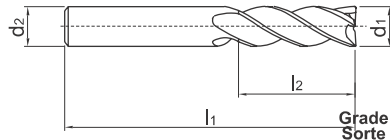


### DIN 6527L 3-flute slotting end mills · DIN 6527L 3-Schneiden VHM Langlochfräser



#### 5502R303GM

YK30F: Ultra-fine carbide grade / Ultrafeinkornhartmetall  
KMG303: nano TiAlN coated ultra-fine carbide / nano TiAlN beschichtetes Ultrafeinkornhartmetall



| Type<br>Typ                          | Dimension(mm)<br>Abmessungen |        |    |     | Teeth<br>Zähne | Application<br>Anwendung | P M K  |        |
|--------------------------------------|------------------------------|--------|----|-----|----------------|--------------------------|--------|--------|
|                                      | d1(h10)                      | d2(h6) | l2 | l1  |                |                          | YK30F  | KMG303 |
| 5502R303GM-0300                      | 3.00                         | 6      | 7  | 57  | 3              |                          | ○      | ●      |
| 5502R303GM-0400                      | 4.00                         | 6      | 8  | 57  | 3              |                          | ○      | ●      |
| 5502R303GM-0500                      | 5.00                         | 6      | 10 | 57  | 3              |                          | ○      | ●      |
| 5502R303GM-0600                      | 6.00                         | 6      | 10 | 57  | 3              |                          | ○      | ●      |
| 5502R303GM-0800                      | 8.00                         | 8      | 16 | 63  | 3              |                          | ○      | ●      |
| 5502R303GM-1000                      | 10.00                        | 10     | 19 | 72  | 3              |                          | ○      | ●      |
| 5502R303GM-1200                      | 12.00                        | 12     | 22 | 83  | 3              |                          | ○      | ●      |
| 5502R303GM-1400                      | 14.00                        | 14     | 22 | 83  | 3              |                          | ○      | ●      |
| 5502R303GM-1600                      | 16.00                        | 16     | 26 | 92  | 3              |                          | ○      | ●      |
| 5502R303GM-1800                      | 18.00                        | 18     | 26 | 92  | 3              |                          | ○      | ●      |
| 5502R303GM-2000                      | 20.00                        | 20     | 32 | 104 | 3              |                          | ○      | ●      |
| Art. Group No. / Produktgruppe Nr. : |                              |        |    |     |                |                          | 021140 | 021130 |

B

Solid Carbide end mills  
Vollhartmetallschaftfräser

#### Material Overview · Material Übersicht

✓ = Very suitable · Sehr empfohlen  
✓ = Suitable · Empfohlen

KMG303

| Workpiece material<br>Werkstückstoff |                                |                                                |        |                                   |        |                                    |                                           |                         |                        |                          |                                 |
|--------------------------------------|--------------------------------|------------------------------------------------|--------|-----------------------------------|--------|------------------------------------|-------------------------------------------|-------------------------|------------------------|--------------------------|---------------------------------|
| Carbon steel<br>Kohlenstoff Stahl    | Alloy steel<br>Legierter Stahl | Quenched and tempered steel · Vergüteter Stahl |        | Hardened steel · Gehärteter Stahl |        | Stainless steel · Rostfreier Stahl | Cast iron, Nodular cast iron Grauguss GGG | Copper alloy Kupfer Leg | Aluminum alloy Alu Leg | Titanium alloy Titan Leg | Heat resist alloy wärmfeste Leg |
|                                      |                                | ~40HRC                                         | ~50HRC | ~55HRC                            | ~68HRC |                                    |                                           |                         |                        |                          |                                 |
| ✓                                    | ✓                              | ✓                                              | ✓      |                                   |        | ✓                                  | ✓                                         |                         |                        |                          |                                 |

Code key B229  
ISO Kennzeichen

Cutting data B387-414  
Schnittdaten

Graphics identification & application B230  
Graphische Werkzeug- & Anwendungsbeschr.

Order form for non-standard products B497-498  
Bestellformular für Sonderwerkzeuge

### Recommended cutting data · Empfohlene Schnittdaten

| Type<br>Typ | Grade<br>Sorte | Material<br>Werkstoffe                                    | d <sub>1</sub><br>(mm) | z | V <sub>c</sub><br>(m/min) | f <sub>z</sub><br>(mm/z) | a <sub>p</sub><br>(mm) | a <sub>e</sub><br>(mm) | n<br>(min <sup>-1</sup> ) | V <sub>f</sub><br>(mm/min) |
|-------------|----------------|-----------------------------------------------------------|------------------------|---|---------------------------|--------------------------|------------------------|------------------------|---------------------------|----------------------------|
| 5502R303GM  | KMG303         | Steel<br>Stahl<br>HRC<25                                  | 3.00                   | 3 | 120                       | 0.010                    | 1.50                   | 0.75                   | 12730                     | 382                        |
| 5602R303GM  | KMG303         |                                                           | 4.00                   | 3 | 120                       | 0.015                    | 2.00                   | 1.00                   | 9540                      | 429                        |
| 5508R454GM  | KMG303         |                                                           | 5.00                   | 3 | 120                       | 0.020                    | 2.50                   | 1.25                   | 7630                      | 458                        |
| 5602R454GM  | KMG303         |                                                           | 6.00                   | 3 | 120                       | 0.024                    | 3.00                   | 1.50                   | 6360                      | 458                        |
|             |                |                                                           | 8.00                   | 3 | 120                       | 0.032                    | 4.00                   | 2.00                   | 4770                      | 458                        |
|             |                |                                                           | 10.00                  | 3 | 120                       | 0.038                    | 5.00                   | 2.50                   | 3810                      | 434                        |
|             |                |                                                           | 12.00                  | 3 | 120                       | 0.046                    | 6.00                   | 3.00                   | 3180                      | 439                        |
|             |                |                                                           | 16.00                  | 3 | 120                       | 0.054                    | 8.00                   | 4.00                   | 2380                      | 386                        |
|             |                |                                                           | 20.00                  | 3 | 120                       | 0.066                    | 10.00                  | 5.00                   | 1900                      | 376                        |
|             |                | Steel, Steel alloy<br>Stahl, legierter Stahl<br>HRC=25-38 | 3.00                   | 3 | 90                        | 0.010                    | 1.50                   | 0.75                   | 9540                      | 286                        |
|             |                |                                                           | 4.00                   | 3 | 90                        | 0.015                    | 2.00                   | 1.00                   | 7160                      | 322                        |
|             |                |                                                           | 5.00                   | 3 | 90                        | 0.020                    | 2.50                   | 1.25                   | 5720                      | 343                        |
|             |                |                                                           | 6.00                   | 3 | 90                        | 0.024                    | 3.00                   | 1.50                   | 4770                      | 343                        |
|             |                |                                                           | 8.00                   | 3 | 90                        | 0.032                    | 4.00                   | 2.00                   | 3580                      | 344                        |
|             |                |                                                           | 10.00                  | 3 | 90                        | 0.038                    | 5.00                   | 2.50                   | 2860                      | 326                        |
|             |                |                                                           | 12.00                  | 3 | 90                        | 0.046                    | 6.00                   | 3.00                   | 2380                      | 328                        |
|             |                |                                                           | 16.00                  | 3 | 90                        | 0.054                    | 8.00                   | 4.00                   | 1790                      | 290                        |
|             |                | High ally steel<br>Hochlegierter Stahl                    | 3.00                   | 3 | 40                        | 0.010                    | 1.50                   | 0.75                   | 4240                      | 127                        |
|             |                |                                                           | 4.00                   | 3 | 40                        | 0.015                    | 2.00                   | 1.00                   | 3180                      | 143                        |
|             |                |                                                           | 5.00                   | 3 | 40                        | 0.020                    | 2.50                   | 1.25                   | 2540                      | 152                        |
|             |                | Stainless steel<br>Rostfreier Stahl                       | 6.00                   | 3 | 40                        | 0.024                    | 3.00                   | 1.50                   | 2120                      | 153                        |
|             |                |                                                           | 8.00                   | 3 | 40                        | 0.032                    | 4.00                   | 2.00                   | 1590                      | 153                        |
|             |                |                                                           | 10.00                  | 3 | 40                        | 0.038                    | 5.00                   | 2.50                   | 1270                      | 145                        |
|             |                | Ti and Ti alloys<br>Ti-Legierungen                        | 12.00                  | 3 | 40                        | 0.046                    | 6.00                   | 3.00                   | 1060                      | 146                        |
|             |                |                                                           | 16.00                  | 3 | 40                        | 0.054                    | 8.00                   | 4.00                   | 790                       | 128                        |
|             |                |                                                           | 20.00                  | 3 | 40                        | 0.066                    | 10.00                  | 5.00                   | 630                       | 125                        |
|             |                | Cast iron<br>Guss                                         | 3.00                   | 3 | 150                       | 0.010                    | 1.50                   | 0.75                   | 15910                     | 477                        |
|             |                |                                                           | 4.00                   | 3 | 150                       | 0.015                    | 2.00                   | 1.00                   | 11930                     | 537                        |
|             |                |                                                           | 5.00                   | 3 | 150                       | 0.022                    | 2.50                   | 1.25                   | 9540                      | 630                        |
|             |                |                                                           | 6.00                   | 3 | 150                       | 0.027                    | 3.00                   | 1.50                   | 7950                      | 644                        |
|             |                |                                                           | 8.00                   | 3 | 150                       | 0.035                    | 4.00                   | 2.00                   | 5960                      | 626                        |
|             |                |                                                           | 10.00                  | 3 | 150                       | 0.044                    | 5.00                   | 2.50                   | 4770                      | 630                        |
|             |                |                                                           | 12.00                  | 3 | 150                       | 0.052                    | 6.00                   | 3.00                   | 3970                      | 619                        |
|             |                | Aluminum alloy<br>Alu-Legierung<br>Si<=10%                | 16.00                  | 3 | 150                       | 0.063                    | 8.00                   | 4.00                   | 2980                      | 563                        |
|             |                |                                                           | 20.00                  | 3 | 150                       | 0.080                    | 10.00                  | 5.00                   | 2380                      | 571                        |
|             |                |                                                           | 3.00                   | 3 | 300                       | 0.015                    | 1.50                   | 0.75                   | 31830                     | 1432                       |
|             |                |                                                           | 4.00                   | 3 | 300                       | 0.020                    | 2.00                   | 1.00                   | 23870                     | 1432                       |
|             |                |                                                           | 5.00                   | 3 | 300                       | 0.025                    | 2.50                   | 1.25                   | 19090                     | 1432                       |
|             |                |                                                           | 6.00                   | 3 | 300                       | 0.029                    | 3.00                   | 1.50                   | 15910                     | 1384                       |
|             |                |                                                           | 8.00                   | 3 | 300                       | 0.042                    | 4.00                   | 2.00                   | 11930                     | 1503                       |
|             |                |                                                           | 10.00                  | 3 | 300                       | 0.050                    | 5.00                   | 2.50                   | 9540                      | 1431                       |
|             |                |                                                           | 12.00                  | 3 | 300                       | 0.059                    | 6.00                   | 3.00                   | 7950                      | 1407                       |
|             |                |                                                           | 16.00                  | 3 | 300                       | 0.072                    | 8.00                   | 4.00                   | 5960                      | 1287                       |
|             |                |                                                           | 20.00                  | 3 | 300                       | 0.090                    | 10.00                  | 5.00                   | 4770                      | 1288                       |
|             |                | Brass<br>Bronze<br>Kupfer                                 | 3.00                   | 3 | 150                       | 0.015                    | 1.50                   | 0.75                   | 15910                     | 716                        |
|             |                |                                                           | 4.00                   | 3 | 150                       | 0.020                    | 2.00                   | 1.00                   | 11930                     | 716                        |
|             |                |                                                           | 5.00                   | 3 | 150                       | 0.025                    | 2.50                   | 1.25                   | 9540                      | 716                        |
|             |                |                                                           | 6.00                   | 3 | 150                       | 0.029                    | 3.00                   | 1.50                   | 7950                      | 692                        |
|             |                |                                                           | 8.00                   | 3 | 150                       | 0.042                    | 4.00                   | 2.00                   | 5960                      | 751                        |
|             |                |                                                           | 10.00                  | 3 | 150                       | 0.050                    | 5.00                   | 2.50                   | 4770                      | 716                        |
|             |                |                                                           | 12.00                  | 3 | 150                       | 0.059                    | 6.00                   | 3.00                   | 3970                      | 703                        |
|             |                |                                                           | 16.00                  | 3 | 150                       | 0.072                    | 8.00                   | 4.00                   | 2980                      | 644                        |
|             |                |                                                           | 20.00                  | 3 | 150                       | 0.090                    | 10.00                  | 5.00                   | 2380                      | 643                        |



- Please start a test cutting with 85% of the V<sub>c</sub> or 75% of the f<sub>z</sub>, then increase the cutting speed and feed rate.
- Please use high precision and high rigidity clamping system. The oscillation of the tool can not be over 0.01 mm.
- When ap=1\*d<sub>1</sub>, f<sub>z</sub> = 75% as the data in the table.
- Recommended operation: climb milling.
- Bitte führen Sie einen Testschnitt mit 85% der V<sub>c</sub> und 75% des f<sub>z</sub> durch. Nach erfolgtem Test können Sie die Schnittgeschwindigkeit bzw. die Vorschubwerte entsprechend erhöhen.
- Bitte verwenden Sie nur Spannmittel mit einer hohen Genauigkeit und einer hohen Spannkraft. Überprüfen Sie den Rundlauf der Werkzeuge. Sie sollten darauf achten, dass der Rundlauffehler nicht größer als 0.01 mm ist.
- Bei Fräsoperationen, die mit einer ap=1\*d<sub>1</sub> durchgeführt werden, ist f<sub>z</sub> um 25% zu reduzieren.
- Empfohlene Fräsmethode: Gleichlaufräsen.