005350080300 |               |
| 0.3189                     |          | 8.10 | 165.00               | 96.85                  | 109.00               | 9005350081000 |               |
| 0.3228                     | P        | 8.20 | 165.00               | 96.70                  | 109.00               | 9005350082000 |               |
| 0.3268                     |          | 8.30 | 165.00               | 96.55                  | 109.00               | 9005350083000 |               |
| 0.3280                     | 21/64    | 8.33 | 165.00               | 96.51                  | 109.00               | 9005350083300 |               |
| 0.3307                     |          | 8.40 | 165.00               | 96.40                  | 109.00               | 9005350084000 |               |
| 0.3319                     | Q        | 8.43 | 165.00               | 96.36                  | 109.00               | 9005350084300 |               |
| 0.3346                     |          | 8.50 | 165.00               | 96.25                  | 109.00               | 9005350085000 |               |
| 0.3386                     |          | 8.60 | 175.00               | 102.10                 | 115.00               | 9005350086000 |               |
| 0.3390                     | R        | 8.61 | 175.00               | 102.09                 | 115.00               | 9005350086100 |               |
| 0.3425                     |          | 8.70 | 175.00               | 101.95                 | 115.00               | 9005350087000 |               |
| 0.3437                     | 11/32    | 8.73 | 175.00               | 101.91                 | 115.00               | 9005350087300 |               |
| 0.3465                     |          | 8.80 | 175.00               | 101.80                 | 115.00               | 9005350088000 |               |
| 0.3480                     | S        | 8.84 | 175.00               | 101.74                 | 115.00               | 9005350088400 |               |
| 0.3504                     |          | 8.90 | 175.00               | 101.65                 | 115.00               | 9005350089000 |               |
| 0.3543                     |          | 9.00 | 175.00               | 101.50                 | 115.00               | 9005350090000 |               |
| 0.3579                     | T        | 9.09 | 175.00               | 101.37                 | 115.00               | 9005350090900 |               |
| 0.3583                     |          | 9.10 | 175.00               | 101.35                 | 115.00               | 9005350091000 |               |
| 0.3594                     | 23/64    | 9.13 | 175.00               | 101.31                 | 115.00               | 9005350091300 |               |
| 0.3622                     |          | 9.20 | 175.00               | 101.20                 | 115.00               | 9005350092000 |               |
| 0.3642                     |          | 9.25 | 175.00               | 101.13                 | 115.00               | 9005350092500 |               |
| 0.3661                     |          | 9.30 | 175.00               | 101.05                 | 115.00               | 9005350093000 |               |
| 0.3681                     |          | 9.35 | 175.00               | 100.98                 | 115.00               | 9005350093500 |               |
| 0.3701                     |          | 9.40 | 175.00               | 100.90                 | 115.00               | 9005350094000 |               |
| 0.3740                     |          | 9.50 | 175.00               | 100.75                 | 115.00               | 9005350095000 |               |
| 0.3748                     | 3/8      | 9.52 | 184.00               | 106.72                 | 121.00               | 9005350095200 |               |
| 0.3780                     |          | 9.60 | 184.00               | 106.60                 | 121.00               | 9005350096000 |               |
| 0.3819                     |          | 9.70 | 184.00               | 106.45                 | 121.00               | 9005350097000 |               |
| 0.3858                     | W        | 9.80 | 184.00               | 106.30                 | 121.00               | 9005350098000 |               |

Taper Length

| Diameter (d <sub>1</sub> ) |          |       | l <sub>1</sub><br>mm | t <sub>max</sub><br>mm | l <sub>2</sub><br>mm | EDP #                |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|----------------------|
| inch                       | wire/ltr | mm    |                      |                        |                      |                      |
| 0.3898                     |          | 9.90  | 184.00               | 106.15                 | 121.00               | <b>9005350099000</b> |
| 0.3906                     | 25/64    | 9.92  | 184.00               | 106.12                 | 121.00               | <b>9005350099200</b> |
| 0.3937                     |          | 10.00 | 184.00               | 106.00                 | 121.00               | <b>9005350100000</b> |
| 0.3969                     | X        | 10.08 | 184.00               | 105.88                 | 121.00               | <b>9005350100800</b> |
| 0.3976                     |          | 10.10 | 184.00               | 105.85                 | 121.00               | <b>9005350101000</b> |
| 0.4016                     |          | 10.20 | 184.00               | 105.70                 | 121.00               | <b>9005350102000</b> |
| 0.4055                     |          | 10.30 | 184.00               | 105.55                 | 121.00               | <b>9005350103000</b> |
| 0.4063                     | 13/32    | 10.32 | 184.00               | 105.52                 | 121.00               | <b>9005350103200</b> |
| 0.4094                     |          | 10.40 | 184.00               | 105.40                 | 121.00               | <b>9005350104000</b> |
| 0.4130                     | Z        | 10.49 | 184.00               | 105.27                 | 121.00               | <b>9005350104900</b> |
| 0.4134                     |          | 10.50 | 184.00               | 105.25                 | 121.00               | <b>9005350105000</b> |
| 0.4220                     | 27/64    | 10.72 | 195.00               | 111.92                 | 128.00               | <b>9005350107200</b> |
| 0.4252                     |          | 10.80 | 195.00               | 111.80                 | 128.00               | <b>9005350108000</b> |
| 0.4291                     |          | 10.90 | 195.00               | 111.65                 | 128.00               | <b>9005350109000</b> |
| 0.4331                     |          | 11.00 | 195.00               | 111.50                 | 128.00               | <b>9005350110000</b> |
| 0.4370                     |          | 11.10 | 195.00               | 111.35                 | 128.00               | <b>9005350111000</b> |
| 0.4374                     | 7/16     | 11.11 | 195.00               | 111.34                 | 128.00               | <b>9005350111100</b> |
| 0.4449                     |          | 11.30 | 195.00               | 111.05                 | 128.00               | <b>9005350113000</b> |

| Diameter (d <sub>1</sub> ) |          |       | l <sub>1</sub><br>mm | t <sub>max</sub><br>mm | l <sub>2</sub><br>mm | EDP #                |
|----------------------------|----------|-------|----------------------|------------------------|----------------------|----------------------|
| inch                       | wire/ltr | mm    |                      |                        |                      |                      |
| 0.4488                     |          | 11.40 | 195.00               | 110.90                 | 128.00               | <b>9005350114000</b> |
| 0.4528                     |          | 11.50 | 195.00               | 110.75                 | 128.00               | <b>9005350115000</b> |
| 0.4531                     | 29/64    | 11.51 | 195.00               | 110.74                 | 128.00               | <b>9005350115100</b> |
| 0.4646                     |          | 11.80 | 195.00               | 110.30                 | 128.00               | <b>9005350118000</b> |
| 0.4685                     |          | 11.90 | 205.00               | 116.15                 | 134.00               | <b>9005350119000</b> |
| 0.4689                     | 15/32    | 11.91 | 205.00               | 116.14                 | 134.00               | <b>9005350119100</b> |
| 0.4724                     |          | 12.00 | 205.00               | 116.00                 | 134.00               | <b>9005350120000</b> |
| 0.4843                     | 31/64    | 12.30 | 205.00               | 115.55                 | 134.00               | <b>9005350123000</b> |
| 0.4921                     |          | 12.50 | 205.00               | 115.25                 | 134.00               | <b>9005350125000</b> |
| 0.4961                     |          | 12.60 | 205.00               | 115.10                 | 134.00               | <b>9005350126000</b> |
| 0.5000                     | 1/2      | 12.70 | 205.00               | 114.95                 | 134.00               | <b>9005350127000</b> |
| 0.5118                     |          | 13.00 | 205.00               | 114.50                 | 134.00               | <b>9005350130000</b> |
| 0.5157                     | 33/64    | 13.10 | 205.00               | 114.35                 | 134.00               | <b>9005350131000</b> |
| 0.5311                     | 17/32    | 13.49 | 214.00               | 119.77                 | 140.00               | <b>9005350134900</b> |
| 0.5315                     |          | 13.50 | 214.00               | 119.75                 | 140.00               | <b>9005350135000</b> |
| 0.5469                     | 35/64    | 13.89 | 214.00               | 119.17                 | 140.00               | <b>9005350138900</b> |
| 0.5472                     |          | 13.90 | 214.00               | 119.15                 | 140.00               | <b>9005350139000</b> |
| 0.5512                     |          | 14.00 | 214.00               | 119.00                 | 140.00               | <b>9005350140000</b> |

Taper Length

Series # 535

| Material group                                                                                    | Hardness |       | SFM | Feed Rate - IPR      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|---------------------------------------------------------------------------------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
|                                                                                                   | HRc      | Bhn   |     | 1/16 in.<br>1.590 mm | 1/8 in.<br>3.170 mm | 1/4 in.<br>6.350 mm | 3/8 in.<br>9.520 mm | 1/2 in.<br>12.700 mm | 5/8 in.<br>15.870 mm | 3/4 in.<br>19.050 mm | 1 in.<br>25.400 mm | 1 1/4 in.<br>31.750 mm | 1 1/2 in.<br>38.100 mm |
| Common structural steels                                                                          | -        | ≤ 150 | 90  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 | 70  | 0.0015               | 0.0040              | 0.0065              | 0.0080              | 0.0100               | 0.0100               |                      |                    |                        |                        |
| Free-cutting steels                                                                               | ≤ 25     | ≤ 255 | 90  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 | 70  | 0.0015               | 0.0040              | 0.0065              | 0.0080              | 0.0100               | 0.0100               |                      |                    |                        |                        |
| Unalloyed heat-treatable steels                                                                   | ≤ 20     | ≤ 220 | 90  | 0.0015               | 0.0040              | 0.0065              | 0.0080              | 0.0100               | 0.0100               |                      |                    |                        |                        |
|                                                                                                   | ≤ 25     | ≤ 255 | 90  | 0.0015               | 0.0040              | 0.0065              | 0.0080              | 0.0100               | 0.0100               |                      |                    |                        |                        |
| Alloyed heat-treatable steels                                                                     | ≤ 32     | ≤ 301 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | ≤ 43     | ≤ 402 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Unalloyed case hardened steels                                                                    | ≤ 25     | ≤ 255 | 90  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
| Alloyed case hardened steels                                                                      | ≤ 32     | ≤ 301 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Nitriding steels                                                                                  | ≤ 32     | ≤ 301 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | ≤ 43     | ≤ 402 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Tool steels                                                                                       | ≤ 25     | ≤ 255 | 45  | 0.0012               | 0.0030              | 0.0050              | 0.0065              | 0.0080               | 0.0080               |                      |                    |                        |                        |
| High speed steels                                                                                 | ≤ 43     | ≤ 402 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | ≤ 38     | ≤ 354 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Hardened steels                                                                                   | ≤ 48     | ≤ 460 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Stainless steels, sulphured<br>austenitic<br>martensitic                                          | ≤ 28     | ≤ 273 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | ≤ 36     | ≤ 337 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Cast iron                                                                                         | ≤ 23     | ≤ 242 | 90  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
|                                                                                                   | ≤ 38     | ≤ 354 | 70  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
| Spheroidal graphite iron and<br>malleable cast iron                                               | ≤ 23     | ≤ 242 | 70  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
|                                                                                                   | ≤ 38     | ≤ 354 | 55  | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
| Chilled cast iron                                                                                 | ≤ 38     | ≤ 354 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| New cast materials GGV                                                                            | ≤ 20     | ≤ 220 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| New cast materials ADI                                                                            | ≤ 32     | ≤ 301 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | ≤ 43     | ≤ 402 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Special alloys                                                                                    | ≤ 54     | ≤ 549 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Ti and Ti-alloys                                                                                  | ≤ 25     | ≤ 255 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Aluminium and Al-alloys                                                                           | -        | ≤ 120 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | -        | ≤ 200 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Al wrought alloys                                                                                 | -        | ≤ 180 | 180 | 0.0020               | 0.0065              | 0.0100              | 0.0125              | 0.0160               | 0.0160               |                      |                    |                        |                        |
| Al cast alloys ≤ 10 % Si<br>≤ 24 % Si                                                             | -        | ≤ 180 | 145 | 0.0017               | 0.0050              | 0.0080              | 0.0100              | 0.0125               | 0.0125               |                      |                    |                        |                        |
| Magnesium alloys                                                                                  | -        | ≤ 120 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Copper, low-alloyed                                                                               | -        | ≤ 150 | 90  | 0.0015               | 0.0040              | 0.0065              | 0.0080              | 0.0100               | 0.0100               |                      |                    |                        |                        |
| Brass, short-chipping<br>long-chipping                                                            | -        | ≤ 180 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Bronze, short-chipping                                                                            | -        | ≤ 180 | 110 | 0.0015               | 0.0040              | 0.0065              | 0.0080              | 0.0100               | 0.0100               |                      |                    |                        |                        |
| Bronze, long-chipping                                                                             | ≤ 25     | ≤ 255 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Duroplastics<br>Thermoplastics<br>Reinforced plastics - Kevlar<br>Reinforced plastics - GFK / CFK | ≤ 25     | ≤ 255 | 70  | 0.0012               | 0.0030              | 0.0050              | 0.0065              | 0.0080               | 0.0080               |                      |                    |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |

Series # 546

| Material group                                                                                    | Hardness |       | SFM | Feed Rate - IPR      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|---------------------------------------------------------------------------------------------------|----------|-------|-----|----------------------|---------------------|---------------------|---------------------|----------------------|----------------------|----------------------|--------------------|------------------------|------------------------|
|                                                                                                   | HRc      | Bhn   |     | 1/16 in.<br>1.590 mm | 1/8 in.<br>3.170 mm | 1/4 in.<br>6.350 mm | 3/8 in.<br>9.520 mm | 1/2 in.<br>12.700 mm | 5/8 in.<br>15.870 mm | 3/4 in.<br>19.050 mm | 1 in.<br>25.400 mm | 1 1/4 in.<br>31.750 mm | 1 1/2 in.<br>38.100 mm |
| Common structural steels                                                                          | -        | ≤ 150 | 245 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 | 230 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Free-cutting steels                                                                               | ≤ 25     | ≤ 255 | 260 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 | 230 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Unalloyed heat-treatable steels                                                                   | ≤ 20     | ≤ 220 | 260 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
|                                                                                                   | ≤ 25     | ≤ 255 | 230 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Alloyed heat-treatable steels                                                                     | ≤ 32     | ≤ 301 | 195 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
|                                                                                                   | ≤ 43     | ≤ 402 | 165 |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
| Unalloyed case hardened steels                                                                    | ≤ 25     | ≤ 255 | 260 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
| Alloyed case hardened steels                                                                      | ≤ 32     | ≤ 301 | 195 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Nitriding steels                                                                                  | ≤ 43     | ≤ 402 | 165 |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 | 165 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Tool steels                                                                                       | ≤ 43     | ≤ 402 | 130 |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
|                                                                                                   | ≤ 25     | ≤ 255 | 165 |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
| High speed steels                                                                                 | ≤ 43     | ≤ 402 | 130 |                      | 0.0016              | 0.0025              | 0.0039              | 0.0039               | 0.0049               | 0.0063               | 0.0079             |                        |                        |
|                                                                                                   | ≤ 38     | ≤ 354 | 80  |                      | 0.0016              | 0.0025              | 0.0039              | 0.0039               | 0.0049               | 0.0063               | 0.0079             |                        |                        |
| Hardened steels                                                                                   | ≤ 48     | ≤ 460 | 65  |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
| Stainless steels, sulphured<br>austenitic<br>martensitic                                          | ≤ 28     | ≤ 273 | 80  |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
|                                                                                                   | ≤ 36     | ≤ 337 | 80  |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
| Cast iron                                                                                         | ≤ 46     | ≤ 435 | 80  |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
|                                                                                                   | ≤ 23     | ≤ 242 | 295 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Spheroidal graphite iron and<br>malleable cast iron                                               | ≤ 38     | ≤ 354 | 260 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
|                                                                                                   | ≤ 23     | ≤ 242 | 260 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
| Chilled cast iron                                                                                 | ≤ 38     | ≤ 354 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| New cast materials GGV                                                                            | ≤ 20     | ≤ 220 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| New cast materials ADI                                                                            | ≤ 32     | ≤ 301 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
|                                                                                                   | ≤ 43     | ≤ 402 |     |                      |                     |                     |                     |                      |                      |                      |                    |                        |                        |
| Special alloys                                                                                    | ≤ 54     | ≤ 549 | 50  |                      | 0.0016              | 0.0025              | 0.0039              | 0.0039               | 0.0049               | 0.0063               | 0.0079             |                        |                        |
| Ti and Ti-alloys                                                                                  | ≤ 25     | ≤ 255 | 65  |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |
| Aluminium and Al-alloys                                                                           | -        | ≤ 120 | 655 |                      | 0.0016              | 0.0025              | 0.0039              | 0.0039               | 0.0049               | 0.0063               | 0.0079             |                        |                        |
|                                                                                                   | -        | ≤ 200 | 655 |                      | 0.0016              | 0.0025              | 0.0039              | 0.0039               | 0.0049               | 0.0063               | 0.0079             |                        |                        |
| Al wrought alloys                                                                                 | -        | ≤ 180 | 490 |                      | 0.0039              | 0.0063              | 0.0098              | 0.0098               | 0.0124               | 0.0157               | 0.0197             |                        |                        |
| Al cast alloys ≤ 10 % Si<br>≤ 24 % Si                                                             | -        | ≤ 180 | 395 |                      | 0.0039              | 0.0063              | 0.0098              | 0.0098               | 0.0124               | 0.0157               | 0.0197             |                        |                        |
| Magnesium alloys                                                                                  | -        | ≤ 120 | 590 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
| Copper, low-alloyed                                                                               | -        | ≤ 150 | 260 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
| Brass, short-chipping<br>long-chipping                                                            | -        | ≤ 180 | 590 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
| Bronze, short-chipping                                                                            | -        | ≤ 180 | 395 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
| Bronze, long-chipping                                                                             | ≤ 25     | ≤ 255 | 395 |                      | 0.0031              | 0.0049              | 0.0079              | 0.0079               | 0.0098               | 0.0124               | 0.0157             |                        |                        |
| Duroplastics<br>Thermoplastics<br>Reinforced plastics - Kevlar<br>Reinforced plastics - GFK / CFK | ≤ 25     | ≤ 255 | 230 |                      | 0.0025              | 0.0039              | 0.0063              | 0.0063               | 0.0079               | 0.0098               | 0.0124             |                        |                        |
|                                                                                                   | ≤ 32     | ≤ 301 | 165 |                      | 0.0020              | 0.0031              | 0.0049              | 0.0049               | 0.0063               | 0.0079               | 0.0098             |                        |                        |