

## Bezeichnungsschlüssel – VHM-Fräswerkzeuge

Beispiel:

|   |   |   |    |   |      |   |   |   |     |    |   |       |   |    |    |
|---|---|---|----|---|------|---|---|---|-----|----|---|-------|---|----|----|
| M | C | 3 | 26 | – | 12.0 | A | 4 | B | 200 | A  | – | W     | K | 40 | TF |
| 1 | 2 | 3 | 4  | 5 | 6    | 7 | 8 | 9 | 10  | 11 |   | Sorte |   |    |    |

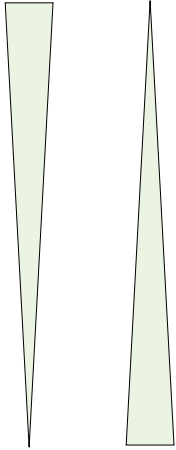
| 1                                  | 2                                                                                                                                                                                                     | 3                                                                                                                                                                                                                                                                                                                           | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Werkzeuggruppe                     | Generation                                                                                                                                                                                            | Werkzeugart                                                                                                                                                                                                                                                                                                                 | Werkzeugtyp                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>M</b> Milling (Fräsen)          |                                                                                                                                                                                                       | <b>0</b> Planfräser, High-Feed-Fräser<br><b>1</b> Eckfräser<br><b>2</b> Eck- / Nut- / Igel-Fräser<br><b>3</b> Eck- / Nut- / Igel-Fräser, Spiralwinkel $\geq 40^\circ$<br><b>4</b> Kugelkopf- / Kopierfräser<br><b>5</b> Profilfräser<br><b>7</b> Bohrnuten- / Bohrzirkularfräser<br><b>8</b> Konische- / Kreissegmentfräser | <b>00</b> Universal Spiralwinkel $0^\circ$ , Fasfräser $60^\circ$<br><b>01</b> Universal Spiralwinkel $0^\circ$ , Fasfräser $90^\circ$<br><b>02</b> Universal Spiralwinkel $0^\circ$ , Fasfräser $120^\circ$<br><b>03</b> Universal Spiralwinkel $0^\circ$ , Viertelkreis-Profilfräser<br><b>04</b> Universal Spiralwinkel $0^\circ$ , Vor- / Rückwärtseingrater<br><b>11</b> Universal Spiralwinkel $30^\circ$ , Typ N<br><b>12</b> Universal Spiralwinkel $30^\circ$ , Typ HSC<br><b>13</b> Universal Spiralwinkel $30^\circ$ , Typ HSC, lange Ausführung<br><b>16</b> Universal Spiralwinkel $30^\circ$ , Typ 30<br><b>19</b> Universal Spiralwinkel $40^\circ$ , Kordelprofil mit IK<br><b>20</b> Universal Spiralwinkel $40^\circ$ , Kordelprofil<br><b>21</b> Universal Spiralwinkel $45^\circ$ , kurze Ausführung<br><b>22</b> Universal Spiralwinkel $45^\circ$ , Typ N<br><b>24</b> Universal Spiralwinkel $45^\circ$ , Typ 45<br><b>25</b> Universal Spiralwinkel $50^\circ$ , High-Feed<br><b>26</b> Universal Spiralwinkel $50^\circ$ , ungleiche Nuttiefe, Ungleichenteilung<br><b>28</b> Universal Spiralwinkel $50^\circ$ , Typ N, Mehrschneider<br><b>29</b> Universal Spiralwinkel $60^\circ$ , Typ N, Mehrschneider<br><b>30</b> Universal Spiralwinkel $35^\circ / 38^\circ$ , UNI, HPC-Geometrie<br><b>32</b> Universal Spiralwinkel $30^\circ - 38^\circ$ , UNI, HPC-Geometrie<br><b>33</b> Universal Spiralwinkel $35^\circ$ + Spanteiler<br><b>38</b> Universal Spiralwinkel $30^\circ$ , Konischer Kreissegmentfräser<br><b>39</b> Universal Spiralwinkel $30^\circ$ , Tangentialer Kreissegmentfräser<br><b>40</b> ISO P Spiralwinkel $38^\circ - 41^\circ$ , HPC-Geometrie<br><b>41</b> ISO P Spiralwinkel $50^\circ$ , HPC, Ungleichenteilung<br><b>51</b> ISO M Spiralwinkel $35^\circ / 38^\circ$ , ohne IK<br><b>65</b> ISO N Spiralwinkel $30^\circ$ , Al-Geometrie, RAPAX G30 Schrupp-Profil, IK axial<br><b>66</b> ISO N Spiralwinkel $30^\circ - 35^\circ$ , Al-Geometrie<br><b>67</b> ISO N Spiralwinkel $45^\circ$ , Al-Geometrie<br><b>68</b> ISO N Spiralwinkel $30^\circ$ , Aluminium, Kordelprofiliert<br><b>77</b> ISO S Spiralwinkel $38^\circ - 40^\circ$ , Ti-Geometrie<br><b>80</b> ISO H Spiralwinkel $30^\circ$ , HSC, Typ H<br><b>81</b> ISO H Spiralwinkel $30^\circ$ , Mini HSC T, Typ H<br><b>82</b> ISO H Spiralwinkel $30^\circ$ , Mini HSC R, Typ H<br><b>83</b> ISO H Spiralwinkel $30^\circ$ , Multi Flute, Typ H<br><b>87</b> ISO H Spiralwinkel $50^\circ$ , Multi Flute, Typ H<br><b>88</b> ISO H Spiralwinkel $50^\circ$ , HPC, Typ H<br><b>89</b> ISO H Spiralwinkel $50^\circ$ , High-Feed, Typ H |
| 5                                  | 6                                                                                                                                                                                                     | 7                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Trennzeichen                       | Schneiddurchmesser                                                                                                                                                                                    | Schafttyp                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>–</b> Metrisch<br><b>.</b> Inch |                                                                                                                                                                                                       | <b>A</b> Zylinderschaft<br><b>B</b> Bohrung<br><b>E</b> ConeFit<br><b>T</b> ScrewFit<br><b>W</b> Weldonschaft                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8                                  | 9                                                                                                                                                                                                     | 10                                                                                                                                                                                                                                                                                                                          | 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Zähnezahl                          | Baunorm                                                                                                                                                                                               | Eckenradius                                                                                                                                                                                                                                                                                                                 | Variante                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                    | <b>A</b> DIN 6527 K<br><b>B</b> DIN 6527 L<br><b>C</b> ANSI-Stub<br><b>D</b> ANSI-Standard<br><b>L</b> P-Norm L<br><b>M</b> P-Norm Mini<br><b>P</b> P-Norm<br><b>S</b> P-Norm S<br><b>X</b> P-Norm XL |                                                                                                                                                                                                                                                                                                                             | <b>A</b> $I_3$ XS<br><b>B</b> $I_3$ S / $2 \times D_c^*$<br><b>C</b> $I_3$ M / $3 \times D_c^*$<br><b>D</b> $I_3$ L / $4 \times D_c^*$<br><b>E</b> $I_3$ XL / $5 \times D_c^*$<br><b>F</b> $I_3$ XXL / $6 \times D_c^*$<br><b>G</b> $I_3$ XXXL / $8 \times D_c^*$<br><b>H</b> $I_3$ XXXL / $10 \times D_c^*$<br><b>J</b> $L_c$ S / $3 \times D_c^*$<br><b>K</b> $L_c$ M / $4 \times D_c^*$<br><b>L</b> $L_c$ L / $5 \times D_c^*$<br><b>V</b> Konischer Hals $\alpha \leq 3^\circ$<br><b>W</b> Konischer Hals $\alpha \leq 6^\circ$<br><b>X</b> Konischer Hals $\alpha \leq 12^\circ$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

\* Richtwerte

## Sorten-Bezeichnungsschlüssel für Schneidstoffe aus Vollhartmetall

Beispiel:

|          |          |           |           |
|----------|----------|-----------|-----------|
| <b>W</b> | <b>K</b> | <b>40</b> | <b>TF</b> |
| Walter   | 1        | 2         | 3         |

| 1                                            | 2                                                                                                                                                                                                                                        | 3                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substrat                                     | Anwendungsbereich                                                                                                                                                                                                                        | Beschichtung                                                                                                                                                                                                                                                                                                                                    |
| <p><b>VHM</b></p> <p>B</p> <p>J</p> <p>K</p> | <p>Verschleiß-<br/>festigkeit</p> <p>5</p> <p>10</p> <p>15</p> <p>20</p> <p>25</p> <p>30</p> <p>35</p> <p>40</p> <p>45</p> <p>50</p> <p>Zähigkeit</p>  | <p><b>TF</b> TiAlN</p> <p><b>UU</b> Unbeschichtet</p> <p><b>CA</b> CrN</p> <p><b>RC</b> TiAlN + AlTi</p> <p><b>TZ</b> AlTiN + ZrN</p> <p><b>ED</b> AlCrN</p> <p><b>TG</b> TiAlSiN</p> <p><b>RD</b> AlTiN + ZrN</p> <p><b>RA</b> TiAlN + TiAl</p> <p><b>EA</b> ACN</p> <p><b>EN</b> nACRoA</p> <p><b>TP</b> TiAlN + ZrN</p> <p><b>DD</b> NHC</p> |