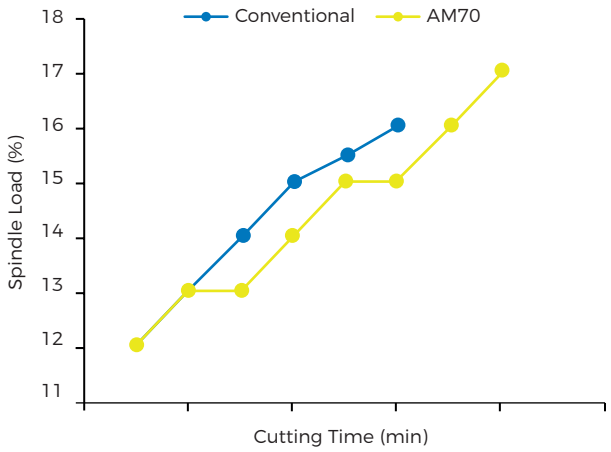
TITANIUM

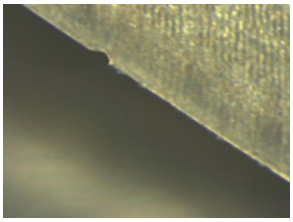
Hyperion Grade AM70

AM70 GRADE AND HYPERION TOLERANCES EQUALS SUPERIOR PERFORMANCE

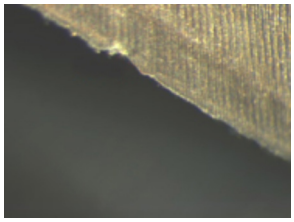
SPINDLE LOAD COMPARISON



CUTTING EDGE COMPARISON DEMONSTRATING AM70 SUPERIOR PERFORMANCE (BUE PROGRESSION)



Hyperion AM70 80x



Conventional 80x

HYPERION CARBIDE BLANK	
SIZE (in)	½ X 3
GRADE	Hyperion AM70
TYPE	RU GI 050003005 End Mill / Hyperion Tolerances
DIAMETER (in)	0.500 (-0.00010 / -0.00030)
TIR (in)	Max 0.0002

TEST CONDITIONS B	
Work piece	Titanium Ti6Al4V
Machine spindle	25-30 HP, 20,000 RPM
Type of cut	Trochoidal Milling
Coolant	Synthetic
Type of collet	HSK63F Hydrogrip
Cycle time per pocket	7 min 50 sec
Cutting speed (SFM)	400
Spindle RPM	3056
Feed rate (IPM)	76
Radial depth of cut (in)	0.05
Axial depth of cut (in)	1
Material removal rate	3.82 in^3/min

Test Location: Hyperion Technology Center, Worthington, OH. USA.

Hyperion AM70 RESULTS

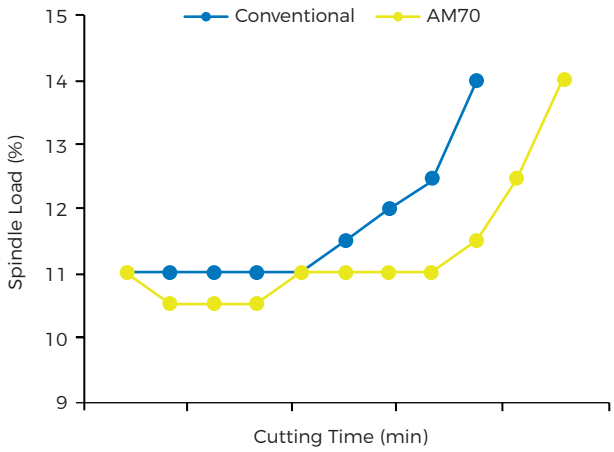
- Tool life improvement of 30%
- Stable and consistently less spindle load
- Repeatable and consistent performance providing a predictable tool life
- Superior integrity of cutting edges
- Significantly less chipping and diameter wear
- Slow progression of material built up (BUE) on cutting edge.

TITANIUM

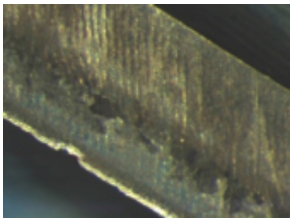
Hyperion Grade AM70

AM70 GRADE AND HYPERION TOLERANCES EQUALS SUPERIOR PERFORMANCE

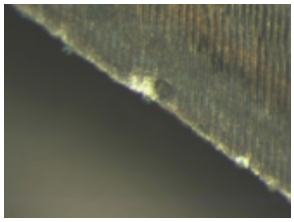
SPINDLE LOAD COMPARISON



CUTTING EDGE COMPARISON DEMONSTRATING AM70 SUPERIOR PERFORMANCE (BUE PROGRESSION)



Hyperion AM70 80x



Conventional 80x

HYPERION CARBIDE BLANK	
SIZE (in)	½ X 3
GRADE	Hyperion AM70
TYPE	RU GI 050003005 End Mill / Hyperion Tolerances
DIAMETER (in)	0.500 (-0.00010 / -0.00030)
TIR (in)	Max 0.0002

TEST CONDITIONS C	
Work piece	Titanium Ti6Al4V
Machine spindle	25-30 HP, 20,000 RPM
Type of cut	Trochoidal Milling
Coolant	Synthetic
Type of collet	HSK63F Hydrogrip
Cycle time per pocket	4 min 20 sec
Cutting speed (SFM)	300
Spindle RPM	2292
Feed rate (IPM)	34.38
Radial depth of cut (in)	0.2
Axial depth of cut (in)	0.5
Material removal rate	3.44 in^3/min

Test Location: Hyperion Technology Center, Worthington, OH. USA.

Hyperion AM70 RESULTS

- Tool life improvement of 22%
- Stable and significantly less spindle load as material removal increases
- Repeatable and consistent performance providing a predictable tool life
- Superior integrity of cutting edges
- Significantly less chipping and diameter wear
- Slow progression of material built up (BUE) on cutting edge.

www.HyperionMT.com

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