

# ONKX 0806-45 LT 30

## Speeds & Feeds



| Material Group         | Gr. N°              | VDI Group  | Material Examples* | Hardness    | D.O.C. [Inch]           |        | Feed [Inch/tooth] |       | V <sub>c</sub> [sfm] |       | Suggested Starting Parameters |       |                |       |     |
|------------------------|---------------------|------------|--------------------|-------------|-------------------------|--------|-------------------|-------|----------------------|-------|-------------------------------|-------|----------------|-------|-----|
|                        |                     |            |                    |             | min                     | max    | min               | max   | min                  | max   | D.O.C.                        | Feed  | V <sub>c</sub> |       |     |
| Steel                  | Non-alloyed         | 1          | 1                  | C35, Ck45,  | 125 HB                  | 0.020  | 0.176             | 0.009 | 0.020                | 620   | 980                           | 0.117 | 0.014          | 820   |     |
|                        |                     |            | 2                  | 1020, 1045, | 190 HB                  |        |                   |       |                      |       |                               |       |                | 720   |     |
|                        |                     |            | 3                  | 1060, 28Mn6 | 250 HB                  |        |                   |       |                      |       |                               |       |                | 650   |     |
|                        | Low alloyed         | 2          | 2                  | 6           | 42CrMo4,                | 180 HB | 0.020             | 0.176 | 0.007                | 0.016 | 490                           | 780   | 0.117          | 0.013 | 650 |
|                        |                     |            |                    | 4,6         | St50, Ck60,             | 230 HB |                   |       |                      |       |                               |       |                |       | 590 |
|                        |                     |            |                    | 5,7         | 4140, 4340,             | 280 HB |                   |       |                      |       |                               |       |                |       | 490 |
|                        |                     |            |                    | 8           | 100Cr6                  | 350 HB |                   |       |                      |       |                               |       |                |       | 450 |
|                        | High alloyed        | 3          | 3                  | 10          | X40CrMoV5               | 220 HB | 0.020             | 0.126 | 0.006                | 0.014 | 290                           | 490   | 0.087          | 0.011 | 420 |
|                        |                     |            |                    | 10          | H13,                    | 280 HB |                   |       |                      |       |                               |       |                |       | 390 |
|                        |                     |            |                    | 11          | M42, D3,                | 320 HB |                   |       |                      |       |                               |       |                |       | 320 |
|                        |                     |            |                    | 11          | S6-5-2,<br>12Ni19       | 350 HB |                   |       |                      |       |                               |       |                |       | 260 |
|                        | Stainless Steel     | Austenitic | 4                  | 14          | 304, 316,               | 180 HB | 0.020             | 0.176 | 0.007                | 0.014 | 620                           | 820   | 0.117          | 0.011 | 720 |
| 14                     |                     |            |                    | X5CrNi18-9  | 240 HB                  | 620    |                   |       |                      |       |                               |       |                |       |     |
| Duplex                 |                     | 5          | 5                  | 14          | X2CrNiN23-4,            | 290 HB | 0.020             | 0.126 | 0.006                | 0.011 | 220                           | 420   | 0.087          | 0.010 | 320 |
|                        |                     |            |                    | 14          | S31500                  | 310 HB |                   |       |                      |       |                               |       |                |       | 290 |
| Ferritic & Martensitic |                     | 6          | 6                  | 12          | 410,                    | 200 HB | 0.020             | 0.176 | 0.007                | 0.014 | 490                           | 680   | 0.117          | 0.011 | 620 |
|                        |                     |            |                    | 13          | X6Cr17,<br>17-4 PH, 430 | 42 HRC |                   |       |                      |       |                               |       |                |       | 420 |
| Cast Iron              | Grey                | 7          | 15                 | GG20, GG40, | 150 HB                  | 0.020  | 0.176             | 0.009 | 0.020                | 490   | 780                           | 0.117 | 0.014          | 650   |     |
|                        |                     |            | 15                 | EN-GJL-250, | 200 HB                  |        |                   |       |                      |       |                               |       |                | 590   |     |
|                        |                     |            | 16                 | No30B       | 250 HB                  |        |                   |       |                      |       |                               |       |                | 520   |     |
|                        | Malleable & Nodular | 8          | 8                  | 17,19       | GGG40,                  | 150 HB | 0.020             | 0.176 | 0.007                | 0.018 | 320                           | 650   | 0.117          | 0.013 | 590 |
|                        |                     |            |                    | 17,19       | GGG70,                  | 200 HB |                   |       |                      |       |                               |       |                |       | 490 |
|                        |                     |            |                    | 18,20       | 50005                   | 250 HB |                   |       |                      |       |                               |       |                |       | 420 |
| High Temp. Alloys      | Fe, Ni & Co based   | 9          | 31,32              | Incoloy 800 | 240 HB                  | 0.020  | 0.126             | 0.006 | 0.011                | 80    | 140                           | 0.087 | 0.010          | 100   |     |
|                        |                     |            | 33                 | Inconel 700 | 250 HB                  |        |                   |       |                      |       |                               |       |                | 90    |     |
|                        |                     |            | 34                 | Stellite 21 | 350 HB                  |        |                   |       |                      |       |                               |       |                | 90    |     |
|                        | Ti based            | 10         | 10                 | 36          | TiAl6V4                 | -      | 0.020             | 0.126 | 0.006                | 0.013 | 130                           | 210   | 0.087          | 0.011 | 180 |
|                        |                     |            |                    | 37          | T40                     | -      |                   |       |                      |       |                               |       |                |       | 130 |
|                        |                     |            |                    |             |                         |        |                   |       |                      |       |                               |       |                |       | 180 |
| Hardened Mat.          | Steel               | 11         | 38                 | XT00CrMo13  | 45 HRC                  | 0.016  | 0.063             | 0.005 | 0.011                | 130   | 220                           | 0.058 | 0.008          | 190   |     |
|                        |                     |            | 38                 | 440C,       | 50 HRC                  |        |                   |       |                      |       |                               |       |                | 180   |     |
|                        |                     |            | 38                 | G-          | 55 HRC                  |        |                   |       |                      |       |                               |       |                | 160   |     |
|                        | Chilled Cast Iron   | 40         | Ni-Hard 2          | 400 HB      | 0.016                   | 0.050  | 0.005             | 0.011 | 130                  | 260   | 0.044                         | 0.009 | 160            |       |     |
|                        | White Cast Iron     | 41         | G-X300CrMo15       | 55 HRC      | 0.016                   | 0.019  | 0.005             | 0.009 | 90                   | 190   | 0.029                         | 0.008 | 130            |       |     |
| NF                     | Al (>8%Si)          | 12         | 25                 | AISI12      | 130 HB                  | 0.020  | 0.176             | 0.009 | 0.020                | 650   | 1310                          | 0.117 | 0.016          | 910   |     |



(800) 597-3921 or (317) 803-8000 for Application Support.  
For additional suggested Speeds & Feeds: <http://delivr.com/1kmpm>

