

## SDKX 1205-HF LT 3130

M0004485

| Material Group  |                        |  SAPPHIRE<br>CUTTING TOOLS<br>Group | Material Example                        | Hardness | D.O.C   |         | Feed      |            | Vc          |             | Advised D.O.C | Advised Feed | Advised Vc |
|-----------------|------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------|---------|---------|-----------|------------|-------------|-------------|---------------|--------------|------------|
|                 |                        |                                                                                                                      |                                         |          | min[mm] | max[mm] | min[mm/t] | max [mm/t] | min [m/min] | max [m/min] | [mm]          | [mm/t]       | [m/min]    |
| Steel           | Non Alloyed            | 1                                                                                                                    | C35, Ck45, 1020, 1045, 1060, 28Mn6      | 125 HB   | 0.3     | 2       | 0.3       | 2.7        | 190         | 350         | 1.2           | 1.7          | 265        |
|                 |                        |                                                                                                                      |                                         | 190 HB   | 0.3     | 2       | 0.3       | 2.7        | 190         | 320         | 1.2           | 1.7          | 240        |
|                 |                        |                                                                                                                      |                                         | 250 HB   | 0.3     | 2       | 0.3       | 2.7        | 190         | 280         | 1.2           | 1.7          | 215        |
|                 | Low Alloyed            | 2                                                                                                                    | 42CrMo4, St50, Ck60, 4140, 4340, 100Cr6 | 230 HB   | 0.3     | 1.6     | 0.3       | 2.5        | 150         | 230         | 0.9           | 1.5          | 200        |
|                 |                        |                                                                                                                      |                                         | 280 HB   | 0.3     | 1.6     | 0.3       | 2.5        | 130         | 210         | 0.9           | 1.4          | 165        |
|                 |                        |                                                                                                                      |                                         | 180 HB   | 0.3     | 1.6     | 0.3       | 2.5        | 150         | 270         | 0.9           | 1.5          | 215        |
|                 |                        |                                                                                                                      |                                         | 350 HB   | 0.3     | 1.6     | 0.3       | 2.25       | 130         | 190         | 0.9           | 1.4          | 155        |
|                 | High Alloyed           | 3                                                                                                                    | X40CrM0V5, H13, M42, D3, S6-5-2, 12Ni19 | 220 HB   | 0.3     | 1.6     | 0.3       | 2.25       | 90          | 170         | 0.7           | 1.2          | 140        |
|                 |                        |                                                                                                                      |                                         | 280 HB   | 0.3     | 1.3     | 0.3       | 2          | 90          | 150         | 0.7           | 1.2          | 130        |
|                 |                        |                                                                                                                      |                                         | 320 HB   | 0.3     | 1.1     | 0.3       | 1.8        | 60          | 120         | 0.7           | 1            | 110        |
|                 |                        |                                                                                                                      |                                         | 350 HB   | 0.3     | 1.1     | 0.3       | 1.6        | 60          | 100         | 0.7           | 1            | 90         |
| Stainless Steel | Austentic              | 4                                                                                                                    | 304, 316, X5CrNi18-9                    | 180 HB   | 0.3     | 1.5     | 0.3       | 1          | 190         | 260         | 0.9           | 0.8          | 230        |
|                 |                        |                                                                                                                      |                                         | 240 HB   | 0.3     | 1.5     | 0.3       | 1          | 160         | 220         | 0.9           | 0.8          | 200        |
|                 | Duplex                 | 5                                                                                                                    | X2CrNiN23-4, S31500                     | 290 HB   | 0.3     | 1.2     | 0.3       | 0.65       | 70          | 140         | 0.8           | 0.5          | 110        |
|                 |                        |                                                                                                                      |                                         | 310 HB   | 0.3     | 1.2     | 0.3       | 0.65       | 70          | 130         | 0.8           | 0.5          | 100        |
|                 | Ferritic & Martensitic | 6                                                                                                                    | 410, X6Cr17, 17-4 PH, 430               | 200 HB   | 0.3     | 1.5     | 0.3       | 0.7        | 150         | 220         | 0.9           | 0.6          | 200        |
|                 |                        |                                                                                                                      |                                         | 42 HRc   | 0.3     | 1.1     | 0.3       | 0.65       | 90          | 160         | 0.8           | 0.5          | 140        |