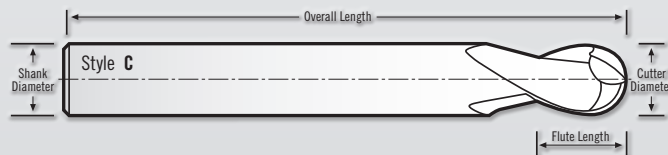
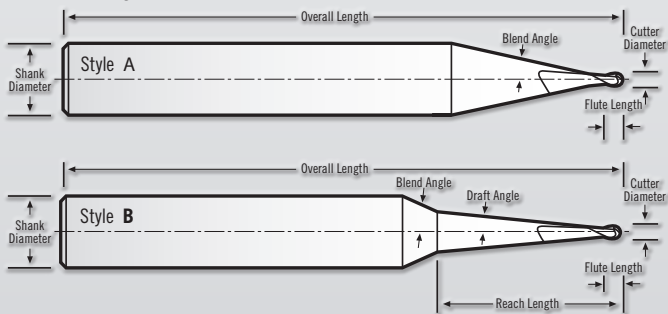


DM Die/Mold End Mills



Coatings
Aluminum
Titan. Nitride



DM Tolerances

Cutting Dia. (1/32"–3/16") = ±.0003"
 (1/4"–1/2") = –.0007/–.0013"
 Shank Dia. = –.0001/–.0002"
 Flute Length (1/32"–1/2") = +.000/+ .020"
 OAL = ±.060"

MDM Tolerances

Cutting Dia. (0.5–5.0) = ±.008mm
 (6.0–12.0) = –.018/–.033mm
 Shank Dia. = –.002/–.005mm
 Flute Length (0.5–12.0) = +.000/+ .500mm
 OAL = ±1.000mm



DM 2 Flute Grade Ball End Extended Length

| Cutting Diameter | Shank Diameter | Flute Length | Reach Length | Draft Angle | Blend Angle | Tool Style | Overall Length | Tool Number AITIN Coated |
|------------------|----------------|--------------|--------------|-------------|-------------|------------|----------------|-----------------------------|
| 1/32" | 1/4" | 1/32" | – | – | 8° | A | 2-1/2" | DM-201-01 |
| 1/32" | 1/4" | 1/32" | 1/8" | 3° | 18° | B | 2-1/2" | DM-202-01 |
| 1/32" | 1/4" | 1/32" | 3/16" | 1.5° | 16.5° | B | 2-1/2" | DM-203-01 |
| 1/32" | 1/4" | 1/32" | 3/8" | 1.5° | 16.5° | B | 2-1/2" | DM-204-01 |
| 1/32" | 1/4" | 1/32" | 9/16" | 1.5° | 16.5° | B | 2-1/2" | DM-205-01 |
| 1/16" | 1/4" | 1/16" | – | – | 8° | A | 2-1/2" | DM-201-02 |
| 1/16" | 1/4" | 1/16" | 3/16" | 3° | 18° | B | 2-1/2" | DM-202-02 |
| 1/16" | 1/4" | 1/16" | 3/8" | 1.5° | 16.5° | B | 2-1/2" | DM-203-02 |
| 1/16" | 1/4" | 1/16" | 3/4" | 1.5° | 16.5° | B | 2-1/2" | DM-204-02 |
| 1/16" | 1/4" | 1/16" | 1-1/8" | 1.5° | 16.5° | B | 2-1/2" | DM-205-02 |
| 3/32" | 1/4" | 3/32" | – | – | 8° | A | 2-1/2" | DM-201-03 |
| 3/32" | 1/4" | 3/32" | 1/4" | 3° | 18° | B | 2-1/2" | DM-202-03 |
| 3/32" | 1/4" | 3/32" | 1/2" | 1.5° | 16.5° | B | 2-1/2" | DM-203-03 |
| 3/32" | 1/4" | 3/32" | 15/16" | 1.5° | 16.5° | B | 2-1/2" | DM-204-03 |
| 3/32" | 1/4" | 3/32" | 1-5/16" | 1.5° | 16.5° | B | 2-1/2" | DM-205-03 |
| 1/8" | 1/4" | 1/8" | – | – | 8° | A | 3" | DM-201-04 |
| 1/8" | 1/4" | 1/8" | 5/16" | 3° | 18° | B | 3" | DM-202-04 |
| 1/8" | 1/4" | 1/8" | 5/8" | 1.5° | 16.5° | B | 3" | DM-203-04 |
| 1/8" | 1/4" | 1/8" | 1" | 1° | 16° | B | 3" | DM-204-04 |
| 1/8" | 1/4" | 1/8" | 1-1/2" | 1° | 16° | B | 3" | DM-205-04 |

Die/Mold End Mills **DM/MDM**



DM 2 Flute Grade Ball End Extended Length —CONTINUED FROM PREVIOUS

| Cutting Diameter | Shank Diameter | Flute Length | Reach Length | Draft Angle | Blend Angle | Tool Style | Overall Length | Tool Number AITIN Coated |
|------------------|----------------|--------------|--------------|-------------|-------------|------------|----------------|-----------------------------|
| 3/16" | 1/4" | 3/16" | — | — | 8° | A | 3" | DM-201-06 |
| 3/16" | 1/4" | 3/16" | 3/8" | 2° | 17° | B | 3" | DM-202-06 |
| 3/16" | 1/4" | 3/16" | 3/4" | 1.5° | 16.5° | B | 3" | DM-203-06 |
| 3/16" | 1/4" | 3/16" | 1-1/8" | 1° | 16° | B | 3" | DM-204-06 |
| 3/16" | 1/4" | 3/16" | 1-9/16" | 1° | 16° | B | 3" | DM-205-06 |
| 1/4" | 1/4" | 1/4" | — | — | — | C | 3" | DM-201-08 |
| 5/16" | 5/16" | 5/16" | — | — | — | C | 3-1/8" | DM-201-10 |
| 3/8" | 3/8" | 3/8" | — | — | — | C | 3-1/2" | DM-201-12 |
| 7/16" | 7/16" | 7/16" | — | — | — | C | 3-3/4" | DM-201-14 |
| 1/2" | 1/2" | 1/2" | — | — | — | C | 4" | DM-201-16 |



MDM 2 Flute Tuffy Ball End Extended Length **METRIC**



| Cutting Diameter | Shank Diameter | Flute Length | Reach Length | Draft Angle | Blend Angle | Tool Style | Overall Length | Tool Number AITIN Coated |
|------------------|----------------|--------------|--------------|-------------|-------------|------------|----------------|-----------------------------|
| 0.5mm | 6mm | 0.5mm | — | — | 8° | A | 63mm | MDM-201-0.5 |
| 0.5mm | 6mm | 0.5mm | 1mm | 3° | 18° | B | 63mm | MDM-203-0.5 |
| 0.5mm | 6mm | 0.5mm | 3mm | 1.5° | 16.5° | B | 63mm | MDM-204-0.5 |
| 0.5mm | 6mm | 0.5mm | 5mm | 1.5° | 16.5° | B | 63mm | MDM-205-0.5 |
| 0.5mm | 6mm | 0.5mm | 10mm | 1.5° | 16.5° | B | 63mm | MDM-206-0.5 |
| 0.8mm | 6mm | 0.8mm | — | — | 8° | A | 63mm | MDM-201-0.8 |
| 0.8mm | 6mm | 0.8mm | 3mm | 3° | 18° | B | 63mm | MDM-203-0.8 |
| 0.8mm | 6mm | 0.8mm | 5mm | 1.5° | 16.5° | B | 63mm | MDM-204-0.8 |
| 0.8mm | 6mm | 0.8mm | 10mm | 1.5° | 16.5° | B | 63mm | MDM-205-0.8 |
| 0.8mm | 6mm | 0.8mm | 15mm | 1.5° | 16.5° | B | 63mm | MDM-206-0.8 |
| 1mm | 6mm | 1mm | — | — | 8° | A | 63mm | MDM-201-01 |
| 1mm | 6mm | 1mm | 3mm | 3° | 18° | B | 63mm | MDM-203-01 |
| 1mm | 6mm | 1mm | 5mm | 1.5° | 16.5° | B | 63mm | MDM-204-01 |
| 1mm | 6mm | 1mm | 10mm | 1.5° | 16.5° | B | 63mm | MDM-205-01 |
| 1mm | 6mm | 1mm | 20mm | 1.5° | 16.5° | B | 63mm | MDM-206-01 |
| 1.5mm | 6mm | 1.5mm | — | — | 8° | A | 63mm | MDM-201-01.5 |
| 1.5mm | 6mm | 1.5mm | 5mm | 3° | 18° | B | 63mm | MDM-203-01.5 |
| 1.5mm | 6mm | 1.5mm | 10mm | 1.5° | 16.5° | B | 63mm | MDM-204-01.5 |
| 1.5mm | 6mm | 1.5mm | 20mm | 1.5° | 16.5° | B | 63mm | MDM-205-01.5 |
| 1.5mm | 6mm | 1.5mm | 30mm | 1.5° | 16.5° | B | 63mm | MDM-206-01.5 |
| 2mm | 6mm | 2mm | — | — | 8° | A | 63mm | MDM-201-02 |
| 2mm | 6mm | 2mm | 5mm | 3° | 18° | B | 63mm | MDM-203-02 |
| 2mm | 6mm | 2mm | 10mm | 1.5° | 16.5° | B | 63mm | MDM-204-02 |
| 2mm | 6mm | 2mm | 20mm | 1.5° | 16.5° | B | 63mm | MDM-205-02 |
| 2mm | 6mm | 2mm | 30mm | 1.5° | 16.5° | B | 63mm | MDM-206-02 |
| 3mm | 6mm | 3mm | — | — | 8° | A | 75mm | MDM-201-03 |
| 3mm | 6mm | 3mm | 5mm | 3° | 18° | B | 75mm | MDM-203-03 |
| 3mm | 6mm | 3mm | 15mm | 1.5° | 16.5° | B | 75mm | MDM-204-03 |
| 3mm | 6mm | 3mm | 30mm | 1° | 16° | B | 75mm | MDM-205-03 |
| 3mm | 6mm | 3mm | 45mm | 1° | 16° | B | 75mm | MDM-206-03 |
| 4mm | 6mm | 4mm | — | — | 8° | A | 75mm | MDM-201-04 |
| 4mm | 6mm | 4mm | 10mm | 2° | 17° | B | 75mm | MDM-203-04 |
| 4mm | 6mm | 4mm | 15mm | 1.5° | 16.5° | B | 75mm | MDM-204-04 |
| 4mm | 6mm | 4mm | 20mm | 1° | 16° | B | 75mm | MDM-205-04 |
| 5mm | 6mm | 5mm | — | — | 8° | B | 75mm | MDM-201-05 |
| 5mm | 6mm | 5mm | 10mm | 2° | 17° | B | 75mm | MDM-203-05 |
| 5mm | 6mm | 5mm | 25mm | 1° | 16° | B | 75mm | MDM-204-05 |
| 6mm | 6mm | 6mm | — | — | — | C | 75mm | MDM-201-06 |
| 8mm | 8mm | 8mm | — | — | — | C | 80mm | MDM-201-08 |
| 10mm | 10mm | 10mm | — | — | — | C | 82mm | MDM-201-10 |
| 12mm | 12mm | 12mm | — | — | — | C | 100mm | MDM-201-12 |

DM Die/Mold End Mills

DM SERIES SPEEDS & FEEDS (Chipload per Tooth)

| Tool Number | Cutter Diameter | Steels 30-40 HRc | | Steels 40-50 HRc | | Steels 50-60 HRc | |
|-------------|-----------------|------------------|---------------|------------------|---------------|------------------|---------------|
| | | ROUGHING | FINISHING | ROUGHING | FINISHING | ROUGHING | FINISHING |
| DM-201-01 | 1/32" | 0.0006-0.0008 | 0.0005-0.0006 | 0.0005-0.0006 | 0.0004-0.0005 | 0.0004-0.0005 | 0.0003-0.0004 |
| DM-201-02 | 1/16" | 0.0013-0.0015 | 0.0010-0.0013 | 0.0010-0.0013 | 0.0008-0.0010 | 0.0008-0.0010 | 0.0005-0.0008 |
| DM-201-03 | 3/32" | 0.0019-0.0023 | 0.0015-0.0019 | 0.0015-0.0019 | 0.0011-0.0015 | 0.0011-0.0015 | 0.0008-0.0011 |
| DM-201-04 | 1/8" | 0.0025-0.0030 | 0.0020-0.0025 | 0.0020-0.0025 | 0.0015-0.0020 | 0.0015-0.0020 | 0.0010-0.0015 |
| DM-201-06 | 3/16" | 0.0038-0.0045 | 0.0030-0.0038 | 0.0030-0.0038 | 0.0023-0.0030 | 0.0023-0.0030 | 0.0015-0.0023 |
| DM-201-08 | 1/4" | 0.0050-0.0060 | 0.0040-0.0050 | 0.0040-0.0050 | 0.0030-0.0040 | 0.0030-0.0040 | 0.0020-0.0030 |
| DM-201-10 | 5/16" | 0.0063-0.0075 | 0.0050-0.0063 | 0.0050-0.0063 | 0.0038-0.0050 | 0.0038-0.0050 | 0.0025-0.0038 |
| DM-201-12 | 3/8" | 0.0075-0.0090 | 0.0060-0.0075 | 0.0060-0.0075 | 0.0045-0.0060 | 0.0045-0.0060 | 0.0030-0.0045 |
| DM-201-14 | 7/16" | 0.0088-0.0105 | 0.0070-0.0088 | 0.0070-0.0088 | 0.0053-0.0070 | 0.0053-0.0070 | 0.0035-0.0053 |
| DM-201-16 | 1/2" | 0.0100-0.0120 | 0.0080-0.0100 | 0.0080-0.0100 | 0.0060-0.0080 | 0.0060-0.0080 | 0.0040-0.0060 |

DM SERIES SPEEDS & FEEDS (Roughing & Semi-Finishing)

| Tool Number | Cutter Diameter | Rotations Per Minute (RPM) | | |
|-------------|-----------------|----------------------------|-----------------|-----------------|
| | | STEELS 30-40HRc | STEELS 40-50HRc | STEELS 50-60HRc |
| DM-201-01 | 1/32" | 20,000-40,000 | 20,000-40,000 | 20,000-40,000 |
| DM-201-02 | 1/16" | 20,000-40,000 | 20,000-40,000 | 20,000-36,000 |
| DM-201-03 | 3/32" | 20,000-32,000 | 20,000-32,000 | 16,000-24,000 |
| DM-201-04 | 1/8" | 15,000-24,000 | 18,000-24,000 | 12,000-18,000 |
| DM-201-06 | 3/16" | 10,000-16,000 | 12,000-16,000 | 8,100-12,000 |
| DM-201-08 | 1/4" | 7,600-12,000 | 9,100-12,000 | 6,100-9,100 |
| DM-201-10 | 5/16" | 6,000-9,700 | 7,300-9,700 | 4,800-7,300 |
| DM-201-12 | 3/8" | 5,000-8,100 | 6,100-8,100 | 4,000-6,100 |
| DM-201-14 | 7/16" | 4,300-6,900 | 5,200-6,900 | 3,400-5,200 |
| DM-201-16 | 1/2" | 3,800-6,100 | 4,500-6,100 | 3,000-4,500 |

DM Series Guidelines

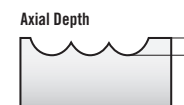
- Special diameters and lengths are available on a make-to-order basis.
- Air or mist coolant on materials greater than 40 HRc.



Radial Step Over
 Radial Step Over for finishing depends on finish requirements. 25%-40% of tool diameter

DM SERIES SPEEDS & FEEDS (Finishing)

| Tool Number | Cutter Diameter | Rotations Per Minute (RPM) | | |
|-------------|-----------------|----------------------------|-----------------|-----------------|
| | | STEELS 30-40HRc | STEELS 40-50HRc | STEELS 50-60HRc |
| DM-201-01 | 1/32" | 20,000-40,000 | 20,000-40,000 | 20,000-40,000 |
| DM-201-02 | 1/16" | 20,000-40,000 | 20,000-40,000 | 20,000-36,000 |
| DM-201-03 | 3/32" | 20,000-32,000 | 20,000-32,000 | 16,000-24,000 |
| DM-201-04 | 1/8" | 15,000-24,000 | 18,000-24,000 | 12,000-18,000 |
| DM-201-06 | 3/16" | 10,000-16,000 | 12,000-16,000 | 8,100-12,000 |
| DM-201-08 | 1/4" | 7,600-12,000 | 9,100-12,000 | 6,100-9,100 |
| DM-201-10 | 5/16" | 6,000-9,700 | 7,300-9,700 | 4,800-7,300 |
| DM-201-12 | 3/8" | 5,000-8,100 | 6,100-8,100 | 4,000-6,100 |
| DM-201-14 | 7/16" | 4,300-6,900 | 5,200-6,900 | 3,400-5,200 |
| DM-201-16 | 1/2" | 3,800-6,100 | 4,500-6,100 | 3,000-4,500 |



Axial Depth
 30-40 HRc Axial depth = 10% of tool diameter
 40-50 HRc Axial depth = 5% of tool diameter
 50-60 HRc Axial depth = 4% of tool diameter