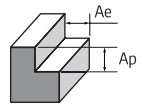


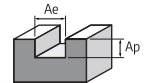
# NiTiCo 30 Schnittdatenempfehlung



## Standard Fräser, 2 Schneider

| Scheiben<br>fräsen        | P01               | P02             | P03              | M01             | M02           | K01        | K02                   | S01            | S02               | S03               |               |            |               |            |               |            |               |            |    |       |
|---------------------------|-------------------|-----------------|------------------|-----------------|---------------|------------|-----------------------|----------------|-------------------|-------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|----|-------|
| Werkstück<br>material     | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |               | Grauguss   | Dehnbare<br>Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |               |            |               |            |               |            |               |            |    |       |
| Eigens-<br>chaften        | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC       | -          | -                     | -              | -                 | -                 |               |            |               |            |               |            |               |            |    |       |
| Schnitttiefe<br>,Ap (mm)  | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D      | 1.00 × D   | 1.00 × D              | 1.00 × D       | 1.00 × D          | 1.00 × D          |               |            |               |            |               |            |               |            |    |       |
| Schnittbreite<br>,Ae (mm) | 0.45 × D          | 0.40 × D        | 0.40 × D         | 0.40 × D        | 0.40 × D      | 0.40 × D   | 0.40 × D              | 0.40 × D       | 0.40 × D          | 0.40 × D          |               |            |               |            |               |            |               |            |    |       |
| D (mm)                    | Vc<br>(m/min)     | Fz<br>(mm)      | Vc<br>(m/min)    | Fz<br>(mm)      | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min)         | Fz<br>(mm)     | Vc<br>(m/min)     | Fz<br>(mm)        | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) |    |       |
| 1                         | 150               | 0.006           | 130              | 0.004           | 100           | 0.005      | 90                    | 0.004          | 60                | 0.003             | 170           | 0.006      | 125           | 0.004      | 85            | 0.004      | 40            | 0.002      | 40 | 0.002 |
| 2                         |                   | 0.010           |                  | 0.008           |               | 0.010      |                       | 0.008          |                   | 0.006             |               | 0.010      |               | 0.008      |               | 0.004      |               | 0.004      |    |       |
| 3                         |                   | 0.018           |                  | 0.014           |               | 0.015      |                       | 0.012          |                   | 0.009             |               | 0.018      |               | 0.014      |               | 0.006      |               | 0.006      |    |       |
| 4                         |                   | 0.024           |                  | 0.019           |               | 0.022      |                       | 0.016          |                   | 0.012             |               | 0.024      |               | 0.019      |               | 0.008      |               | 0.008      |    |       |
| 5                         |                   | 0.028           |                  | 0.025           |               | 0.028      |                       | 0.020          |                   | 0.015             |               | 0.028      |               | 0.025      |               | 0.010      |               | 0.010      |    |       |
| 6                         |                   | 0.038           |                  | 0.032           |               | 0.036      |                       | 0.024          |                   | 0.018             |               | 0.038      |               | 0.032      |               | 0.015      |               | 0.015      |    |       |
| 8                         |                   | 0.042           |                  | 0.035           |               | 0.040      |                       | 0.032          |                   | 0.024             |               | 0.042      |               | 0.035      |               | 0.018      |               | 0.018      |    |       |
| 10                        |                   | 0.060           |                  | 0.050           |               | 0.055      |                       | 0.040          |                   | 0.030             |               | 0.060      |               | 0.050      |               | 0.022      |               | 0.022      |    |       |
| 12                        |                   | 0.072           |                  | 0.060           |               | 0.065      |                       | 0.048          |                   | 0.036             |               | 0.072      |               | 0.060      |               | 0.030      |               | 0.030      |    |       |
| 14                        |                   | 0.084           |                  | 0.070           |               | 0.075      |                       | 0.056          |                   | 0.042             |               | 0.084      |               | 0.070      |               | 0.035      |               | 0.035      |    |       |
| 16                        | 0.096             | 0.080           | 0.085            | 0.064           | 0.480         | 0.096      | 0.080                 | 0.040          | 0.040             |                   |               |            |               |            |               |            |               |            |    |       |
| 18                        | 0.110             | 0.090           | 0.100            | 0.072           | 0.054         | 0.110      | 0.090                 | 0.050          | 0.050             |                   |               |            |               |            |               |            |               |            |    |       |
| 20                        | 0.140             | 0.110           | 0.120            | 0.800           | 0.060         | 0.140      | 0.110                 | 0.060          | 0.060             |                   |               |            |               |            |               |            |               |            |    |       |

## Standard Fräser, 2 Schneider

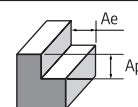


| Nuten fräsen           | P01               | P02             | P03              | M01             | M02        | K01      | K02                | S01            | S02               | S03               |            |         |            |         |            |         |            |         |            |         |
|------------------------|-------------------|-----------------|------------------|-----------------|------------|----------|--------------------|----------------|-------------------|-------------------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|
| Werkstück material     | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |            | Grauguss | Dehnbare Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |            |         |            |         |            |         |            |         |            |         |
| Eigenschaften          | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC    | -        | -                  | -              | -                 | -                 |            |         |            |         |            |         |            |         |            |         |
| Schnitttiefe ,Ap (mm)  | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D   | 1.00 × D | 1.00 × D           | 1.00 × D       | 1.00 × D          | 1.00 × D          |            |         |            |         |            |         |            |         |            |         |
| Schnittbreite ,Ae (mm) | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D   | 1.00 × D | 1.00 × D           | 1.00 × D       | 1.00 × D          | 1.00 × D          |            |         |            |         |            |         |            |         |            |         |
| D (mm)                 | Vc (m/min)        | Fz (mm)         | Vc (m/min)       | Fz (mm)         | Vc (m/min) | Fz (mm)  | Vc (m/min)         | Fz (mm)        | Vc (m/min)        | Fz (mm)           | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) |
| 1                      | 170               | 0.003           | 150              | 0.003           | 120        | 0.003    | 90                 | 0.002          | 50                | 0.002             | 150        | 0.002   | 105        | 0.003   | 70         | 0.004   | 40         | 0.003   | 30         | 0.003   |
| 2                      |                   | 0.007           |                  | 0.006           |            | 0.007    |                    | 0.006          |                   | 0.004             |            | 0.005   |            | 0.009   |            | 0.006   |            | 0.006   |            |         |
| 3                      |                   | 0.011           |                  | 0.009           |            | 0.009    |                    | 0.008          |                   | 0.006             |            | 0.009   |            | 0.015   |            | 0.011   |            | 0.011   |            |         |
| 4                      |                   | 0.016           |                  | 0.013           |            | 0.013    |                    | 0.012          |                   | 0.010             |            | 0.012   |            | 0.024   |            | 0.016   |            | 0.016   |            |         |
| 5                      |                   | 0.020           |                  | 0.018           |            | 0.017    |                    | 0.015          |                   | 0.012             |            | 0.013   |            | 0.033   |            | 0.022   |            | 0.022   |            |         |
| 6                      |                   | 0.026           |                  | 0.022           |            | 0.021    |                    | 0.018          |                   | 0.015             |            | 0.018   |            | 0.044   |            | 0.029   |            | 0.029   |            |         |
| 8                      |                   | 0.035           |                  | 0.031           |            | 0.030    |                    | 0.024          |                   | 0.020             |            | 0.026   |            | 0.028   |            | 0.065   |            | 0.042   |            | 0.042   |
| 10                     |                   | 0.046           |                  | 0.041           |            | 0.039    |                    | 0.030          |                   | 0.025             |            | 0.035   |            | 0.036   |            | 0.088   |            | 0.057   |            | 0.057   |
| 12                     |                   | 0.057           |                  | 0.052           |            | 0.048    |                    | 0.036          |                   | 0.030             |            | 0.046   |            | 0.045   |            | 0.115   |            | 0.073   |            | 0.073   |
| 14                     |                   | 0.069           |                  | 0.063           |            | 0.059    |                    | 0.042          |                   | 0.036             |            | 0.057   |            | 0.055   |            | 0.145   |            | 0.091   |            | 0.091   |
| 16                     | 0.082             | 0.076           | 0.069            | 0.048           | 0.042      | 0.070    | 0.065              | 0.177          | 0.111             | 0.111             |            |         |            |         |            |         |            |         |            |         |
| 18                     | 0.095             | 0.089           | 0.081            | 0.054           | 0.048      | 0.083    | 0.076              | 0.212          | 0.133             | 0.133             |            |         |            |         |            |         |            |         |            |         |
| 20                     | 0.109             | 0.102           | 0.093            | 0.060           | 0.054      | 0.098    | 0.087              | 0.251          | 0.156             | 0.156             |            |         |            |         |            |         |            |         |            |         |



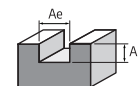
Empfohlene Schnittparameter  
Hinweis: Die empfohlenen Schnittparameter dienen nur als Referenz. Diese ändern sich bei verschiedenen Schnittbedingungen.

# NiTiCo 30 Schnittdatenempfehlung



## Standard Fräser, 3 Schneider

| Scheiben<br>fräsen        | P01               | P02             | P03              | M01             | M02           | K01        | K02                   | S01            | S02               | S03               |               |            |               |            |               |            |               |            |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
|---------------------------|-------------------|-----------------|------------------|-----------------|---------------|------------|-----------------------|----------------|-------------------|-------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Werkstück<br>material     | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |               | Grauguss   | Dehnbare<br>Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |               |            |               |            |               |            |               |            |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Eigens-<br>chaften        | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC       | -          | -                     | -              | -                 | -                 |               |            |               |            |               |            |               |            |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Schnitttiefe<br>,Ap (mm)  | 0.80 × D          | 0.80 × D        | 0.75 × D         | 0.70 × D        | 0.65 × D      | 0.80 × D   | 0.65 × D              | 0.65 × D       | 0.60 × D          | 0.60 × D          |               |            |               |            |               |            |               |            |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Schnittbreite<br>,Ae (mm) | 0.45 × D          | 0.45 × D        | 0.45 × D         | 0.45 × D        | 0.45 × D      | 0.45 × D   | 0.45 × D              | 0.45 × D       | 0.45 × D          | 0.45 × D          |               |            |               |            |               |            |               |            |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| D (mm)                    | Vc<br>(m/min)     | Fz<br>(mm)      | Vc<br>(m/min)    | Fz<br>(mm)      | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min)         | Fz<br>(mm)     | Vc<br>(m/min)     | Fz<br>(mm)        | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 1                         | 150               | 0.006           | 130              | 100             | 90            | 0.004      | 60                    | 0.003          | 170               | 0.006             | 125           | 0.004      | 85            | 0.004      | 40            | 0.002      | 40            | 0.002      |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 2                         |                   | 0.010           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.008         | 0.006      | 0.010 | 0.008 | 0.006 | 0.010 | 0.008 | 0.006 | 0.010 | 0.008 | 0.006 | 0.010 | 0.008 | 0.006 | 0.010 | 0.008 |       |
| 3                         |                   | 0.018           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.014         | 0.012      | 0.009 | 0.018 | 0.014 | 0.012 | 0.009 | 0.018 | 0.014 | 0.012 | 0.009 | 0.018 | 0.014 | 0.012 | 0.009 | 0.018 | 0.014 |
| 4                         |                   | 0.024           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.019         | 0.016      | 0.012 | 0.024 | 0.019 | 0.016 | 0.012 | 0.024 | 0.019 | 0.016 | 0.012 | 0.024 | 0.019 | 0.016 | 0.012 | 0.024 | 0.019 |
| 5                         |                   | 0.028           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.025         | 0.020      | 0.015 | 0.028 | 0.025 | 0.020 | 0.015 | 0.028 | 0.025 | 0.020 | 0.015 | 0.028 | 0.025 | 0.020 | 0.015 | 0.028 | 0.025 |
| 6                         |                   | 0.038           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.032         | 0.024      | 0.018 | 0.038 | 0.032 | 0.024 | 0.018 | 0.038 | 0.032 | 0.024 | 0.018 | 0.038 | 0.032 | 0.024 | 0.018 | 0.038 | 0.032 |
| 8                         |                   | 0.042           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.035         | 0.032      | 0.024 | 0.042 | 0.035 | 0.032 | 0.024 | 0.042 | 0.035 | 0.032 | 0.024 | 0.042 | 0.035 | 0.032 | 0.024 | 0.042 | 0.035 |
| 10                        |                   | 0.060           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.050         | 0.040      | 0.030 | 0.060 | 0.050 | 0.040 | 0.030 | 0.060 | 0.050 | 0.040 | 0.030 | 0.060 | 0.050 | 0.040 | 0.030 | 0.060 | 0.050 |
| 12                        |                   | 0.072           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.060         | 0.048      | 0.036 | 0.072 | 0.060 | 0.048 | 0.036 | 0.072 | 0.060 | 0.048 | 0.036 | 0.072 | 0.060 | 0.048 | 0.036 | 0.072 | 0.060 |
| 14                        |                   | 0.084           |                  |                 |               |            |                       |                |                   |                   |               |            |               |            |               |            |               |            | 0.070         | 0.056      | 0.042 | 0.084 | 0.070 | 0.056 | 0.042 | 0.084 | 0.070 | 0.056 | 0.042 | 0.084 | 0.070 | 0.056 | 0.042 | 0.084 | 0.070 |
| 16                        | 0.096             | 0.080           | 0.064            | 0.480           | 0.096         | 0.080      | 0.064                 | 0.480          | 0.096             | 0.080             | 0.064         | 0.480      | 0.096         | 0.080      | 0.064         | 0.480      | 0.096         | 0.080      |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 18                        | 0.110             | 0.090           | 0.072            | 0.054           | 0.110         | 0.090      | 0.072                 | 0.054          | 0.110             | 0.090             | 0.072         | 0.054      | 0.110         | 0.090      | 0.072         | 0.054      | 0.110         | 0.090      |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 20                        | 0.140             | 0.110           | 0.800            | 0.060           | 0.140         | 0.110      | 0.800                 | 0.060          | 0.140             | 0.110             | 0.800         | 0.060      | 0.140         | 0.110      | 0.800         | 0.060      | 0.140         | 0.110      |               |            |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |



## Standard Fräser, 3 Schneider

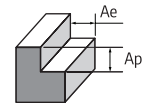
| Nuten<br>fräsen           | P01               | P02             | P03              | M01             | M02           | K01        | K02                   | S01            | S02               | S03               |               |            |               |            |               |            |               |            |               |            |
|---------------------------|-------------------|-----------------|------------------|-----------------|---------------|------------|-----------------------|----------------|-------------------|-------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|
| Werkstück<br>material     | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |               | Grauguss   | Dehnbare<br>Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |               |            |               |            |               |            |               |            |               |            |
| Eigens-<br>chaften        | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC       | -          | -                     | -              | -                 | -                 |               |            |               |            |               |            |               |            |               |            |
| Schnitttiefe<br>,Ap (mm)  | 0.60 × D          | 0.60 × D        | 0.55 × D         | 0.50 × D        | 0.45 × D      | 0.60 × D   | 0.45 × D              | 0.45 × D       | 0.40 × D          | 0.40× D           |               |            |               |            |               |            |               |            |               |            |
| Schnittbreite<br>,Ae (mm) | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D      | 1.00 × D   | 1.00 × D              | 1.00 × D       | 1.00 × D          | 1.00 × D          |               |            |               |            |               |            |               |            |               |            |
| D (mm)                    | Vc<br>(m/min)     | Fz<br>(mm)      | Vc<br>(m/min)    | Fz<br>(mm)      | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min)         | Fz<br>(mm)     | Vc<br>(m/min)     | Fz<br>(mm)        | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) |
| 1                         | 170               | 0.003           | 150              | 0.003           | 120           | 0.003      | 90                    | 0.003          | 50                | 0.002             | 150           | 0.002      | 105           | 0.003      | 70            | 0.004      | 40            | 0.003      | 30            | 0.003      |
| 2                         |                   | 0.007           |                  | 0.006           |               | 0.007      |                       | 0.006          |                   | 0.004             |               | 0.005      |               | 0.009      |               | 0.006      |               | 0.006      |               |            |
| 3                         |                   | 0.011           |                  | 0.009           |               | 0.009      |                       | 0.008          |                   | 0.006             |               | 0.009      |               | 0.015      |               | 0.011      |               | 0.011      |               |            |
| 4                         |                   | 0.016           |                  | 0.013           |               | 0.013      |                       | 0.012          |                   | 0.010             |               | 0.012      |               | 0.024      |               | 0.016      |               | 0.016      |               |            |
| 5                         |                   | 0.020           |                  | 0.018           |               | 0.017      |                       | 0.015          |                   | 0.012             |               | 0.013      |               | 0.016      |               | 0.033      |               | 0.022      |               | 0.022      |
| 6                         |                   | 0.026           |                  | 0.022           |               | 0.021      |                       | 0.018          |                   | 0.015             |               | 0.018      |               | 0.020      |               | 0.044      |               | 0.029      |               | 0.029      |
| 8                         |                   | 0.035           |                  | 0.031           |               | 0.030      |                       | 0.024          |                   | 0.020             |               | 0.026      |               | 0.028      |               | 0.065      |               | 0.042      |               | 0.042      |
| 10                        |                   | 0.046           |                  | 0.041           |               | 0.039      |                       | 0.030          |                   | 0.025             |               | 0.035      |               | 0.036      |               | 0.088      |               | 0.057      |               | 0.057      |
| 12                        |                   | 0.057           |                  | 0.052           |               | 0.048      |                       | 0.036          |                   | 0.030             |               | 0.046      |               | 0.045      |               | 0.115      |               | 0.073      |               | 0.073      |
| 14                        |                   | 0.069           |                  | 0.063           |               | 0.059      |                       | 0.042          |                   | 0.036             |               | 0.057      |               | 0.055      |               | 0.145      |               | 0.091      |               | 0.091      |
| 16                        | 0.082             | 0.076           | 0.069            | 0.048           | 0.042         | 0.070      | 0.065                 | 0.177          | 0.111             | 0.111             |               |            |               |            |               |            |               |            |               |            |
| 18                        | 0.095             | 0.089           | 0.081            | 0.054           | 0.048         | 0.083      | 0.076                 | 0.212          | 0.133             | 0.133             |               |            |               |            |               |            |               |            |               |            |
| 20                        | 0.109             | 0.102           | 0.093            | 0.060           | 0.054         | 0.098      | 0.087                 | 0.251          | 0.156             | 0.156             |               |            |               |            |               |            |               |            |               |            |



Empfohlene Schnittparameter

Hinweis: Die empfohlenen Schnittparameter dienen nur als Referenz. Diese ändern sich bei verschiedenen Schnittbedingungen.

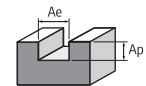
# NiTiCo 30 Schnittdatenempfehlung



## Standard Fräser, 4 Schneider

| Scheiben<br>fräsen        | P01               | P02             | P03              | M01             | M02           | K01        | K02                   | S01            | S02               | S03               |               |            |               |            |               |            |               |            |               |            |
|---------------------------|-------------------|-----------------|------------------|-----------------|---------------|------------|-----------------------|----------------|-------------------|-------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|
| Werkstück<br>material     | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |               | Grauguss   | Dehnbare<br>Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |               |            |               |            |               |            |               |            |               |            |
| Eigens-<br>chaften        | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC       | -          | -                     | -              | -                 | -                 |               |            |               |            |               |            |               |            |               |            |
| Schnitttiefe<br>,Ap (mm)  | 0.80 × D          | 0.80 × D        | 0.75 × D         | 0.70 × D        | 0.65 × D      | 0.80 × D   | 0.65 × D              | 0.65 × D       | 0.60 × D          | 0.60 × D          |               |            |               |            |               |            |               |            |               |            |
| Schnittbreite<br>,Ae (mm) | 0.45 × D          | 0.45 × D        | 0.45 × D         | 0.45 × D        | 0.45 × D      | 0.45 × D   | 0.45 × D              | 0.45 × D       | 0.45 × D          | 0.45 × D          |               |            |               |            |               |            |               |            |               |            |
| D (mm)                    | Vc<br>(m/min)     | Fz<br>(mm)      | Vc<br>(m/min)    | Fz<br>(mm)      | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min)         | Fz<br>(mm)     | Vc<br>(m/min)     | Fz<br>(mm)        | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) |
| 1                         | 150               | 0.006           | 130              | 0.005           | 100           | 0.004      | 90                    | 0.004          | 60                | 0.003             | 170           | 0.006      | 125           | 0.004      | 85            | 0.004      | 40            | 0.002      | 40            | 0.002      |
| 2                         |                   | 0.010           |                  | 0.008           |               | 0.008      |                       | 0.006          |                   | 0.010             |               | 0.008      |               | 0.004      |               | 0.004      |               |            |               |            |
| 3                         |                   | 0.018           |                  | 0.015           |               | 0.014      |                       | 0.012          |                   | 0.009             |               | 0.018      |               | 0.014      |               | 0.006      |               | 0.006      |               |            |
| 4                         |                   | 0.024           |                  | 0.022           |               | 0.019      |                       | 0.016          |                   | 0.012             |               | 0.024      |               | 0.019      |               | 0.008      |               | 0.008      |               |            |
| 5                         |                   | 0.028           |                  | 0.028           |               | 0.025      |                       | 0.020          |                   | 0.015             |               | 0.028      |               | 0.025      |               | 0.010      |               | 0.010      |               |            |
| 6                         |                   | 0.038           |                  | 0.036           |               | 0.032      |                       | 0.024          |                   | 0.018             |               | 0.038      |               | 0.032      |               | 0.015      |               | 0.015      |               |            |
| 8                         |                   | 0.042           |                  | 0.040           |               | 0.035      |                       | 0.032          |                   | 0.024             |               | 0.042      |               | 0.035      |               | 0.035      |               | 0.018      |               | 0.018      |
| 10                        |                   | 0.060           |                  | 0.055           |               | 0.050      |                       | 0.040          |                   | 0.030             |               | 0.060      |               | 0.050      |               | 0.050      |               | 0.022      |               | 0.022      |
| 12                        |                   | 0.072           |                  | 0.065           |               | 0.060      |                       | 0.048          |                   | 0.036             |               | 0.072      |               | 0.060      |               | 0.060      |               | 0.030      |               | 0.030      |
| 14                        |                   | 0.084           |                  | 0.075           |               | 0.070      |                       | 0.056          |                   | 0.042             |               | 0.084      |               | 0.070      |               | 0.070      |               | 0.035      |               | 0.035      |
| 16                        | 0.096             | 0.085           | 0.080            | 0.064           | 0.480         | 0.096      | 0.080                 | 0.080          | 0.040             | 0.040             |               |            |               |            |               |            |               |            |               |            |
| 18                        | 0.110             | 0.100           | 0.090            | 0.072           | 0.054         | 0.110      | 0.090                 | 0.090          | 0.050             | 0.050             |               |            |               |            |               |            |               |            |               |            |
| 20                        | 0.140             | 0.120           | 0.110            | 0.800           | 0.060         | 0.140      | 0.110                 | 0.110          | 0.060             | 0.060             |               |            |               |            |               |            |               |            |               |            |

## Standard Fräser, 4 Schneider

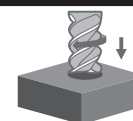


| Nuten fräsen           | P01               | P02             | P03              | M01             | M02        | K01      | K02                | S01            | S02               | S03               |            |         |            |         |            |         |            |         |
|------------------------|-------------------|-----------------|------------------|-----------------|------------|----------|--------------------|----------------|-------------------|-------------------|------------|---------|------------|---------|------------|---------|------------|---------|
| Werkstück material     | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |            | Grauguss | Dehnbare Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |            |         |            |         |            |         |            |         |
| Eigenschaften          | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC    | -        | -                  | -              | -                 | -                 |            |         |            |         |            |         |            |         |
| Schnitttiefe ,Ap (mm)  | 0.60 × D          | 0.60 × D        | 0.55 × D         | 0.50 × D        | 0.45 × D   | 0.60 × D | 0.45 × D           | 0.45 × D       | 0.40 × D          | 0.40× D           |            |         |            |         |            |         |            |         |
| Schnittbreite ,Ae (mm) | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D   | 1.00 × D | 1.00 × D           | 1.00 × D       | 1.00 × D          | 1.00 × D          |            |         |            |         |            |         |            |         |
| D (mm)                 | Vc (m/min)        | Fz (mm)         | Vc (m/min)       | Fz (mm)         | Vc (m/min) | Fz (mm)  | Vc (m/min)         | Fz (mm)        | Vc (m/min)        | Fz (mm)           | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) |
| 1                      | 170               | 0.003           | 150              | 0.003           | 120        | 0.003    | 90                 | 0.002          | 50                | 0.002             | 150        | 0.003   | 105        | 0.004   | 70         | 0.004   | 40         | 0.003   |
| 2                      |                   | 0.007           |                  | 0.006           |            | 0.007    |                    | 0.006          |                   | 0.004             |            | 0.005   |            | 0.009   |            | 0.006   |            |         |
| 3                      |                   | 0.011           |                  | 0.009           |            | 0.009    |                    | 0.008          |                   | 0.006             |            | 0.009   |            | 0.015   |            | 0.011   |            |         |
| 4                      |                   | 0.016           |                  | 0.013           |            | 0.013    |                    | 0.012          |                   | 0.010             |            | 0.012   |            | 0.024   |            | 0.016   |            |         |
| 5                      |                   | 0.020           |                  | 0.018           |            | 0.017    |                    | 0.015          |                   | 0.012             |            | 0.013   |            | 0.016   |            | 0.033   |            | 0.022   |
| 6                      |                   | 0.026           |                  | 0.022           |            | 0.021    |                    | 0.018          |                   | 0.015             |            | 0.018   |            | 0.020   |            | 0.044   |            | 0.029   |
| 8                      |                   | 0.035           |                  | 0.031           |            | 0.030    |                    | 0.024          |                   | 0.020             |            | 0.026   |            | 0.028   |            | 0.065   |            | 0.042   |
| 10                     |                   | 0.046           |                  | 0.041           |            | 0.039    |                    | 0.030          |                   | 0.025             |            | 0.035   |            | 0.036   |            | 0.088   |            | 0.057   |
| 12                     |                   | 0.057           |                  | 0.052           |            | 0.048    |                    | 0.036          |                   | 0.030             |            | 0.046   |            | 0.045   |            | 0.115   |            | 0.073   |
| 14                     |                   | 0.069           |                  | 0.063           |            | 0.059    |                    | 0.042          |                   | 0.036             |            | 0.057   |            | 0.055   |            | 0.145   |            | 0.091   |
| 16                     | 0.082             | 0.076           | 0.069            | 0.048           | 0.042      | 0.070    | 0.065              | 0.177          | 0.111             |                   |            |         |            |         |            |         |            |         |
| 18                     | 0.095             | 0.089           | 0.081            | 0.054           | 0.048      | 0.083    | 0.076              | 0.212          | 0.133             |                   |            |         |            |         |            |         |            |         |
| 20                     | 0.109             | 0.102           | 0.093            | 0.060           | 0.054      | 0.098    | 0.087              | 0.251          | 0.156             |                   |            |         |            |         |            |         |            |         |



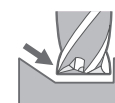
Empfohlene Schnittparameter  
Hinweis: Die empfohlenen Schnittparameter dienen nur als Referenz. Diese ändern sich bei verschiedenen Schnittbedingungen.

# NiTiCo 30 Schnittdatenempfehlung



## Standard Fräser, 4 Schneider

| Bohrfräsen             | P01               | P02             | P03              | M01             | M02        | K01      | K02                | S01            | S02               | S03               |            |         |            |         |            |         |            |         |            |         |   |   |   |   |   |   |
|------------------------|-------------------|-----------------|------------------|-----------------|------------|----------|--------------------|----------------|-------------------|-------------------|------------|---------|------------|---------|------------|---------|------------|---------|------------|---------|---|---|---|---|---|---|
| Werkstückmaterial      | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |            | Grauguss | Dehnbare Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |            |         |            |         |            |         |            |         |            |         |   |   |   |   |   |   |
| Eigenschaften          | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC    | -        | -                  | -              | -                 | -                 |            |         |            |         |            |         |            |         |            |         |   |   |   |   |   |   |
| Schnitttiefe, Ap (mm)  | -                 | -               | -                | -               | -          | -        | -                  | -              | -                 | -                 |            |         |            |         |            |         |            |         |            |         |   |   |   |   |   |   |
| Schnittbreite, Ae (mm) | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D   | 1.00 × D | 1.00 × D           | 1.00 × D       | 1.00 × D          | 1.00 × D          |            |         |            |         |            |         |            |         |            |         |   |   |   |   |   |   |
| D (mm)                 | Vc (m/min)        | Fz (mm)         | Vc (m/min)       | Fz (mm)         | Vc (m/min) | Fz (mm)  | Vc (m/min)         | Fz (mm)        | Vc (m/min)        | Fz (mm)           | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) | Vc (m/min) | Fz (mm) |   |   |   |   |   |   |
| 1                      | 125               | -               | 110              | -               | 100        | -        | 95                 | -              | 55                | -                 | 135        | -       | 55         | -       | 65         | -       | 45         | -       | 55         | -       |   |   |   |   |   |   |
| 2                      |                   | -               |                  | -               |            | -        |                    | -              |                   | -                 |            | -       |            | -       |            | -       |            | -       |            | -       | - | - | - | - | - | - |
| 3                      |                   | 0.014           |                  | 0.014           |            | 0.013    |                    | 0.006          |                   | 0.005             |            | 0.005   |            | 0.006   |            | 0.013   |            | 0.006   |            | 0.006   |   |   |   |   |   |   |
| 4                      |                   | 0.020           |                  | 0.020           |            | 0.019    |                    | 0.010          |                   | 0.009             |            | 0.007   |            | 0.009   |            | 0.017   |            | 0.009   |            | 0.009   |   |   |   |   |   |   |
| 5                      |                   | 0.024           |                  | 0.027           |            | 0.026    |                    | 0.012          |                   | 0.011             |            | 0.009   |            | 0.011   |            | 0.022   |            | 0.011   |            | 0.011   |   |   |   |   |   |   |
| 6                      |                   | 0.028           |                  | 0.032           |            | 0.031    |                    | 0.016          |                   | 0.014             |            | 0.011   |            | 0.013   |            | 0.027   |            | 0.013   |            | 0.013   |   |   |   |   |   |   |
| 8                      |                   | 0.045           |                  | 0.046           |            | 0.044    |                    | 0.022          |                   | 0.020             |            | 0.015   |            | 0.017   |            | 0.037   |            | 0.017   |            | 0.017   |   |   |   |   |   |   |
| 10                     |                   | 0.060           |                  | 0.061           |            | 0.059    |                    | 0.027          |                   | 0.024             |            | 0.019   |            | 0.023   |            | 0.046   |            | 0.023   |            | 0.023   |   |   |   |   |   |   |
| 12                     |                   | 0.075           |                  | 0.077           |            | 0.075    |                    | 0.034          |                   | 0.031             |            | 0.024   |            | 0.027   |            | 0.059   |            | 0.027   |            | 0.027   |   |   |   |   |   |   |
| 14                     |                   | 0.088           |                  | 0.090           |            | 0.088    |                    | 0.041          |                   | 0.037             |            | 0.033   |            | 0.032   |            | 0.069   |            | 0.032   |            | 0.032   |   |   |   |   |   |   |
| 16                     |                   | 0.106           |                  | 0.109           |            | 0.107    |                    | 0.049          |                   | 0.044             |            | 0.037   |            | 0.037   |            | 0.083   |            | 0.037   |            | 0.037   |   |   |   |   |   |   |
| 18                     |                   | 0.119           |                  | 0.122           |            | 0.120    |                    | 0.055          |                   | 0.050             |            | 0.045   |            | 0.059   |            | 0.094   |            | 0.059   |            | 0.059   |   |   |   |   |   |   |
| 20                     |                   | 0.138           |                  | 0.143           |            | 0.141    |                    | 0.063          |                   | 0.057             |            | 0.050   |            | 0.077   |            | 0.109   |            | 0.077   |            | 0.077   |   |   |   |   |   |   |



## Standard Fräser, 4 Schneider

| Rampen<br>fräsen                 | P01               | P02             | P03              | M01             | M02           | K01        | K02                   | S01            | S02               | S03               |               |            |               |            |               |            |               |            |               |            |   |   |   |   |   |
|----------------------------------|-------------------|-----------------|------------------|-----------------|---------------|------------|-----------------------|----------------|-------------------|-------------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---------------|------------|---|---|---|---|---|
| Werkstück<br>material            | Unlegierter Stahl | legierter Stahl | Gehärteter Stahl | rostfreie Stahl |               | Grauguss   | Dehnbare<br>Gusseisen | Titanlegierung | Nickellegierungen | Kobaltlegierungen |               |            |               |            |               |            |               |            |               |            |   |   |   |   |   |
| Eigens-<br>chaften               | -                 | 520 < Rm < 1200 | 35 ≤ HRC < 45    | >35 HRC         | <35 HRC       | -          | -                     | -              | -                 | -                 |               |            |               |            |               |            |               |            |               |            |   |   |   |   |   |
| Schnitttiefe<br>,Ap (mm)         | 1.00 × D          | 1.00 × D        | 1.00 × D         | 1.00 × D        | 1.00 × D      | 1.00 × D   | 1.00 × D              | 1.00 × D       | 1.00 × D          | 1.00 × D          |               |            |               |            |               |            |               |            |               |            |   |   |   |   |   |
| Eintauch<br>winkel<br>bei ae=1xD | 30°               | 25°             | 15°              | 10°             | 8°            | 30°        | 15°                   | 5°             | 3°                | 3°                |               |            |               |            |               |            |               |            |               |            |   |   |   |   |   |
| D (mm)                           | Vc<br>(m/min)     | Fz<br>(mm)      | Vc<br>(m/min)    | Fz<br>(mm)      | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min)         | Fz<br>(mm)     | Vc<br>(m/min)     | Fz<br>(mm)        | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) | Vc<br>(m/min) | Fz<br>(mm) |   |   |   |   |   |
| 1                                | 125               | -               | 110              | -               | 100           | -          | 95                    | -              | 55                | -                 | 135           | -          | 55            | -          | 65            | -          | 45            | -          | 55            | -          |   |   |   |   |   |
| 2                                |                   | -               |                  | -               |               | -          |                       | -              |                   | -                 |               | -          |               | -          |               | -          |               | -          |               | -          | - | - | - | - | - |
| 3                                |                   | 0.017           |                  | 0.017           |               | 0.016      |                       | 0.006          |                   | 0.005             |               | 0.005      |               | 0.006      |               | 0.013      |               | 0.006      |               | 0.006      |   |   |   |   |   |
| 4                                |                   | 0.024           |                  | 0.024           |               | 0.024      |                       | 0.010          |                   | 0.009             |               | 0.007      |               | 0.009      |               | 0.017      |               | 0.009      |               | 0.009      |   |   |   |   |   |
| 5                                |                   | 0.031           |                  | 0.032           |               | 0.031      |                       | 0.012          |                   | 0.011             |               | 0.009      |               | 0.011      |               | 0.022      |               | 0.011      |               | 0.011      |   |   |   |   |   |
| 6                                |                   | 0.038           |                  | 0.039           |               | 0.038      |                       | 0.016          |                   | 0.014             |               | 0.011      |               | 0.013      |               | 0.027      |               | 0.013      |               | 0.013      |   |   |   |   |   |
| 8                                |                   | 0.053           |                  | 0.054           |               | 0.053      |                       | 0.022          |                   | 0.020             |               | 0.015      |               | 0.017      |               | 0.037      |               | 0.017      |               | 0.017      |   |   |   |   |   |
| 10                               |                   | 0.069           |                  | 0.071           |               | 0.071      |                       | 0.027          |                   | 0.024             |               | 0.019      |               | 0.023      |               | 0.046      |               | 0.023      |               | 0.023      |   |   |   |   |   |
| 12                               |                   | 0.087           |                  | 0.090           |               | 0.090      |                       | 0.034          |                   | 0.031             |               | 0.024      |               | 0.027      |               | 0.059      |               | 0.027      |               | 0.027      |   |   |   |   |   |
| 14                               |                   | 0.101           |                  | 0.105           |               | 0.104      |                       | 0.041          |                   | 0.037             |               | 0.033      |               | 0.032      |               | 0.069      |               | 0.032      |               | 0.032      |   |   |   |   |   |
| 16                               |                   | 0.121           |                  | 0.126           |               | 0.126      |                       | 0.049          |                   | 0.044             |               | 0.037      |               | 0.037      |               | 0.083      |               | 0.037      |               | 0.037      |   |   |   |   |   |
| 18                               |                   | 0.136           |                  | 0.141           |               | 0.141      |                       | 0.055          |                   | 0.050             |               | 0.045      |               | 0.059      |               | 0.094      |               | 0.059      |               | 0.059      |   |   |   |   |   |
| 20                               |                   | 0.157           |                  | 0.164           |               | 0.165      |                       | 0.063          |                   | 0.057             |               | 0.050      |               | 0.077      |               | 0.109      |               | 0.077      |               | 0.077      |   |   |   |   |   |



Empfohlene Schnittparameter  
Hinweis: Die empfohlenen Schnittparameter dienen nur als Referenz. Diese ändern sich bei verschiedenen Schnittbedingungen.



# MATERIALGRUPPE



|     | Materialgruppe                     | Material Group                      |
|-----|------------------------------------|-------------------------------------|
| N01 | Aluminiumlegierungen, Si < 9%      | Aluminium wrought alloy, Si < 9%    |
| N02 | Aluminiumguss, Si ≥ 9%             | Aluminium cast alloy, Si ≥ 9%       |
| N03 | Kupferlegierungen                  | Copper alloy                        |
| K01 | Grauguss                           | Grey cast iron                      |
| K02 | Gusseisen                          | Ductile cast iron                   |
| P01 | Kohlenstoffstähle                  | Carbon steel                        |
| P02 | Stahllegierungen                   | Alloy steel                         |
| P03 | Vorgehärtete Stähle, 35 ≤ HRC ≤ 45 | Prehardened steel, 35 ≤ HRC ≤ 45    |
| M01 | Rostfreie Stähle <35 HR            | Stainless steel, high machinability |
| M02 | Rostfreie Stähle ≥35 HRC           | Stainless steel, low machinability  |
| S01 | Titanlegierungen                   | Titanium alloy                      |
| S02 | Nickellegierungen                  | Nickel alloy                        |
| S03 | Kobaltlegierungen                  | Cobalt alloy                        |
| H01 | Gehärtete Stähle, 45 ≤ HRC < 52    | Hardened steel, 45 ≤ HRC < 52       |
| H02 | Gehärtete Stähle, ≥ 52 HR          | Hardened steel, ≥ 52HRC             |
| O01 | Thermoplaste                       | Thermoplastics                      |
| O02 | Grafit                             | Graphite                            |