

## End Mills

Micrograin Solid Carbide – Uncoated & TiAlN Coated – 4 Flute – Center Cut

Regular Length



| Cutter Diameter (Inch) | Shank Diameter (Inch) | Length of Cut (Inch) | Overall Length (Inch) | Uncoated | TiAlN Coated | Cutter Diameter (Inch) | Shank Diameter (Inch) | Length of Cut (Inch) | Overall Length (Inch) | Uncoated | TiAlN Coated |
|------------------------|-----------------------|----------------------|-----------------------|----------|--------------|------------------------|-----------------------|----------------------|-----------------------|----------|--------------|
|                        |                       |                      |                       | Code     | Code         |                        |                       |                      |                       | Code     | Code         |
| 1/32                   | 1/8                   | 3/32                 | 1-1/2                 | 932957   | 933186       | 5/16                   | 5/16                  | 13/16                | 2-1/2                 | 933011   | 933240       |
| 3/64                   | 1/8                   | 1/8                  | 1-1/2                 | 932960   | 933189       | 21/64                  | 3/8                   | 7/8                  | 2-1/2                 | 933014   | 933243       |
| 1/16                   | 1/8                   | 3/16                 | 1-1/2                 | 932963   | 933192       | 11/32                  | 3/8                   | 7/8                  | 2-1/2                 | 933017   | 933246       |
| 5/64                   | 1/8                   | 3/16                 | 1-1/2                 | 932966   | 933195       | 23/64                  | 3/8                   | 7/8                  | 2-1/2                 | 933020   | 933249       |
| 3/32                   | 1/8                   | 3/8                  | 1-1/2                 | 932969   | 933198       | 3/8                    | 3/8                   | 7/8                  | 2-1/2                 | 933023   | 933252       |
| 7/64                   | 1/8                   | 3/8                  | 1-1/2                 | 932972   | 933201       | 25/64                  | 7/16                  | 1                    | 2-3/4                 | 933026   | 933255       |
| 1/8                    | 1/8                   | 1/2                  | 1-1/2                 | 932975   | 933204       | 13/32                  | 7/16                  | 1                    | 2-3/4                 | 933029   | 933258       |
| 9/64                   | 3/16                  | 9/16                 | 2                     | 932978   | 933207       | 27/64                  | 7/16                  | 1                    | 2-3/4                 | 933032   | 933261       |
| 5/32                   | 3/16                  | 9/16                 | 2                     | 932981   | 933210       | 7/16                   | 7/16                  | 1                    | 2-3/4                 | 933035   | 933264       |
| 11/64                  | 3/16                  | 5/8                  | 2                     | 932984   | 933213       | 29/64                  | 1/2                   | 1                    | 3                     | 933038   | 933267       |
| 3/16                   | 3/16                  | 5/8                  | 2                     | 932987   | 933216       | 15/32                  | 1/2                   | 1                    | 3                     | 933041   | 933270       |
| 13/64                  | 1/4                   | 5/8                  | 2-1/2                 | 932990   | 933219       | 31/64                  | 1/2                   | 1                    | 3                     | 933044   | 933273       |
| 7/32                   | 1/4                   | 5/8                  | 2-1/2                 | 932993   | 933222       | 1/2                    | 1/2                   | 1                    | 3                     | 933047   | 933276       |
| 15/64                  | 1/4                   | 3/4                  | 2-1/2                 | 932996   | 933225       | 9/16                   | 9/16                  | 1-1/4                | 3                     | 933050   | 933279       |
| 1/4                    | 1/4                   | 3/4                  | 2-1/2                 | 932999   | 933228       | 5/8                    | 5/8                   | 1-1/4                | 3-1/2                 | 933053   | 933282       |
| 17/64                  | 5/16                  | 3/4                  | 2-1/2                 | 933002   | 933231       | 11/16                  | 3/4                   | 1-1/2                | 4                     | 933056   | 933285       |
| 9/32                   | 5/16                  | 3/4                  | 2-1/2                 | 933005   | 933234       | 3/4                    | 3/4                   | 1-1/2                | 4                     | 933059   | 933288       |
| 19/64                  | 5/16                  | 13/16                | 2-1/2                 | 933008   | 933237       | 7/8                    | 7/8                   | 1-1/2                | 4                     | 933062   | 933291       |
|                        |                       |                      |                       |          |              | 1                      | 1                     | 1-1/2                | 4                     | 933065   | 933294       |

Metric – Regular Length



| Cutter Diameter (mm) | Shank Diameter (mm) | Length of Cut (mm) | Overall Length (mm) | Uncoated |
|----------------------|---------------------|--------------------|---------------------|----------|
|                      |                     |                    |                     | Code     |
| 1.0                  | 3.0                 | 4.0                | 38.0                | 934373   |
| 1.5                  | 3.0                 | 4.5                | 38.0                | 934376   |
| 2.0                  | 3.0                 | 6.0                | 38.0                | 934379   |
| 2.5                  | 3.0                 | 8.0                | 38.0                | 934382   |
| 3.0                  | 3.0                 | 10.0               | 38.0                | 934385   |
| 3.5                  | 4.0                 | 12.0               | 50.0                | 934388   |
| 4.0                  | 4.0                 | 12.0               | 50.0                | 934391   |
| 4.5                  | 5.0                 | 14.0               | 50.0                | 934394   |
| 5.0                  | 5.0                 | 15.0               | 50.0                | 934397   |
| 6.0                  | 6.0                 | 18.0               | 63.0                | 934400   |
| 7.0                  | 8.0                 | 20.0               | 63.0                | 934403   |
| 8.0                  | 8.0                 | 20.0               | 63.0                | 934406   |
| 9.0                  | 10.0                | 22.0               | 63.0                | 934409   |
| 10.0                 | 10.0                | 22.0               | 63.0                | 934412   |
| 11.0                 | 12.0                | 25.0               | 75.0                | 934415   |
| 12.0                 | 12.0                | 25.0               | 75.0                | 934418   |
| 14.0                 | 14.0                | 25.0               | 75.0                | 934421   |
| 16.0                 | 16.0                | 32.0               | 90.0                | 934424   |
| 18.0                 | 18.0                | 32.0               | 100.0               | 934427   |
| 20.0                 | 20.0                | 38.0               | 100.0               | 934430   |
| 22.0                 | 22.0                | 38.0               | 102.0               | 934433   |
| 25.0                 | 25.0                | 38.0               | 100.0               | 934436   |

Stub Length



| Cutter Diameter (Inch) | Shank Diameter (Inch) | Length of Cut (Inch) | Overall Length (Inch) | Uncoated |
|------------------------|-----------------------|----------------------|-----------------------|----------|
|                        |                       |                      |                       | Code     |
| 1/32                   | 1/8                   | 5/64                 | 1-1/2                 | 932070   |
| 3/64                   | 1/8                   | 3/32                 | 1-1/2                 | 932073   |
| 1/16                   | 1/8                   | 1/8                  | 1-1/2                 | 932076   |
| 5/64                   | 1/8                   | 5/32                 | 1-1/2                 | 932079   |
| 3/32                   | 1/8                   | 3/16                 | 1-1/2                 | 932082   |
| 7/64                   | 1/8                   | 7/32                 | 1-1/2                 | 932085   |
| 1/8                    | 1/8                   | 1/4                  | 1-1/2                 | 932088   |
| 9/64                   | 3/16                  | 9/32                 | 2                     | 932091   |
| 5/32                   | 3/16                  | 5/16                 | 2                     | 932094   |
| 11/64                  | 3/16                  | 5/16                 | 2                     | 932097   |
| 3/16                   | 3/16                  | 3/8                  | 2                     | 932100   |
| 13/64                  | 1/4                   | 3/8                  | 2                     | 932103   |
| 7/32                   | 1/4                   | 7/16                 | 2                     | 932106   |
| 15/64                  | 1/4                   | 7/16                 | 2                     | 932109   |
| 1/4                    | 1/4                   | 1/2                  | 2                     | 932112   |
| 5/16                   | 5/16                  | 1/2                  | 2                     | 932115   |
| 3/8                    | 3/8                   | 5/8                  | 2                     | 932118   |
| 7/16                   | 7/16                  | 5/8                  | 2-1/2                 | 932121   |
| 1/2                    | 1/2                   | 5/8                  | 2-1/2                 | 932124   |
| 5/8                    | 5/8                   | 3/4                  | 3                     | 932127   |
| 3/4                    | 3/4                   | 1                    | 3                     | 932130   |

END MILLS & ROUGHERS