

**CGS**

**STORM**

**ECCENTRIC**



**3 FLUTE HI-HELIX "HEAVY DUTY"**

*Performance Matters*

# SQUARE END

## 3000 SERIES

### SQUARE END

| EDP # | DIA  | SHANK | LOC   | OAL   | RADIUS |
|-------|------|-------|-------|-------|--------|
| 3001  | 1/8  | 1/8   | 1/2   | 1-1/2 | NO     |
| 3003  | 3/16 | 1/4   | 5/8   | 2-1/2 | NO     |
| 3006  | 1/4  | 1/4   | 3/4   | 2-1/2 | NO     |
| 3009  | 5/16 | 5/16  | 13/16 | 2-1/2 | NO     |
| 3012  | 3/8  | 3/8   | 1     | 2-1/2 | NO     |
| 3015  | 7/16 | 7/16  | 1     | 3     | NO     |
| 3018  | 1/2  | 1/2   | 1     | 3     | NO     |
| 3024  | 5/8  | 5/8   | 1-1/4 | 3-1/2 | NO     |
| 3030  | 3/4  | 3/4   | 1-1/2 | 4     | NO     |
| 3033  | 1    | 1     | 1-1/2 | 4     | NO     |

### 60 DEGREE HI HELIX CARBIDE END MILLS

- ✓ FOR FASTER, EASIER, AND MORE PRODUCTIVE CNC MACHINING WHEN COMMON ORDINARY END MILLS 'JUST CAN'T CUT IT'.
- ✓ FOR MAXIMUM SPEEDS, FEEDS, SURFACE FINISHES, AND TOOL LIFE. FOR BETTER MACHINING OF HARD EXOTIC METALS INCLUDING TITANIUM ALLOYS, INCONELS, ALLOY STEELS, AND STAINLESS STEELS.

### CONSIDER THESE ADVANTAGES:

- ✓ **100% CNC PRECISION GROUND** WITH ECCENTRIC FORM RELIEF PRODUCING SUPERIOR CUTTING EDGE STRENGTH AND DURABILITY.
- ✓ **FREE CUTTING GEOMETRY** REDUCES CUTTING FORCE AND SIDE LOAD FOR MAXIMUM TRANSVERSE RUPTURE STRENGTH AND LESS TOOL DEFLECTION.
- ✓ **AVAILABLE WITH PVD COATINGS**
- ✓ **COMPLETE CNC REGRINDING SERVICE** RESTORES TOOLS TO ORIGINAL GEOMETRIES
- ✓ **AVAILABLE WITH RADIUS FOR STRONGER CORNERS**

THESE END MILLS HAVE CONSISTENTLY OUTPERFORMED ALL OTHERS IN TESTING AND EVALUATIONS CONDUCTED BY MAJOR AEROSPACE AND MEDICAL EQUIPMENT MANUFACTURERS ACROSS THE COUNTRY.

# XL LENGTH

\*\*\* ALL ITEMS \*\*\*  
 ADD THE FOLLOWING AFTER EDP#  
 -UC = UNCOATED  
 -ALTIN = ALTiN COATED

## 3100XL SERIES

### LONG LENGTH

| EDP # | DIA  | SHANK | LOC   | OAL   | RADIUS |
|-------|------|-------|-------|-------|--------|
| 3103  | 3/16 | 1/4   | 1     | 2-1/2 | NO     |
| 3106  | 1/4  | 1/4   | 1     | 2-1/2 | NO     |
| 3109  | 3/8  | 3/8   | 1-1/2 | 3     | NO     |
| 3115  | 1/2  | 1/2   | 2     | 4     | NO     |
| 3116  | 5/8  | 5/8   | 1-3/4 | 4     | NO     |
| 3121  | 3/4  | 3/4   | 2     | 4     | NO     |
| 3124  | 3/4  | 3/4   | 2-1/2 | 5     | NO     |
| 3127  | 3/4  | 3/4   | 3-1/2 | 6     | NO     |
| 3136  | 1    | 1     | 4     | 6-1/2 | NO     |

|                     | COMPETITORS TOOL | CGS TOOL    | COMPETITORS TOOL | CGS TOOL      | COMPETITORS TOOL | CGS TOOL      |
|---------------------|------------------|-------------|------------------|---------------|------------------|---------------|
| MATERIAL TYPE       | INC 718          | INC 718     | IRON CLASS 30    | IRON CLASS 30 | 316 STAINLESS    | 316 STAINLESS |
| HARDNESS            | 37 RC            | 37 RC       | 214-240 BN       | 214-240 BM    | 162 BRINELL      | 162 BRINELL   |
| TOOL MATERIAL       | SOLID CARBIDE    | CGS STORM   | CARBIDE INSERT   | CGS STORM     | M-42             | CGS STORM     |
| NUMBER OF FLUTES    | 4                | 4           | 8                | 4             | 6                | 3             |
| CUTTER SIZE         | 1"               | 1"          | 8"               | 1"            | 1"               | 1"            |
| CUTTER DEPTH        | .125             | .225        | .150-200         | .150          | 900              | .900          |
| RADIAL DEPTH OF CUT | .200             | .375        | SLOT             | SLOT          | .050             | .100          |
| S.F.M. OR R.P.M.    | 17 S.F.M.        | 60 S.F.M.   | 250 S.F.M.       | 250 S.F.M.    | 250 R.P.M.       | 750 R.P.M.    |
| I.P.M. OR TOOTH     | .001 I.P.T       | .0035 I.P.T | 6.40 I.P.M.      | 40.0 I.P.M.   | 41 I.P.M.        | 15 I.P.M.     |
| COATING TYPE        | TIN              | ALTIN       | TIN              | ALTIN         | NONE             | NONE          |



**DIVISION OF**  
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