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## TURNING FEEDS AND SPEEDS CONVERSION TABLE SURFACE/CUTTING SPEED TO R.P.M. SURFACE/CUTTING SPEED: METRES PER MINUTE

| DIAMETER |        | 3                      | 5   | 8    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45                     | 50   | 60   | 70    | 80    | 90    | 100   | 200   |
|----------|--------|------------------------|-----|------|------|------|------|------|------|------|------|------------------------|------|------|-------|-------|-------|-------|-------|
| (mm)     | (inch) | SPINDLE SPEED (R.P.M.) |     |      |      |      |      |      |      |      |      | SPINDLE SPEED (R.P.M.) |      |      |       |       |       |       |       |
| 2        |        | 477                    | 795 | 1272 | 1590 | 2386 | 3181 | 3976 | 4771 | 5566 | 6362 | 7157                   | 7952 | 9542 | 11133 | 12723 | 14314 | 15904 | 31808 |
| 3        |        | 318                    | 530 | 848  | 1060 | 1590 | 2121 | 2651 | 3181 | 3711 | 4241 | 4771                   | 5301 | 6362 | 7422  | 8482  | 9543  | 10603 | 21206 |
|          | 1/8    | 300                    | 500 | 800  | 1000 | 1200 | 1500 | 2501 | 3001 | 3501 | 4001 | 4501                   | 5001 | 6002 | 7002  | 8002  | 9003  | 10003 | 20006 |
| 4        |        | 239                    | 398 | 636  | 795  | 1193 | 1590 | 1988 | 2386 | 2783 | 3181 | 3578                   | 3976 | 4771 | 5566  | 6362  | 7157  | 7952  | 15904 |
|          | 3/16   | 200                    | 334 | 535  | 668  | 1002 | 1336 | 1671 | 2005 | 2339 | 2673 | 3007                   | 3341 | 4009 | 4678  | 5346  | 6014  | 6682  | 13364 |
| 5        |        | 191                    | 318 | 509  | 636  | 954  | 1272 | 1590 | 1908 | 2227 | 2546 | 2865                   | 3183 | 3820 | 4456  | 5093  | 5730  | 6366  | 12732 |
| 6        |        | 159                    | 265 | 424  | 530  | 795  | 1060 | 1325 | 1590 | 1855 | 2122 | 2387                   | 2653 | 3183 | 3714  | 4244  | 4775  | 5305  | 10610 |
|          | 1/4    | 150                    | 250 | 401  | 501  | 751  | 1002 | 1252 | 1503 | 1753 | 2004 | 2254                   | 2505 | 3005 | 3506  | 4007  | 4508  | 5009  | 10018 |
|          | 5/16   | 120                    | 200 | 320  | 401  | 601  | 801  | 1002 | 1202 | 1402 | 1602 | 1803                   | 2003 | 2404 | 2804  | 3205  | 3606  | 4006  | 8012  |
| 8        |        | 119                    | 199 | 318  | 398  | 596  | 795  | 994  | 1193 | 1392 | 1592 | 1790                   | 1989 | 2387 | 2785  | 3183  | 3581  | 3979  | 7958  |
|          | 3/8    | 100                    | 167 | 267  | 334  | 501  | 668  | 834  | 1001 | 1168 | 1335 | 1502                   | 1669 | 2003 | 2336  | 2670  | 3004  | 3338  | 6676  |
| 10       |        | 95                     | 159 | 254  | 318  | 477  | 636  | 795  | 954  | 1113 | 1273 | 1432                   | 1592 | 1910 | 2228  | 2546  | 2865  | 3183  | 6366  |
|          | 7/16   | 86                     | 143 | 229  | 286  | 429  | 573  | 716  | 859  | 1002 | 1145 | 1288                   | 1432 | 1718 | 2004  | 2290  | 2577  | 2863  | 5726  |
| 12       |        | 80                     | 133 | 212  | 265  | 398  | 530  | 663  | 795  | 928  | 1061 | 1194                   | 1326 | 1592 | 1857  | 2122  | 2387  | 2653  | 5305  |
|          | 1/2    | 75                     | 125 | 200  | 250  | 376  | 501  | 626  | 751  | 877  | 1002 | 1127                   | 1252 | 1503 | 1753  | 2004  | 2255  | 2505  | 5010  |
| 14       |        | 68                     | 114 | 182  | 227  | 341  | 454  | 568  | 682  | 795  | 909  | 1022                   | 1136 | 1363 | 1590  | 1818  | 2045  | 2272  | 4544  |
|          | 9/16   | 67                     | 111 | 178  | 223  | 334  | 445  | 556  | 668  | 779  | 890  | 1002                   | 1113 | 1336 | 1558  | 1781  | 2004  | 2226  | 4452  |
|          | 5/8    | 60                     | 100 | 160  | 200  | 300  | 401  | 501  | 601  | 701  | 801  | 901                    | 1002 | 1202 | 1402  | 1602  | 1803  | 2003  | 4006  |
| 16       |        | 60                     | 99  | 159  | 199  | 298  | 398  | 497  | 596  | 696  | 795  | 895                    | 995  | 1194 | 1393  | 1591  | 1790  | 1989  | 3979  |
| 18       |        | 53                     | 88  | 141  | 171  | 265  | 353  | 442  | 530  | 618  | 707  | 795                    | 884  | 1060 | 1237  | 1414  | 1590  | 1767  | 3534  |
|          | 3/4    | 50                     | 83  | 134  | 167  | 250  | 334  | 417  | 501  | 584  | 667  | 751                    | 835  | 1002 | 1169  | 1336  | 1503  | 1670  | 3340  |
| 20       |        | 48                     | 80  | 127  | 159  | 239  | 318  | 398  | 477  | 557  | 637  | 716                    | 796  | 955  | 1114  | 1273  | 1432  | 1592  | 3183  |
| 22       |        | 43                     | 72  | 116  | 145  | 217  | 29   | 361  | 434  | 506  | 578  | 651                    | 723  | 867  | 1012  | 1157  | 1301  | 1446  | 2892  |
|          | 7/8    | 43                     | 72  | 114  | 143  | 215  | 286  | 358  | 429  | 501  | 572  | 644                    | 716  | 859  | 1002  | 1145  | 1288  | 1431  | 2862  |
| 24       |        | 40                     | 66  | 106  | 133  | 199  | 265  | 331  | 398  | 464  | 530  | 596                    | 663  | 795  | 928   | 1060  | 1192  | 1325  | 2650  |
| 25       |        | 38                     | 64  | 102  | 127  | 191  | 254  | 318  | 382  | 445  | 509  | 573                    | 637  | 764  | 891   | 1019  | 1146  | 1273  | 2546  |
|          | 1      | 38                     | 63  | 100  | 125  | 251  | 250  | 313  | 376  | 438  | 501  | 564                    | 626  | 751  | 877   | 1002  | 1127  | 1252  | 2504  |
| 30       |        | 32                     | 53  | 85   | 105  | 159  | 212  | 265  | 318  | 371  | 424  | 477                    | 530  | 637  | 743   | 849   | 955   | 1061  | 2122  |
|          | 1.1/4  | 30                     | 50  | 80   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450                    | 501  | 601  | 701   | 801   | 901   | 1001  | 2003  |
|          | 1.1/2  | 25                     | 41  | 67   | 83   | 125  | 167  | 208  | 250  | 292  | 334  | 375                    | 417  | 501  | 584   | 668   | 751   | 835   | 1670  |
| 40       |        | 24                     | 40  | 63   | 79   | 119  | 159  | 199  | 238  | 278  | 318  | 358                    | 398  | 477  | 557   | 637   | 716   | 796   | 1592  |
|          | 1.3/4  | 21                     | 36  | 57   | 71   | 107  | 143  | 179  | 214  | 250  | 286  | 322                    | 358  | 429  | 501   | 572   | 644   | 715   | 1431  |
| 50       |        | 19                     | 32  | 51   | 63   | 95   | 127  | 159  | 191  | 222  | 255  | 286                    | 318  | 382  | 446   | 509   | 573   | 637   | 1273  |
|          | 2      | 19                     | 31  | 50   | 62   | 94   | 125  | 156  | 188  | 219  | 250  | 282                    | 313  | 375  | 438   | 501   | 563   | 626   | 1252  |
| 75       |        | 13                     | 21  | 34   | 42   | 64   | 85   | 106  | 127  | 148  | 170  | 191                    | 212  | 255  | 297   | 340   | 382   | 424   | 849   |
|          | 3      | 13                     | 21  | 33   | 42   | 63   | 83   | 104  | 125  | 146  | 167  | 188                    | 209  | 250  | 292   | 334   | 376   | 417   | 835   |
| 100      |        | 9                      | 16  | 25   | 32   | 48   | 63   | 79   | 95   | 111  | 127  | 143                    | 159  | 191  | 223   | 255   | 286   | 318   | 637   |
|          | 4      | 9                      | 16  | 25   | 31   | 47   | 62   | 78   | 94   | 110  | 125  | 141                    | 156  | 187  | 219   | 250   | 281   | 313   | 626   |
| 200      |        | 5                      | 8   | 13   | 17   | 24   | 32   | 40   | 48   | 56   | 64   | 72                     | 80   | 95   | 111   | 127   | 143   | 159   | 318   |
|          | 8      | 5                      | 8   | 12   | 16   | 23   | 31   | 39   | 47   | 55   | 63   | 70                     | 78   | 94   | 110   | 125   | 141   | 145   | 313   |
| 300      |        | 3                      | 5   | 8    | 10   | 16   | 21   | 26   | 31   | 37   | 42   | 48                     | 53   | 64   | 74    | 85    | 96    | 106   | 212   |
|          | 12     | 3                      | 5   | 8    | 10   | 16   | 21   | 26   | 31   | 37   | 41   | 47                     | 52   | 63   | 73    | 83    | 94    | 104   | 209   |

NOTE: R.P.M. for Surface/Cutting Speeds not given, can be obtained by simple addition or subtraction.

eg: 120m/mm = 100 + 20 = 3183 R.P.M. + 636 R.P.M. = 3819 R.P.M. (for 10mm dia.)

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