

# SPEED & FEED GUIDE

Optimum Performance



## Series 2010, 2012, 2014, 2015

### 250 2 FLUTE SERIES NON-FERROUS

| Material |                                                                   | Axial<br>↓ | Radial<br>→ | SFM  | 1/8   |     | 1/4   |     | 5/16  |     | 3/8   |     | 1/2  |     | 5/8  |     | 3/4  |     |
|----------|-------------------------------------------------------------------|------------|-------------|------|-------|-----|-------|-----|-------|-----|-------|-----|------|-----|------|-----|------|-----|
|          |                                                                   |            |             |      | RPM   | IPM | RPM   | IPM | RPM   | IPM | RPM   | IPM | RPM  | IPM | RPM  | IPM | RPM  | IPM |
| N        | Aluminum,<br>Brass, Copper<br>6061, 7050,<br>7075                 | .5 x D     | 1 x D       | 600  | 18336 | 44  | 9168  | 48  | 7334  | 53  | 6112  | 53  | 4584 | 55  | 3667 | 53  | 3056 | 53  |
|          |                                                                   | 1.25 x D   | .3 x D      | 720  | 22003 | 66  | 11002 | 70  | 8801  | 77  | 7334  | 77  | 5501 | 80  | 4401 | 77  | 3667 | 77  |
|          |                                                                   | 1.5 x D    | .1 x D      | 1200 | 36672 | 147 | 18336 | 150 | 14669 | 154 | 12224 | 154 | 9168 | 162 | 7334 | 155 | 6112 | 155 |
|          | High Silicon<br>Aluminum<br>4% - 13%<br>A242, A319,<br>A356, A390 | .5 x D     | 1 x D       | 600  | 18336 | 37  | 9168  | 40  | 7334  | 44  | 6112  | 44  | 4584 | 46  | 3667 | 44  | 3056 | 44  |
|          |                                                                   | 1.25 x D   | .3 x D      | 720  | 22003 | 53  | 11002 | 56  | 8801  | 63  | 7334  | 63  | 5501 | 67  | 4401 | 64  | 3667 | 64  |
|          |                                                                   | 1.5 x D    | .1 x D      | 1200 | 36672 | 117 | 18336 | 121 | 14669 | 132 | 12224 | 132 | 9168 | 139 | 7334 | 133 | 6112 | 133 |

## Series 2030, 2031, 2047, 2032, 2050, 2053

### 350 3 FLUTE SERIES NON-FERROUS

| Material |                                                                   | Axial<br>↓ | Radial<br>→ | SFM  | 1/8   |     | 1/4   |     | 5/16  |     | 3/8   |     | 1/2  |     | 5/8  |     | 3/4  |     |
|----------|-------------------------------------------------------------------|------------|-------------|------|-------|-----|-------|-----|-------|-----|-------|-----|------|-----|------|-----|------|-----|
|          |                                                                   |            |             |      | RPM   | IPM | RPM   | IPM | RPM   | IPM | RPM   | IPM | RPM  | IPM | RPM  | IPM | RPM  | IPM |
| N        | Aluminum,<br>Brass, Copper<br>6061, 7050,<br>7075                 | .5 x D     | 1 x D       | 600  | 18336 | 66  | 9168  | 66  | 7334  | 79  | 6112  | 79  | 4584 | 83  | 3667 | 80  | 3056 | 80  |
|          |                                                                   | 1.25 x D   | .3 x D      | 720  | 22003 | 99  | 11002 | 96  | 8801  | 115 | 7334  | 115 | 5501 | 121 | 4401 | 116 | 3667 | 116 |
|          |                                                                   | 1.5 x D    | .1 x D      | 1200 | 36672 | 220 | 18336 | 193 | 14669 | 231 | 12224 | 231 | 9168 | 243 | 7334 | 233 | 6112 | 233 |
|          | High Silicon<br>Aluminum<br>4% - 13%<br>A242, A319,<br>A356, A390 | .5 x D     | 1 x D       | 600  | 18336 | 55  | 9168  | 55  | 7334  | 66  | 6112  | 66  | 4584 | 69  | 3667 | 67  | 3056 | 67  |
|          |                                                                   | 1.25 x D   | .3 x D      | 720  | 22003 | 79  | 11002 | 79  | 8801  | 95  | 7334  | 95  | 5501 | 100 | 4401 | 96  | 3667 | 96  |
|          |                                                                   | 1.5 x D    | .1 x D      | 1200 | 36672 | 176 | 18336 | 165 | 14669 | 198 | 12224 | 198 | 9168 | 208 | 7334 | 200 | 6112 | 200 |

## Series 2060

### 550 5 FLUTE SERIES NON-FERROUS

| Material |                                                                   | Axial<br>↓ | Radial<br>→ | SFM  | 1/8   |     | 1/4   |     | 5/16  |     | 3/8   |     | 1/2  |     | 5/8  |     | 3/4  |     |
|----------|-------------------------------------------------------------------|------------|-------------|------|-------|-----|-------|-----|-------|-----|-------|-----|------|-----|------|-----|------|-----|
|          |                                                                   |            |             |      | RPM   | IPM | RPM   | IPM | RPM   | IPM | RPM   | IPM | RPM  | IPM | RPM  | IPM | RPM  | IPM |
| N        | Aluminum,<br>Brass, Copper<br>6061, 7050,<br>7075                 | .5 x D     | .5 x D      | 600  | 18336 | 110 | 9168  | 110 | 7334  | 132 | 6112  | 132 | 4584 | 139 | 3667 | 133 | 3056 | 133 |
|          |                                                                   | 1.25 x D   | .3 x D      | 720  | 22003 | 165 | 11002 | 160 | 8801  | 191 | 7334  | 191 | 5501 | 201 | 4401 | 193 | 3667 | 193 |
|          |                                                                   | 1.5 x D    | .1 x D      | 1200 | 36672 | 367 | 18336 | 321 | 14669 | 385 | 12224 | 385 | 9168 | 404 | 7334 | 388 | 6112 | 388 |
|          | High Silicon<br>Aluminum<br>4% - 13%<br>A242, A319,<br>A356, A390 | .5 x D     | .5 x D      | 600  | 18336 | 92  | 9168  | 92  | 7334  | 110 | 6112  | 110 | 4584 | 116 | 3667 | 111 | 3056 | 111 |
|          |                                                                   | 1.25 x D   | .3 x D      | 720  | 22003 | 132 | 11002 | 132 | 8801  | 158 | 7334  | 158 | 5501 | 166 | 4401 | 160 | 3667 | 160 |
|          |                                                                   | 1.5 x D    | .1 x D      | 1200 | 36672 | 293 | 18336 | 275 | 14669 | 330 | 12224 | 330 | 9168 | 347 | 7334 | 333 | 6112 | 333 |

# PERFORMANCE

Premium Carbide End Mills for Non-Ferrous Alloys

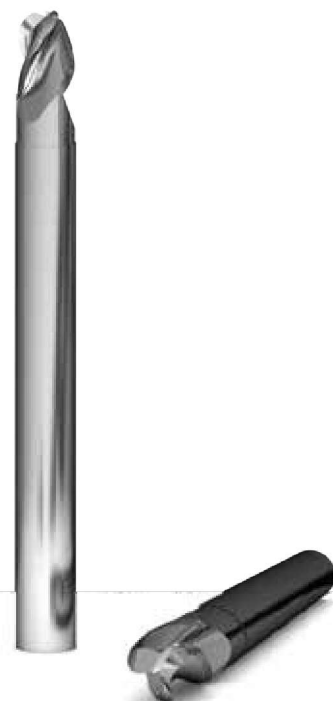


## Series 2032 350 | 3FL | Reduced Neck | Square & Radius

| Diameter | Shank Dia. | LOC   | OAL   | Length Below Shank | Radius | Bright EDP | ZrN EDP |
|----------|------------|-------|-------|--------------------|--------|------------|---------|
| 1/8      | 1/8        | 1/4   | 1-1/2 | 1/2                | 0.020  | -          | 315355  |
| 1/8      | 1/8        | 1/4   | 1-1/2 | 1/2                | 0.030  | -          | 315359  |
| 1/8      | 1/8        | 1/4   | 3     | 1-3/8              | 0.020  | -          | 315363  |
| 1/8      | 1/8        | 1/4   | 3     | 1-3/8              | 0.030  | -          | 315367  |
| 3/16     | 3/16       | 5/16  | 2     | 1/2                | 0.010  | -          | 315369  |
| 3/16     | 3/16       | 5/16  | 2     | 1/2                | 0.030  | -          | 315371  |
| 3/16     | 3/16       | 5/16  | 3     | 1-3/8              | 0.010  | -          | 315374  |
| 3/16     | 3/16       | 5/16  | 3     | 1-3/8              | 0.030  | -          | 315377  |
| 1/4      | 1/4        | 3/8   | 2-1/2 | -                  | -      | 315379     | 315381  |
| 1/4      | 1/4        | 3/8   | 2-1/2 | 1-1/8              | -      | 315384     | 315388  |
| 1/4      | 1/4        | 3/8   | 2-1/2 | 1-1/8              | 0.015  | -          | 315392  |
| 1/4      | 1/4        | 3/8   | 2-1/2 | 1-1/8              | 0.030  | -          | 315394  |
| 1/4      | 1/4        | 3/8   | 2-1/2 | 1-1/8              | 0.060  | -          | 315397  |
| 1/4      | 1/4        | 3/8   | 2-1/2 | 1-1/8              | 0.090  | -          | 315399  |
| 1/4      | 1/4        | 3/8   | 4     | -                  | -      | 315403     | 315405  |
| 1/4      | 1/4        | 3/8   | 4     | 2-1/8              | -      | 315408     | 315411  |
| 1/4      | 1/4        | 3/8   | 4     | 2-1/8              | 0.015  | -          | 315413  |
| 1/4      | 1/4        | 3/8   | 4     | 2-1/8              | 0.030  | -          | 315415  |
| 1/4      | 1/4        | 3/8   | 4     | 2-1/8              | 0.060  | -          | 315417  |
| 1/4      | 1/4        | 3/8   | 4     | 2-1/8              | 0.090  | -          | 315419  |
| 1/4      | 1/4        | 3/4   | 4     | 2-1/8              | 0.015  | -          | 315423  |
| 1/4      | 1/4        | 3/4   | 4     | 2-1/8              | 0.030  | -          | 315427  |
| 1/4      | 1/4        | 3/4   | 4     | 2-1/8              | 0.060  | -          | 315429  |
| 1/4      | 1/4        | 3/4   | 4     | 2-1/8              | 0.090  | -          | 315433  |
| 5/16     | 5/16       | 7/16  | 2-1/2 | -                  | -      | 315437     | 315441  |
| 5/16     | 5/16       | 7/16  | 2-1/2 | 1-1/8              | -      | 315445     | 315447  |
| 5/16     | 5/16       | 7/16  | 2-1/2 | 1-1/8              | 0.015  | -          | 315450  |
| 5/16     | 5/16       | 7/16  | 4     | -                  | -      | 315453     | 315456  |
| 5/16     | 5/16       | 7/16  | 4     | 2-1/8              | -      | 315458     | 315460  |
| 5/16     | 5/16       | 13/16 | 4     | 2-1/8              | 0.015  | -          | 315464  |
| 3/8      | 3/8        | 1/2   | 2-1/2 | -                  | -      | 315466     | 315469  |
| 3/8      | 3/8        | 1/2   | 2-1/2 | 1-1/8              | -      | 315473     | 315476  |
| 3/8      | 3/8        | 1/2   | 4     | -                  | -      | 315478     | 315481  |
| 3/8      | 3/8        | 1/2   | 4     | 2-1/8              | -      | 315483     | 315486  |
| 3/8      | 3/8        | 1/2   | 4     | 2-1/8              | 0.030  | -          | 315489  |
| 1/2      | 1/2        | 5/8   | 3     | -                  | -      | 315491     | 315495  |
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | -      | 315498     | 315502  |
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | 0.015  | -          | 315505  |
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | 0.020  | -          | 315507  |
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | 0.030  | -          | 315511  |

### More About the Series 2032

Reduced neck for extended reach



★ Best ☆ Good

# PERFORMANCE

Premium Carbide End Mills for Non-Ferrous Alloys



## Series 2032 350 | 3FL | Reduced Neck | Square & Radius

| Diameter | Shank Dia. | LOC   | OAL   | Length Below Shank | Radius | Bright EDP | ZrN EDP |
|----------|------------|-------|-------|--------------------|--------|------------|---------|
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | 0.060  | -          | 315515  |
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | 0.090  | -          | 315518  |
| 1/2      | 1/2        | 5/8   | 3     | 1-3/8              | 0.120  | -          | 315520  |
| 1/2      | 1/2        | 5/8   | 4     | -                  | -      | 315523     | 315525  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | -      | 315527     | 315529  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | 0.015  | -          | 315532  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | 0.020  | -          | 315535  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | 0.030  | -          | 315537  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | 0.060  | -          | 315539  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | 0.090  | -          | 315542  |
| 1/2      | 1/2        | 5/8   | 4     | 2-3/8              | 0.120  | -          | 315546  |
| 1/2      | 1/2        | 5/8   | 6     | -                  | -      | 315548     | 315552  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | -      | -          | 315554  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | 0.015  | -          | 315558  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | 0.020  | -          | 315562  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | 0.030  | -          | 315565  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | 0.060  | -          | 315569  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | 0.090  | -          | 315572  |
| 1/2      | 1/2        | 5/8   | 6     | 3-3/8              | 0.120  | -          | 315574  |
| 1/2      | 1/2        | 1-1/4 | 6     | 3-3/8              | 0.015  | -          | 315578  |
| 1/2      | 1/2        | 1-1/4 | 6     | 3-3/8              | 0.030  | -          | 315581  |
| 1/2      | 1/2        | 1-1/4 | 6     | 3-3/8              | 0.060  | -          | 315583  |
| 1/2      | 1/2        | 1-1/4 | 6     | 3-3/8              | 0.090  | -          | 315586  |
| 1/2      | 1/2        | 1-1/4 | 6     | 3-3/8              | 0.120  | -          | 315589  |
| 5/8      | 5/8        | 3/4   | 3-1/2 | -                  | -      | 315591     | 315593  |
| 5/8      | 5/8        | 3/4   | 3-1/2 | 1-5/8              | -      | 315597     | 315599  |
| 5/8      | 5/8        | 3/4   | 5     | -                  | -      | 315601     | 315603  |
| 5/8      | 5/8        | 3/4   | 5     | 2-3/8              | -      | 315605     | 315607  |
| 5/8      | 5/8        | 3/4   | 6     | -                  | -      | 315609     | 315611  |
| 5/8      | 5/8        | 3/4   | 6     | 3-3/8              | -      | 315615     | 315618  |
| 3/4      | 3/4        | 1     | 4     | -                  | -      | 315621     | 315625  |
| 3/4      | 3/4        | 1     | 4     | 1-5/8              | -      | 315627     | 315629  |
| 3/4      | 3/4        | 1     | 4     | 1-5/8              | 0.030  | -          | 315632  |
| 3/4      | 3/4        | 1     | 4     | 1-5/8              | 0.060  | -          | 315636  |
| 3/4      | 3/4        | 1     | 4     | 1-5/8              | 0.090  | -          | 315640  |
| 3/4      | 3/4        | 1     | 4     | 1-5/8              | 0.120  | -          | 315642  |
| 3/4      | 3/4        | 1     | 5     | -                  | -      | -          | 315644  |
| 3/4      | 3/4        | 1     | 5     | 2-1/2              | -      | 315646     | 315650  |
| 3/4      | 3/4        | 1     | 5     | 2-1/2              | 0.030  | -          | 315654  |
| 3/4      | 3/4        | 1     | 5     | 2-1/2              | 0.060  | -          | 315656  |

### More About the Series 2032

Reduced neck for extended reach



★ Best ☆ Good

# PERFORMANCE

Premium Carbide End Mills for Non-Ferrous Alloys

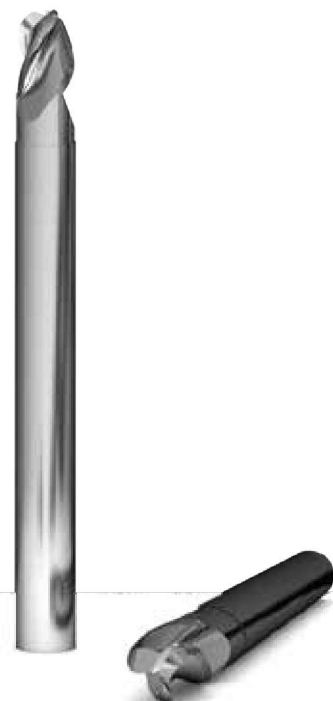


## Series 2032 350 | 3FL | Reduced Neck | Square & Radius

| Diameter | Shank Dia. | LOC   | OAL | Length Below Shank | Radius | Bright EDP | ZrN EDP |
|----------|------------|-------|-----|--------------------|--------|------------|---------|
| 3/4      | 3/4        | 1     | 5   | 2-1/2              | 0.090  | -          | 315659  |
| 3/4      | 3/4        | 1     | 5   | 2-1/2              | 0.120  | -          | 315662  |
| 3/4      | 3/4        | 1     | 6   | -                  | -      | -          | 315664  |
| 3/4      | 3/4        | 1     | 6   | 3-3/8              | -      | 315667     | 315669  |
| 3/4      | 3/4        | 1     | 6   | 3-3/8              | 0.030  | -          | 315671  |
| 3/4      | 3/4        | 1     | 6   | 3-3/8              | 0.060  | -          | 315673  |
| 3/4      | 3/4        | 1     | 6   | 3-3/8              | 0.090  | -          | 315675  |
| 3/4      | 3/4        | 1     | 6   | 3-3/8              | 0.120  | -          | 315677  |
| 3/4      | 3/4        | 1-5/8 | 6   | 3-3/8              | 0.030  | -          | 315679  |
| 3/4      | 3/4        | 1-5/8 | 6   | 3-3/8              | 0.060  | -          | 315683  |
| 3/4      | 3/4        | 1-5/8 | 6   | 3-3/8              | 0.090  | -          | 315686  |
| 3/4      | 3/4        | 1-5/8 | 6   | 3-3/8              | 0.120  | -          | 315689  |
| 1        | 1          | 1-1/4 | 5   | -                  | -      | 315693     | 315696  |
| 1        | 1          | 1-1/4 | 5   | 2-1/8              | -      | 315699     | 315702  |
| 1        | 1          | 1-1/4 | 6   | -                  | -      | 315706     | 315709  |
| 1        | 1          | 1-1/4 | 6   | 3-3/8              | -      | 315713     | 315716  |
| 1        | 1          | 1-1/4 | 6   | 3-3/8              | 0.030  | -          | 315720  |
| 1        | 1          | 1-1/4 | 6   | 3-3/8              | 0.060  | -          | 315724  |
| 1        | 1          | 1-1/4 | 6   | 3-3/8              | 0.090  | -          | 315728  |
| 1        | 1          | 1-1/4 | 6   | 3-3/8              | 0.120  | -          | 315730  |
| 1        | 1          | 1-1/4 | 7   | -                  | -      | 315734     | 315738  |
| 1        | 1          | 1-1/4 | 7   | 4-3/8              | -      | 315742     | 315745  |
| 1        | 1          | 1-1/4 | 7   | 4-3/8              | 0.030  | -          | 315749  |
| 1        | 1          | 1-1/4 | 7   | 4-3/8              | 0.060  | -          | 315751  |
| 1        | 1          | 1-1/4 | 7   | 4-3/8              | 0.090  | -          | 315755  |
| 1        | 1          | 1-1/4 | 7   | 4-3/8              | 0.120  | -          | 315758  |
| 1        | 1          | 2     | 7   | 4-3/8              | 0.030  | -          | 315761  |
| 1        | 1          | 2     | 7   | 4-3/8              | 0.060  | -          | 315764  |
| 1        | 1          | 2     | 7   | 4-3/8              | 0.090  | -          | 315767  |
| 1        | 1          | 2     | 7   | 4-3/8              | 0.120  | -          | 315771  |

### More About the Series 2032

Reduced neck for extended reach



★ Best ☆ Good