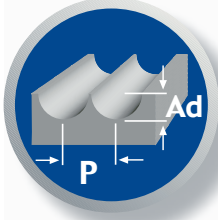




# DM Series: Technical Data

High strength, high hardness solid carbide ball end mills for high-speed machining of hardened alloys up to 65HRc.

- Designed for milling complex contours and shapes
- Proprietary cemented carbide grade and coating
- Maximum tool life and performance in HSM applications
- Pitch (P) and Axial depth (Ad) are expressed in % of cutter diameter
- If recommended speed is higher than machine tool's capacity, run at maximum RPM and reduce feed appropriately



| Material Hardness   | 30 - 40 HRc |        | 40 - 45 HRc |        | 45 - 55 HRc |        | 55 - 60 HRc |        | 60 - 65 HRc |        |
|---------------------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
| Depth of Cut        | Ad = .1xD   | P=.2xD | Ad = .05xD  | P=.2xD | Ad = .03xD  | P=.1xD | Ad = .02xD  | P=.1xD | Ad = .01xD  | P=.1xD |
|                     | Speed       | Feed   | Speed       | Feed   | Speed       | Feed   | Speed       | Feed   | Speed       | Feed   |
| Fractional Diameter | RPM         | in/min | RPM         | in/min | RPM         | in/min | RPM         | in/min | RPM         | in/min |
| .032                | 38,800      | 39     | 38,800      | 39     | 38,800      | 39     | 38,800      | 34     | 37,600      | 21     |
| .040                | 31,040      | 59     | 31,040      | 59     | 31,040      | 59     | 28,000      | 55     | 15,550      | 21     |
| 1/16"               | 31,040      | 74     | 31,040      | 74     | 31,040      | 74     | 28,000      | 70     | 15,550      | 23     |
| .080                | 31,040      | 74     | 31,040      | 74     | 31,040      | 74     | 28,000      | 70     | 15,550      | 23     |
| 3/32"               | 31,040      | 74     | 31,040      | 74     | 31,040      | 74     | 28,000      | 70     | 15,550      | 23     |
| 1/8"                | 23,925      | 86     | 23,925      | 80     | 20,925      | 80     | 18,925      | 70     | 10,425      | 23     |
| 3/16"               | 14,550      | 97     | 14,550      | 91     | 12,550      | 83     | 11,050      | 75     | 6,400       | 23     |
| 1/4"                | 12,025      | 97     | 12,025      | 85     | 10,625      | 83     | 9,625       | 75     | 8,425       | 25     |
| 5/16"               | 9,300       | 72     | 9,300       | 72     | 8,100       | 62     | 7,300       | 56     | 4,100       | 19     |
| 3/8"                | 7,285       | 54     | 7,285       | 54     | 6,300       | 46     | 5,650       | 40     | 3,400       | 15     |
| 7/16"               | 6,425       | 49     | 6,425       | 49     | 5,600       | 43     | 5,100       | 39     | 3,000       | 14     |
| 1/2"                | 6,125       | 48     | 6,125       | 48     | 5,325       | 42     | 4,775       | 38     | 2,675       | 13     |

**SFR** DM Series End Mill Specs:  
Cutting Diam +.0000/- .0008  
Shank Diam -.0000/- .0002  
Radius ±.0005

| Material Hardness    | 30 - 40 HRc |        | 40 - 45 HRc |        | 45 - 55 HRc |        | 55 - 60 HRc |        | 60 - 65 HRc |        |
|----------------------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|-------------|--------|
| Depth of Cut         | Ad = .1xD   | P=.2xD | Ad = .05xD  | P=.2xD | Ad = .03xD  | P=.1xD | Ad = .02xD  | P=.1xD | Ad = .01xD  | P=.1xD |
|                      | Speed       | Feed   | Speed       | Feed   | Speed       | Feed   | Speed       | Feed   | Speed       | Feed   |
| Metric Mill Diameter | RPM         | mm/min | RPM         | mm/min | RPM         | mm/min | RPM         | mm/min | RPM         | mm/min |
| 0.50 mm              | 38,800      | 991    | 38,800      | 991    | 38,800      | 991    | 38,800      | 864    | 37,600      | 533    |
| 1.0 mm               | 31,040      | 1,499  | 31,040      | 1,499  | 31,040      | 1,499  | 28,000      | 1,397  | 15,550      | 533    |
| 1.5 mm               | 31,040      | 1,880  | 31,040      | 1,880  | 31,040      | 1,880  | 28,000      | 1,778  | 15,550      | 584    |
| 2.0 mm               | 31,040      | 1,880  | 31,040      | 1,880  | 31,040      | 1,880  | 28,000      | 1,778  | 15,550      | 584    |
| 3.0 mm               | 31,040      | 1,880  | 31,040      | 1,880  | 31,040      | 1,880  | 28,000      | 1,778  | 15,550      | 584    |
| 4.0 mm               | 23,925      | 2,184  | 23,925      | 2,032  | 20,925      | 2,032  | 18,925      | 1,778  | 10,425      | 584    |
| 5.0 mm               | 14,550      | 2,464  | 14,550      | 2,311  | 12,550      | 2,108  | 11,050      | 1,905  | 6,400       | 584    |
| 6.0 mm               | 12,025      | 2,464  | 12,025      | 2,159  | 10,625      | 2,108  | 9,625       | 1,905  | 8,425       | 635    |
| 8.0 mm               | 9,300       | 1,829  | 9,300       | 1,829  | 8,100       | 1,575  | 7,300       | 1,422  | 4,100       | 483    |
| 10.0 mm              | 7,285       | 1,372  | 7,285       | 1,372  | 6,300       | 1,168  | 5,650       | 1,016  | 3,400       | 381    |
| 12.0 mm              | 6,425       | 1,245  | 6,425       | 1,245  | 5,600       | 1,092  | 5,100       | 991    | 3,000       | 356    |

**SFR** DM Metric End Mill Specs:  
Cutting Diam +0.00/-0.02mm  
Shank Diam -0.000/-0.005mm  
Radius ±0.013mm



Shrink-Fit Ready!

SmoothGrind®

SmoothContricity®

SmoothCoat®