

# MACHINING CONDITIONS

TPKN 2204 PDTR – LT 3000

Catalog N°: M0004041

| Material Group | Gr. N°              | VDI Group | Material Examples | Hardness           | DOC [mm] |      | Feed [mm/rev] |      | V <sub>c</sub> [m/min] |     | Suggested Starting Parameters |      |                |     |
|----------------|---------------------|-----------|-------------------|--------------------|----------|------|---------------|------|------------------------|-----|-------------------------------|------|----------------|-----|
|                |                     |           |                   |                    | min      | max  | min           | max  | min                    | max | DOC                           | Feed | V <sub>c</sub> |     |
| P              | Non Alloyed         | 1         | 1                 | C35, Ck45,         | 125 HB   | 0.5  | 18            | 0.16 | 0.27                   | 190 | 330                           | 4    | 0.19           | 250 |
|                |                     | 2         | 1020, 1045,       | 190 HB             | 0.5      | 18   | 0.16          | 0.27 | 190                    | 300 | 4                             | 0.19 | 220            |     |
|                |                     | 3         | 1060, 28Mn6       | 250 HB             | 0.5      | 18   | 0.16          | 0.27 | 190                    | 250 | 4                             | 0.19 | 200            |     |
|                | Low Alloyed         | 2         | 4, 6              | 42CrMo4,           | 180 HB   | 0.5  | 18            | 0.14 | 0.21                   | 150 | 210                           | 4    | 0.17           | 180 |
|                |                     | 5, 7      | St50, Ck60,       | 230 HB             | 0.5      | 18   | 0.14          | 0.19 | 130                    | 190 | 4                             | 0.15 | 150            |     |
|                |                     | 6         | 4140, 4340,       | 280 HB             | 0.5      | 18   | 0.14          | 0.21 | 150                    | 240 | 4                             | 0.17 | 200            |     |
|                |                     | 8         | 100Cr06           | 350 HB             | 0.5      | 18   | 0.14          | 0.19 | 130                    | 170 | 4                             | 0.15 | 140            |     |
|                | High Alloyed        | 3         | 10                | X40CrMoV5,         | 220 HB   | 0.5  | 12.9          | 0.11 | 0.19                   | 90  | 150                           | 3    | 0.15           | 130 |
|                |                     | 10        | H13, M42, D3,     | 280 HB             | 0.5      | 12.9 | 0.11          | 0.19 | 90                     | 130 | 3                             | 0.15 | 120            |     |
|                |                     | 11        | S6-5-2, 12Ni19    | 320 HB             | 0.5      | 12.9 | 0.11          | 0.15 | 60                     | 110 | 3                             | 0.13 | 100            |     |
|                |                     | 11        |                   | 350 HB             | 0.5      | 12.9 | 0.11          | 0.15 | 60                     | 90  | 3                             | 0.13 | 80             |     |
| K              | Grey                | 7         | 15                | GG20, GG40,        | 150 HB   | 0.5  | 18            | 0.16 | 0.27                   | 150 | 240                           | 4    | 0.19           | 200 |
|                |                     | 15        | EN-GJL-250        | 200 HB             | 0.5      | 18   | 0.16          | 0.27 | 150                    | 220 | 4                             | 0.19 | 180            |     |
|                |                     | 16        |                   | 250 HB             | 0.5      | 18   | 0.16          | 0.27 | 150                    | 190 | 4                             | 0.19 | 160            |     |
|                | Malleable & Nodular | 8         | 17, 19            | GG20, GG70, 50005  | 150 HB   | 0.5  | 18            | 0.14 | 0.24                   | 100 | 200                           | 4    | 0.17           | 180 |
|                |                     | 17, 19    | 200 HB            |                    | 0.5      | 18   | 0.14          | 0.24 | 100                    | 180 | 4                             | 0.17 | 150            |     |
|                |                     | 18, 20    | 250 HB            |                    | 0.5      | 18   | 0.14          | 0.24 | 100                    | 150 | 4                             | 0.17 | 130            |     |
|                |                     |           |                   |                    |          |      |               |      |                        |     |                               |      |                |     |
| H              | Steel               | 11        | 38                | X100 CrMo13, 440C, | 45 HRc   | 0.5  | 6.4           | 0.09 | 0.15                   | 40  | 80                            | 2    | 0.12           | 60  |
|                |                     | 38        | 50 HRc            | 0.5                | 4.5      | 0.09 | 0.14          | 40   | 70                     | 1.5 | 0.11                          | 55   |                |     |
|                |                     | 38        | G-X260NiCr42      | 55 HRc             | 0.5      | 3.9  | 0.09          | 0.12 | 40                     | 60  | 1                             | 0.1  | 50             |     |
|                | Chilled Cast Iron   | 12        | 40                | Ni-Hard 2          | 400 HB   | 0.5  | 5.1           | 0.09 | 0.15                   | 40  | 80                            | 1.5  | 0.12           | 50  |
|                | White Cast Iron     | 13        | 41                | G-X300CrMo15       | 55 HRc   | 0.5  | 3.9           | 0.09 | 0.12                   | 30  | 60                            | 1    | 0.1            | 40  |

