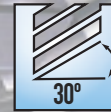
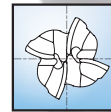
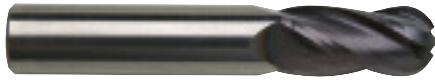


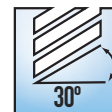
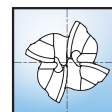
4 FLUTE BALL NOSE REGULAR, LONG, X-LONG LENGTH TIALN COATED CARBIDE ENDMILLS



These endmills offer excellent performance in a wide range of applications including production milling where the benefits of a TiAlN coating is required.

4 FL. BALL NOSE REG. LENGTH TIALN COATED

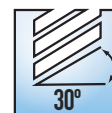
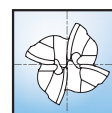
| Cutting Diameter (in.) | Shank Diameter (in.) | Flute Length (in.) | Overall Length (in.) | Code No. | Price \$ |
|---------------------------|-------------------------|-----------------------|-------------------------|----------|----------|
| 1/8 | 1/8 | 1/2 | 1-1/2 | 102-882 | 15.00 |
| 3/16 | 3/16 | 5/8 | 2 | 102-884 | 18.90 |
| 1/4 | 1/4 | 3/4 | 2-1/2 | 102-886 | 22.30 |
| 5/16 | 5/16 | 13/16 | 2-1/2 | 102-888 | 29.30 |
| 3/8 | 3/8 | 1 | 2-1/2 | 102-890 | 36.90 |
| 1/2 | 1/2 | 1 | 3 | 102-892 | 57.30 |
| 9/16 | 9/16 | 1-1/8 | 3-1/2 | 102-894 | 80.60 |
| 5/8 | 5/8 | 1-1/4 | 3-1/2 | 102-896 | 94.80 |
| 11/16 | 3/4 | 1-3/8 | 4 | 102-895 | 194.10 |
| 3/4 | 3/4 | 1-1/2 | 4 | 102-898 | 143.50 |
| 7/8 | 7/8 | 1-1/2 | 4 | 102-897 | 313.00 |
| 1 | 1 | 1-1/2 | 4 | 102-900 | 222.60 |



Long Length End mills combine added flute and overall length for greater reach when deep slotting or milling. These end mills have the capability to mill much thicker material in a single pass, thereby eliminating the interrupted cut that may be present with regular length end mills. TiAlN coated for increased speed and feed capabilities and enhanced tool life.

4 FL. BALL NOSE LONG LENGTH TIALN COATED

| Cutting Diameter (in.) | Shank Diameter (in.) | Flute Length (in.) | Overall Length (in.) | Code No. | Price \$ |
|---------------------------|-------------------------|-----------------------|-------------------------|----------|----------|
| 1/8 | 1/8 | 3/4 | 2-1/4 | 102-942 | 19.10 |
| 3/16 | 3/16 | 3/4 | 2-1/2 | 102-944 | 26.30 |
| 1/4 | 1/4 | 1-1/8 | 3 | 102-946 | 34.00 |
| 5/16 | 5/16 | 1-1/8 | 3 | 102-948 | 39.30 |
| 3/8 | 3/8 | 1-1/8 | 3 | 102-950 | 49.70 |
| 7/16 | 7/16 | 2 | 4 | 102-952 | 71.70 |
| 1/2 | 1/2 | 2 | 4 | 102-954 | 82.30 |
| 5/8 | 5/8 | 2-1/4 | 5 | 102-956 | 170.40 |
| 3/4 | 3/4 | 2-1/4 | 5 | 102-958 | 242.20 |
| 1 | 1 | 2-1/4 | 5 | 102-960 | 415.50 |



Extra Long Length End mills combine added flute and overall lengths for greater reach when deep slotting or milling. These end mills have the capability to mill much thicker material in a single pass, thereby eliminating the interrupted cut that may be present with regular length end mills. TiAlN coated for increased speed and feed capabilities and enhanced tool life.

4 FL. BALL NOSE X-LONG LENGTH TIALN COATED

| Cutting Diameter (in.) | Shank Diameter (in.) | Flute Length (in.) | Overall Length (in.) | Code No. | Price \$ |
|---------------------------|-------------------------|-----------------------|-------------------------|----------|----------|
| 1/8 | 1/8 | 1 | 3 | 102-580 | 21.50 |
| 3/16 | 3/16 | 1-1/8 | 3 | 102-582 | 33.20 |
| 1/4 | 1/4 | 1-1/2 | 4 | 102-584 | 36.50 |
| 5/16 | 5/16 | 1-5/8 | 4 | 102-586 | 42.60 |
| 3/8 | 3/8 | 1-3/4 | 4 | 102-588 | 53.30 |
| 7/16 | 7/16 | 3 | 6 | 102-590 | 100.30 |
| 1/2 | 1/2 | 3 | 6 | 102-592 | 98.60 |
| 5/8 | 5/8 | 3 | 6 | 102-594 | 184.50 |
| 3/4 | 3/4 | 3 | 6 | 102-596 | 271.40 |
| 1 | 1 | 3 | 6 | 102-598 | 466.00 |