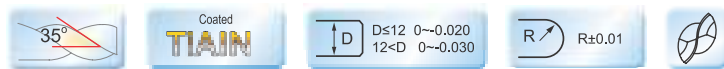
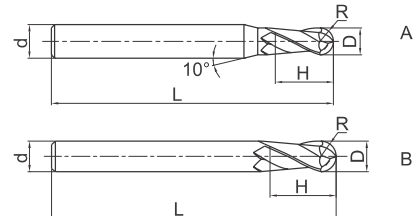


# Milling · Fräsen

Solid Carbide end mills · Vollhartmetallschaftfräser

## GM-2B

2-flute ball nose end mills with straight shank  
2-Schneiden Kugelpkopfräser mit Zylinderschaft



| Type<br>Typ  | Dimension(mm)<br>Abmessungen |      |    |    |     | Teeth<br>Zähne<br>Z | Geometry<br>Ausführung | Grade<br>Sorte<br>KMG 303 |
|--------------|------------------------------|------|----|----|-----|---------------------|------------------------|---------------------------|
|              | D                            | R    | d  | H  | L   |                     |                        |                           |
| GM-2B-R0.5S  | 1.0                          | 0.5  | 4  | 2  | 50  | 2                   | A                      | ●                         |
| GM-2B-R0.75S | 1.5                          | 0.75 | 4  | 3  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.0S  | 2.0                          | 1.0  | 4  | 4  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.25S | 2.5                          | 1.25 | 4  | 5  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.5S  | 3.0                          | 1.5  | 4  | 6  | 50  | 2                   | A                      | ●                         |
| GM-2B-R2.0S  | 4.0                          | 2.0  | 4  | 8  | 50  | 2                   | B                      | ●                         |
| GM-2B-R0.5   | 1.0                          | 0.5  | 6  | 2  | 50  | 2                   | A                      | ●                         |
| GM-2B-R0.75  | 1.5                          | 0.75 | 6  | 3  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.0   | 2.0                          | 1.0  | 6  | 4  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.25  | 2.5                          | 1.25 | 6  | 5  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.5   | 3.0                          | 1.5  | 6  | 6  | 50  | 2                   | A                      | ●                         |
| GM-2B-R1.75  | 3.5                          | 1.75 | 6  | 8  | 50  | 2                   | A                      | ●                         |
| GM-2B-R2.0   | 4.0                          | 2.0  | 6  | 8  | 50  | 2                   | A                      | ●                         |
| GM-2B-R2.5   | 5.0                          | 2.5  | 6  | 10 | 50  | 2                   | A                      | ●                         |
| GM-2B-R2.75  | 5.5                          | 2.75 | 6  | 12 | 50  | 2                   | A                      | ●                         |
| GM-2B-R3.0   | 6.0                          | 3.0  | 6  | 12 | 50  | 2                   | B                      | ●                         |
| GM-2B-R3.5   | 7.0                          | 3.5  | 8  | 14 | 60  | 2                   | A                      | ●                         |
| GM-2B-R4.0   | 8.0                          | 4.0  | 8  | 16 | 60  | 2                   | B                      | ●                         |
| GM-2B-R4.5   | 9.0                          | 4.5  | 10 | 18 | 75  | 2                   | A                      | ●                         |
| GM-2B-R5.0   | 10                           | 5.0  | 10 | 20 | 75  | 2                   | B                      | ●                         |
| GM-2B-R6.0   | 12                           | 6.0  | 12 | 24 | 75  | 2                   | B                      | ●                         |
| GM-2B-R7.0   | 14                           | 7.0  | 14 | 28 | 75  | 2                   | B                      | ●                         |
| GM-2B-R8.0   | 16                           | 8.0  | 16 | 32 | 100 | 2                   | B                      | ●                         |
| GM-2B-R10.0  | 20                           | 10.0 | 20 | 40 | 100 | 2                   | B                      | ●                         |

### 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 |                                    |                                           |                         |                        |                          |                                 |
| ✓                                    | ✓                              | ✓                                              | ✓      |                                   |        | ✓                                  | ✓                                         |                         |                        |                          |                                 |

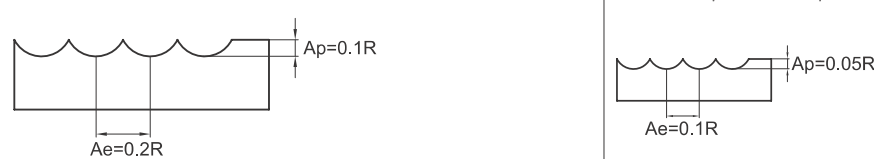
● Ex Stock / ab Lager ○ On demand / auf Anfrage

# Milling · Fräsen

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## Recommended cutting data · Empfohlene Schnittdaten

### GM-2B | GM-2BL

| Workpiece material<br>Werkstückstoff   | Cast iron,<br>Nodular cast iron<br>Grauguss<br>GGG                                   |                              | Carbon steel, Alloy steel<br>Kohlenstoffstahl<br>Leg. Stahl<br>~750N/mm <sup>2</sup> |                              | Carbon steel, Alloy steel<br>Kohlenstoffstahl<br>Leg. Stahl<br>~30HRC |                              | Pre-hardened steel,<br>Quenched and tempered steel<br>Vergüteter Stahl<br>~40HRC |                              | Stainless steel<br>Rostfreier Stahl          |                              | Pre-hardened steel,<br>Quenched and tempered steel<br>Vergüteter Stahl<br>~50HRC |                              |
|----------------------------------------|--------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------|------------------------------|-----------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------|------------------------------|----------------------------------------------|------------------------------|----------------------------------------------------------------------------------|------------------------------|
| Diameter Ø<br>Durchmesser<br>(mm)      | Rotating<br>Drehzahl<br>(min <sup>-1</sup> )                                         | Feed<br>Vorschub<br>(mm/min) | Rotating<br>Drehzahl<br>(min <sup>-1</sup> )                                         | Feed<br>Vorschub<br>(mm/min) | Rotating<br>Drehzahl<br>(min <sup>-1</sup> )                          | Feed<br>Vorschub<br>(mm/min) | Rotating<br>Drehzahl<br>(min <sup>-1</sup> )                                     | Feed<br>Vorschub<br>(mm/min) | Rotating<br>Drehzahl<br>(min <sup>-1</sup> ) | Feed<br>Vorschub<br>(mm/min) | Rotating<br>Drehzahl<br>(min <sup>-1</sup> )                                     | Feed<br>Vorschub<br>(mm/min) |
| <b>R0.5</b>                            | 40000                                                                                | 800                          | 40000                                                                                | 800                          | 38000                                                                 | 700                          | 32000                                                                            | 320                          | 22300                                        | 200                          | 25000                                                                            | 275                          |
| <b>R1.0</b>                            | 24000                                                                                | 900                          | 24000                                                                                | 900                          | 19000                                                                 | 760                          | 16000                                                                            | 400                          | 11150                                        | 230                          | 13000                                                                            | 275                          |
| <b>R1.5</b>                            | 15500                                                                                | 950                          | 15500                                                                                | 950                          | 12750                                                                 | 760                          | 10600                                                                            | 450                          | 7400                                         | 290                          | 8500                                                                             | 280                          |
| <b>R2.0</b>                            | 11500                                                                                | 950                          | 11500                                                                                | 950                          | 9550                                                                  | 760                          | 8000                                                                             | 550                          | 5550                                         | 370                          | 6500                                                                             | 370                          |
| <b>R2.5</b>                            | 9500                                                                                 | 1050                         | 9500                                                                                 | 1050                         | 7650                                                                  | 800                          | 6400                                                                             | 550                          | 4450                                         | 370                          | 5000                                                                             | 375                          |
| <b>R3.0</b>                            | 8000                                                                                 | 1050                         | 8000                                                                                 | 1050                         | 6400                                                                  | 800                          | 5300                                                                             | 580                          | 3700                                         | 390                          | 4200                                                                             | 390                          |
| <b>R4.0</b>                            | 6000                                                                                 | 1300                         | 6000                                                                                 | 1300                         | 4800                                                                  | 950                          | 4000                                                                             | 700                          | 2750                                         | 455                          | 3200                                                                             | 440                          |
| <b>R5.0</b>                            | 4800                                                                                 | 1200                         | 4800                                                                                 | 1200                         | 3800                                                                  | 900                          | 3200                                                                             | 650                          | 2200                                         | 430                          | 2500                                                                             | 440                          |
| <b>R6.0</b>                            | 4000                                                                                 | 1100                         | 4000                                                                                 | 1100                         | 3200                                                                  | 840                          | 2650                                                                             | 610                          | 1850                                         | 430                          | 2100                                                                             | 420                          |
| <b>R8.0</b>                            | 3000                                                                                 | 1050                         | 3000                                                                                 | 1050                         | 2400                                                                  | 800                          | 2000                                                                             | 600                          | 1350                                         | 380                          | 1600                                                                             | 375                          |
| <b>R10.0</b>                           | 2400                                                                                 | 950                          | 2400                                                                                 | 950                          | 1900                                                                  | 680                          | 1600                                                                             | 560                          | 1100                                         | 370                          | 1250                                                                             | 330                          |
| Max. cutting depth<br>max Schnitttiefe |  |                              |                                                                                      |                              |                                                                       |                              |                                                                                  |                              |                                              |                              |                                                                                  |                              |

1. Please select high precise machine and tool holder.
2. Please use air blow or cutting liquid with high mist retardant property.
3. Vibration and unusual noise may be generated if the machine rigidity and workpiece fixture stability is low, please reduce the rotating speed and feed rate like mentioned above.
4. Make overhang as short as possible if no interference.

1. Bitte präzise Maschine und Werkzeugaufnahmen wählen.
2. Als Kühlmittel bitte Luft oder MQL (Minimalmengen) verwenden..
3. Bei Vibrationen oder unüblichen Geräuschen reduzieren Sie die Schnittdaten (wie oben empfohlen) entsprechend.
4. Werkzeugauskragung so kurz wie möglich wählen.