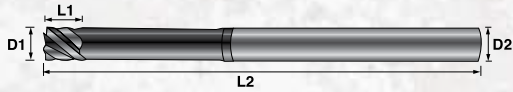


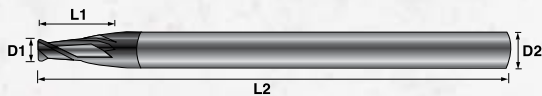
Solid Carbide End Mill Program - Bull Nose continued



EMR - Bull Nose with Corner Radius, Extended Reach Tapered Nose*

| Tool Ordering No. | Cutter Diameter (D1) tol. +0/-0.01 | Corner Radius | Shank Diameter (D2) | No. of Flutes | Neck Diameter | Cutting Length (L1) | Nose Taper | Overall Length (L2) |
|---------------------|---------------------------------------|---------------|---------------------|---------------|---------------|---------------------|-----------------|---------------------|
| EMR-2.0-0.2-1.25NL | 2 | 0,2 | 6 | 4 | 1,9 / 1,3 | 2 | 31,75 / (1,25") | 75 |
| EMR-2.0-0.2-1.80NL | 2 | 0,2 | 6 | 4 | 1,9 / 1,3 | 2 | 45,70 / (1,8") | 75 |
| EMR-2.0-0.2-50NL | 2 | 0,2 | 6 | 4 | 1,9 / 1,3 | 2 | 50 / (1,95") | 75 |
| EMR-2.5-0.2-1.25NL | 2,5 | 0,2 | 6 | 4 | 2,4 / 1,3 | 2,5 | 31,75 / (1,25") | 75 |
| EMR-2.5-0.2-1.80NL | 2,5 | 0,2 | 6 | 4 | 2,4 / 1,3 | 2,5 | 45,70 / (1,8") | 75 |
| EMR-3.0-0.2-1.25NL | 3 | 0,2 | 6 | 5 | 2,9 / 1,3 | 3 | 31,75 / (1,25") | 75 |
| EMR-3.0-0.2-1.80NL | 3 | 0,2 | 6 | 5 | 2,9 / 1,3 | 3 | 45,70 / (1,8") | 75 |
| EMR-3.0-0.2-50NL | 3 | 0,2 | 6 | 5 | 2,9 / 1,3 | 3 | 50 / (1,95") | 75 |
| EMR-4.0-0.2-1.25NL | 4 | 0,2 | 6 | 6 | 3,9 / 1,3 | 4 | 31,75 / (1,25") | 75 |
| EMR-4.0-0.2-1.80NL | 4 | 0,2 | 6 | 6 | 3,9 / 1,3 | 4 | 45,70 / (1,8") | 75 |
| EMR-4.0-0.2-50NL | 4 | 0,2 | 6 | 6 | 3,9 / 1,3 | 4 | 50 / (1,95") | 75 |
| EMR-5.0-0.2-1.25NL | 5 | 0,2 | 6 | 6 | 4,9 / 1,3 | 5 | 31,75 / (1,25") | 75 |
| EMR-5.0-0.2-1.80NL | 5 | 0,2 | 6 | 6 | 4,9 / 1,3 | 5 | 45,70 / (1,8") | 75 |
| EMR-6.0-0.2-1.25NL | 6 | 0,2 | 6 | 6 | 5,9 / - | 6 | 31,75 / (1,25") | 75 |
| EMR-6.0-0.2-1.80NL | 6 | 0,2 | 6 | 6 | 5,9 / - | 6 | 45,70 / (1,8") | 75 |
| EMR-12.0-0.2-1.25NL | 12 | 0,2 | 12 | 6 | 11,9 / - | 12 | 31,75 / (1,25") | 75 |
| EMR-12.0-0.2-1.80NL | 12 | 0,2 | 12 | 6 | 11,9 / - | 12 | 45,70 / (1,8") | 75 |

* 1.3° Neck Taper Per Side



IMB-2.0 - Z2 Angle 30°

| Tool Ordering No. | Cutter Diameter (D1) tol. +0/-0.01 | Corner Radius | Shank Diameter (D2) | No. of Flutes | Cutting Length (L1) | Overall Length (L2) |
|---------------------|---------------------------------------|---------------|---------------------|---------------|---------------------|---------------------|
| IMB-2.0-0.5-EX2-LL | 2,0 | 0,5 | 4 | 2 | 3,0 | 75 |
| IMB-3.0-0.5-EX2-LL | 3,0 | 0,5 | 6 | 2 | 4,5 | 75 |
| IMB-3.0-1.0-EX2-LL | 3,0 | 1,0 | 6 | 2 | 4,5 | 75 |
| IMB-4.0-0.5-EX2-LL | 4,0 | 0,5 | 6 | 2 | 6,0 | 75 |
| IMB-4.0-1.0-EX2-LL | 4,0 | 1,0 | 6 | 2 | 6,0 | 75 |
| IMB-5.0-0.5-EX2-LL | 5,0 | 0,5 | 6 | 2 | 7,5 | 75 |
| IMB-5.0-1.0-EX2-LL | 5,0 | 1,0 | 6 | 2 | 7,5 | 75 |
| IMB-6.0-0.5-EX2-LL | 6,0 | 0,5 | 6 | 2 | 9,0 | 90 |
| IMB-6.0-1.0-EX2-LL | 6,0 | 1,0 | 6 | 2 | 9,0 | 90 |
| IMB-8.0-0.5-EX2-LL | 8,0 | 0,5 | 8 | 2 | 12,0 | 100 |
| IMB-8.0-1.0-EX2-LL | 8,0 | 1,0 | 8 | 2 | 12,0 | 100 |
| IMB-10.0-0.5-EX2-LL | 10,0 | 0,5 | 10 | 2 | 15,0 | 100 |
| IMB-10.0-1.0-EX2-LL | 10,0 | 1,0 | 10 | 2 | 15,0 | 100 |
| IMB-6.0-1.0-EX2 | 6,0 | 1,0 | 6 | 2 | 9,0 | 63 |
| IMB-8.0-0.5-EX2 | 8,0 | 0,5 | 8 | 2 | 12,0 | 73 |
| IMB-8.0-1.0-EX2 | 8,0 | 1,0 | 8 | 2 | 12,0 | 73 |
| IMB-10.0-0.5-EX2 | 10,0 | 0,5 | 10 | 2 | 15,0 | 73 |
| IMB-10.0-1.0-EX2 | 10,0 | 1,0 | 10 | 2 | 15,0 | 73 |

All products on these pages come in both TLN and HSN coatings.

Solid Carbide End Mill Program - Bull Nose continued

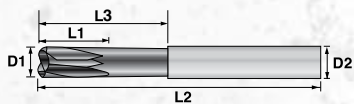


IMB-4-LL – Z4 Angle 30°

| Tool Ordering No. | Cutter Diameter (D1) tol. +0 / -0.01 | Corner Radius | Shank Diameter (D2) | No. of Flutes | Cutting Length (L1) | Overall Length (L2) |
|---------------------|---|---------------|---------------------|---------------|---------------------|---------------------|
| IMB-2.0-0.5-EX4-LL | 2,0 | 0,5 | 4 | 4 | 3,0 | 75 |
| IMB-3.0-0.5-EX4-LL | 3,0 | 0,5 | 6 | 4 | 4,5 | 75 |
| IMB-4.0-0.5-EX4-LL | 4,0 | 0,5 | 6 | 4 | 6,0 | 75 |
| IMB-5.0-0.5-EX4-LL | 5,0 | 0,5 | 6 | 4 | 7,5 | 75 |
| IMB-6.0-0.5-EX4-LL | 6,0 | 0,5 | 6 | 4 | 9,0 | 90 |
| IMB-8.0-0.5-EX4-LL | 8,0 | 0,5 | 8 | 4 | 12,0 | 100 |
| IMB-10.0-0.5-EX4-LL | 10,0 | 0,5 | 10 | 4 | 15,0 | 100 |

Solid Carbide End Mill Program - Toroid

The Toroid Series TOM with large corner radius and slight back taper is a Millstar innovative addition. It is very useful in I.D. and O.D. Z-level and spiral milling at constant tool pressure, pocket milling, and milling of pre-hard and hardened flat surfaces at higher speeds than tools with smaller or sharp corner radii.



TOM- Toroid

| Tool Ordering No. | Cutter Diameter (D1) tol. +0 / -0.01 | Corner Radius | Shank Diameter (D2) | No. of Flutes | Neck Diameter | Cutting Length (L1) | Nose Taper | Overall Length (L2) |
|-------------------|---|---------------|---------------------|---------------|---------------|---------------------|------------|---------------------|
| TOM-2.0 | 2 | 0,5 | 6,0 | 2 | 1,84 | 2,0 | 6 / 0,75° | 63 |
| TOM-3.0 | 3 | 0,75 | 6,0 | 2 | 2,76 | 3,0 | 9 / 0,75° | 63 |
| TOM-4.0 | 4 | 1,0 | 6 | 2 | 3,68 | 4,0 | 12 / 0,75° | 63 |
| TOM-6.0 | 6 | 1,5 | 6 | 2 | 5,52 | 6,0 | 18 / - | 63 |
| TOM-8.0 | 8 | 2,0 | 8 | 2 | 7,37 | 8,0 | 24 / - | 75 |
| TOM-10.0 | 10 | 2,5 | 10 | 2 | 9,21 | 10,0 | 30 / - | 75 |
| TOM-12.0 | 12 | 3,0 | 12 | 2 | 11,05 | 12,0 | 36 / - | 90 |

All tools backdraft 3° per side

All products on these pages come in both TLN and HSN coatings.

Example: TOM-2.0-TLN