

Introducing

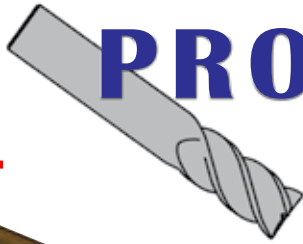
*PRO-4

*Patented

21st Century Tooling

By

**PROMAX
Tools**



"Feel The Edge"



Chip Breakers

Finishing Edge



**Every Flute is Different =
"NO HARMONICS"**

The new *PRO-4 solid carbide hybrid cutter combines the best elements of two of PROMAX's most popular end mills, the **Series 111** Finishing End Mill and the **Series 120** Rougher-Finisher. Yet with 8 geometries on 4 flutes, the *PRO-4 presents an entirely unique approach to common problems which vex high-performance machining.

Unique Hybrid Geometry

Cutting edge chip-breakers and finishing geometry appear on either the lower or upper half of each flute. The pattern is alternated for the adjacent flute. In the resulting cutting action, a chip-breaking edge on one half of the tool on one flute is followed by a finishing edge in the same region on the following flute. This geometry accomplishes what other geometries attempt through unequal indexing or multiple helices:

- Breaks Up Harmonics
- Reduces Chatter and Vibration
- Relieves Cutting Pressure Against The Tool With OD Chip-Breakers While Delivering An Excellent Finish
- Increases Feeds and Speeds
- Longer Running, Less Wear
- More Aggressive, With Superb Finishes
- Ready For Shrink-Fit Holders
- Easy And Inexpensive To Regrind¹
- Standard With The Most Advanced Aluminum-Titanium-Nitride (AlTiN) Coating

**So join the 21st Century —
give the *PRO-4 a try!**

¹ *PRO-4 is specially designed for easy and inexpensive regrinding, a great feature given the spiraling cost of carbide. Since the four flutes are equally indexed, all that's required is a standard face regrinding, a common service of most local grind shops – no special process is required. And with average usage, cutting diameter reduction per regrind is about .002 to .004 under nominal – no OD grinding required thanks to eccentric style relief.