# **Toolholder Lineup for Various Applications**

## Fine and Extra Fine Pitch Types Available.



Fine Pitch (Example: 5000R-11-12T = 12 Inserts)

- Recommended for Unstable Setups
- General Purpose for Wide Application Ranges



## Extra Fine Pitch

(Example: 5000R-11-18T = 18 Inserts)

- Recommended for Rigid Setups
- Finer Pitch for Higher Efficiency



# Chipbreaker Lineup for Wide Range of Applications



General Purpose: GM Chipbreaker



**Heavy Duty:** GH Chipbreaker



Finishing: GL Ground Chipbreaker



Wiper Edge: W Ground Wiper Edge

## Long Tool Life and Stable Machining

## CA420M Features Advanced CVD Coating Technology

# Controlled a-Al<sub>2</sub>O<sub>3</sub> crystal growth for improving wear resistance and fracture resistance.

CA420M

Longer Tool Life



Conventional

## Prevents Film Peeling

40 % improved film adhesion by optimized interface.





## Increased Edge Strength

Higher film strength and fracture resistance with high aspect ratio TiCN.



Carbide Substrate

CA420M

### Insert Grade Lineup



**CA420M** Long Tool Life (1st Recommendation)

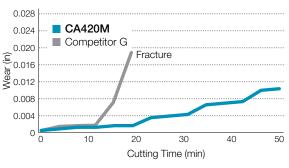


PR1510 Stable Machining



PR1525 Fracture Resistance

## Wear Resistance Comparison (Internal Evaluation)



Cutting Conditions: Vc = 670 sfm, fz = 0.012 ipt, ap  $\times$  ae = 0.079"  $\times$  3.150", Dry Workpiece: Nodular Cast Iron (65-45-12)

В

/70° LEAD

Ε

F

G

/BALL

Κ