

# UNI-PRO Ball Nose (4-Flute) - Inch - Standard Length



## center cutting



Standard



No. Flutes



Helix angle



Radius



Rake Angle



Slotting



Roughing



Ramping



Helix



Plunging



Copy Milling

Tool material

Surface finish



Solid Carbide

bright

FIREX®

Series

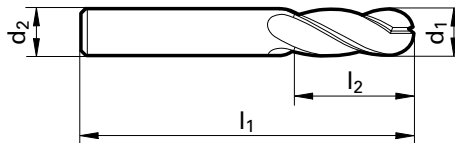
3161

3165

| Application group | Material examples | Ideal for |
|-------------------|-------------------|-----------|
| P                 | Steel             | ●         |
| M                 | Stainless steel   | ●         |
| K                 | Cast iron         | ●         |
| N                 | Aluminum          | ●         |
| S                 | Ni / Ti alloys    | ○         |
| H                 | Hardened steel    | --        |

●=Optimal ○=Secondary

Speed and Feed data found on page 289



| d1 h10 | d2 h6 | l1    | l2    | No. of Flutes | Code no. | EDP Number    |               |
|--------|-------|-------|-------|---------------|----------|---------------|---------------|
| inch   | inch  | inch  | inch  |               |          |               |               |
| 1/16   | 1/8   | 1 1/2 | 3/16  | 4             | 1.590    | 9031610015900 | 9031650015900 |
| 5/64   | 1/8   | 1 1/2 | 9/32  | 4             | 1.980    | 9031610019800 | 9031650019800 |
| 3/32   | 1/8   | 1 1/2 | 1/4   | 4             | 2.380    | 9031610023800 | 9031650023800 |
| 7/64   | 1/8   | 1 1/2 | 3/8   | 4             | 2.780    | 9031610027800 | 9031650027800 |
| 1/8    | 1/8   | 1 1/2 | 3/8   | 4             | 3.170    | 9031610031700 | 9031650031700 |
| 9/64   | 3/16  | 2     | 1/2   | 4             | 3.570    | 9031610035700 | 9031650035700 |
| 5/32   | 3/16  | 2     | 1/2   | 4             | 3.970    | 9031610039700 | 9031650039700 |
| 11/64  | 3/16  | 2     | 5/8   | 4             | 4.370    | 9031610043700 | 9031650043700 |
| 3/16   | 3/16  | 2     | 5/8   | 4             | 4.760    | 9031610047600 | 9031650047600 |
| 13/64  | 1/4   | 2 1/2 | 5/8   | 4             | 5.160    | 9031610051600 | 9031650051600 |
| 7/32   | 1/4   | 2 1/2 | 5/8   | 4             | 5.560    | 9031610055600 | 9031650055600 |
| 15/64  | 1/4   | 2 1/2 | 3/4   | 4             | 5.950    | 9031610059500 | 9031650059500 |
| 1/4    | 1/4   | 2 1/2 | 3/4   | 4             | 6.350    | 9031610063500 | 9031650063500 |
| 17/64  | 5/16  | 2 1/2 | 3/4   | 4             | 6.750    | 9031610067500 | 9031650067500 |
| 9/32   | 5/16  | 2 1/2 | 3/4   | 4             | 7.140    | 9031610071400 | 9031650071400 |
| 19/64  | 5/16  | 2 1/2 | 13/16 | 4             | 7.540    | 9031610075400 | 9031650075400 |
| 5/16   | 5/16  | 2 1/2 | 13/16 | 4             | 7.940    | 9031610079400 | 9031650079400 |
| 21/64  | 3/8   | 2 1/2 | 1     | 4             | 8.330    | 9031610083300 | 9031650083300 |
| 11/32  | 3/8   | 2 1/2 | 1     | 4             | 8.730    | 9031610087300 | 9031650087300 |
| 23/64  | 3/8   | 2 1/2 | 1     | 4             | 9.130    | 9031610091300 | 9031650091300 |
| 3/8    | 3/8   | 2 1/2 | 1     | 4             | 9.520    | 9031610095200 | 9031650095200 |
| 25/64  | 7/16  | 2 3/4 | 1     | 4             | 9.920    | 9031610099200 | 9031650099200 |
| 13/32  | 7/16  | 2 3/4 | 1     | 4             | 10.320   | 9031610103200 | 9031650103200 |
| 27/64  | 7/16  | 2 3/4 | 1     | 4             | 10.720   | 9031610107200 | 9031650107200 |
| 7/16   | 7/16  | 2 3/4 | 1     | 4             | 11.110   | 9031610111100 | 9031650111100 |
| 29/64  | 1/2   | 3     | 1     | 4             | 11.510   | 9031610115100 | 9031650115100 |
| 15/32  | 1/2   | 3     | 1     | 4             | 11.910   | 9031610119100 | 9031650119100 |
| 31/64  | 1/2   | 3     | 1     | 4             | 12.300   | 9031610123000 | 9031650123000 |
| 1/2    | 1/2   | 3     | 1     | 4             | 12.700   | 9031610127000 | 9031650127000 |
| 9/16   | 9/16  | 3 1/2 | 1 1/8 | 4             | 14.290   | 9031610142900 | 9031650142900 |
| 5/8    | 5/8   | 3 1/2 | 1 1/4 | 4             | 15.870   | 9031610158700 | 9031650158700 |
| 3/4    | 3/4   | 4     | 1 1/2 | 4             | 19.050   | 9031610190500 | 9031650190500 |
| 1      | 1     | 4     | 1 1/2 | 4             | 25.400   | 9031610254000 | 9031650254000 |