



# CARBIDE END MILLS

## TECHNICAL INFORMATION

### AlTiN

Aluminum Titanium Nitride is ideal for high temperature cutting operation in many materials such as **Titanium & Nickel Alloys, Co.Cr-Mo, Stainless Steel, Alloy Steels & Cast Iron.**

When exposed to higher temperatures, it forms a HARD aluminum oxide layer and, as temperatures increase, the coating insulates the tool transferring heat into the chips. It is an EXTREMELY TOUGH coating that will hold up in heavy and interrupted cuts.

Contains a higher aluminum content than the similar TiAlN coating which makes it harder & smoother than TiAlN.

**AlTiN** is ideal for smaller depths of cut and excels in high speed and dry machining applications and

### nAlCo

Aluminum Titanium Nitride + Silicon Nitride coating is an extremely well suited for high performance DRILLING and MILLING applications. It has a great ability to resist high heat up to 1200° C before it starts to oxidize and break down. It has a tough core with HIGH wear and heat resistance.

A top layer with extreme high Nanohardness. A very low coefficient of friction for less resistance.

Up to (1-7) um thickness in coating layers for the most protection against heat and tool breakdown.

### ZrN

Zirconium Nitride coating is a coating developed specifically for machining ALUMINUM, yet excellent when machining all Non- Ferrous materials. ZrN is also highly recommended for machining Fiberglass, Nylon and most Polymer materials.

The maximum working temperature = 600°C/1110° F. It has a coating thickness of 1 to 2 microns. The

### nAlCrO

Aluminum Chrome Nitride + Silicon Nitride coating is an excellent coating for high ABRASIVE wear and HEAT resistance. A top layer with high hardness and toughness.

Heat resistance of up to 1100°C before it starts to oxidize and break down. It has a wide application range and is good in Super Alloys applications. It has a very low coefficient of friction for less resistance (0.35). Best in very tough operations.

Up to (1-7) um thickness in coating layers. A premium coating for those difficult applications.

### UNC

Not covered with a coating.